



**Government of Jammu and Kashmir**  
**Services Selection Board**  
**Zum Zum Building, Rambagh, Srinagar**  
**([www.jkssb.nic.in](http://www.jkssb.nic.in))**

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**NOTICE**

1. It is for the information of all the candidates who have applied for the items/advertisements shown hereunder that the Objective Type Written exam for the said posts is scheduled to be held in the month of November, 2017.
2. The syllabi are as such being annexed herewith for the information of the candidates.
3. The candidates are also hereby being intimated that there shall be negative marking for wrong answers (0.25 for each wrong answer) attempted in the said examination. The exam shall be Computer Based for which a link shall also be provided subsequently to the candidates for acquaintance. Detailed criteria shall be notified by the Board for each item separately.
4. Issuance of Admit cards shall also be notified later.
5. This advance notice is for the purpose of intimation to the concerned candidates only. The schedule of those items of similar advertisement which is not figuring in the said notice shall be intimated subsequently.

Sd/-  
Tassaduq Hussain Mir, (KAS)  
Secretary  
Services Selection Board

Dated: 12.10.2017

No. SSB/Secy/Sel/2017/10665-67

Copy to the:-

1. Private Secretary to the Ld. Chairman for information of the Chairman.
2. I/c Web site .
3. Stock file.

S. No.	Item No.	Adv. No	Name of the Department	Name of the post	Cadre	Syllabus Type	Syllabus Annexed
1	76	01 of 2016	Health and Medical Education Department	Pharmacist-Dawasaz	Kathua	Specific - Pharma ISM	Annexure "D"
2	133	01 of 2016	Health and Medical Education Department	Pharmacist-Dawasaz	Reasi	Specific - Pharma ISM	Annexure "D"
3	25	01 of 2016	Agriculture Production Deptt	Horticulture Technician IV	Baramulla	Specific - Horti Tech 4	Annexure "M"
4	86	01 of 2016	Agriculture Deptt	Horticulture Technician IV	Kulgam	Specific - Horti Tech 4	Annexure "M"
5	94	01 of 2016	Agriculture Deptt	Horticulture Technician IV	Kupwara	Specific - Horti Tech 4	Annexure "M"
6	145	01 of 2016	Agriculture Deptt	Horticulture Technician IV	Shopian	Specific - Horti Tech 4	Annexure "M"
7	149	01 of 2016	Agriculture Production Deptt	Horticulture Technician IV	Srinagar	Specific - Horti Tech 4	Annexure "M"
8	261	03 of 2016	Agriculture Production Department	Horticulture Technician-IV	Anantnag	Specific - Horti Tech 4	Annexure "M"
10	283	03 of 2016	Agriculture Production Deptt	Horticulture technician Grade IV	Baramulla	Specific - Horti Tech 4	Annexure "M"
11	299	03 of 2016	Agriculture Production Department	Horticulture Technician-IV	Budgam	Specific - Horti Tech 4	Annexure "M"
12	373	03 of 2016	Agriculture Production Department	Horticulture Technician-IV	Poonch	Specific - Horti Tech 4	Annexure "M"
14	390	03 of 2016	Agriculture Production Deptt	Horticulture technician Grade IV	Ramban	Specific - Horti Tech 4	Annexure "M"
15	229	09 of 2010	Information	Photo Librarian	Div Jammu	Specific - B.LIB	Annexure "X"
16	10	01 of 2016	Higher Education	Library Assistant	Div Cadre Kmr	Specific - B.LIB	Annexure "O"
17	20	01 of 2016	School Education Deptt	Library Assistant	Bandipora	Specific - B.LIB	Annexure "O"
18	32	01 of 2016	School Education Deptt	Library Assistant	Baramulla	Specific - B.LIB	Annexure "O"
19	41	01 of 2016	School Education Deptt	Library Assistant	Budgam	Specific - B.LIB	Annexure "O"
20	47	01 of 2016	School Education Deptt	Jr. Librarian	Doda	Specific - B.LIB	Annexure "O"
21	49	01 of 2016	School Education Deptt	Library Assistant	Doda	Specific - B.LIB	Annexure "O"
22	66	01 of 2016	School Education Deptt	Library Assistant	Jammu	Specific - B.LIB	Annexure "O"

23	67	01 of 2016	Higher Education	Library Assistant	Jammu	Specific - B.LIB	Annexure "O"
24	75	01 of 2016	School Education Deptt	Library Assistant	Kathua	Specific - B.LIB	Annexure "O"
25	99	01 of 2016	School Education Deptt	Library Assistant	Kupwara	Specific - B.LIB	Annexure "O"
26	121	01 of 2016	School Education Deptt	Library Assistant	Rajouri	Specific - B.LIB	Annexure "O"
27	132	01 of 2016	School Education Deptt	Jr. Librarian	Reasi	Specific - B.LIB	Annexure "O"
28	154	01 of 2016	School Education Deptt	Library Assistant	Srinagar	Specific - B.LIB	Annexure "O"
29	161	01 of 2016	School Education Deptt	Library Assistant	Udhampur	Specific - B.LIB	Annexure "O"
30	28	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Baramulla	Specific - Jr. Pharma	Annexure "W"
31	64	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Jammu	Specific - Jr. Pharma	Annexure "W"
32	73	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Kathua	Specific - Jr. Pharma	Annexure "W"
33	81	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Kishtwar	Specific - Jr. Pharma	Annexure "W"
34	128	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Ramban	Specific - Jr. Pharma	Annexure "W"
35	134	01 of 2016	Health and Medical Education Department	Jr. Pharmacist	Reasi	Specific - Jr. Pharma	Annexure "W"
36	166	02 of 2016	Health & Medical Educaton Deptt	Jr. Pharmacist	Div. Cadre Jmu	Specific - Jr. Pharma	Annexure "W"
37	167	02 of 2016	Health & Medical Educaton Deptt	Care Taker	Div. Cadre Jmu	Specific - Jr. Pharma	Annexure "W"
38	234	03 of 2016	Health & Medical Education Deptt	Jr. ECG Technician	Div Kashmir	Specific - Jr. Pharma	Annexure "W"
39	250	03 of 2016	Health & Medical Education Deptt	Sr. ECG Technician	Div Kashmir	Specific - Jr. Pharma	Annexure "W"
40	698	09 of 2013	Higher Education	Cherographer	Div Jmu	10+2	10+2
41	14	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Anantnag	10+2	10+2
42	16	01 of 2016	School Education Deptt	Lab Assistant	Anantnag	10+2	10+2
43	19	01 of 2016	Education Deptt	Lab Assistant	Bandipora	10+2	10+2

44	27	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Baramulla	10+2	10+2
45	31	01 of 2016	School Education Deptt	Lab Assistant	Baramulla	10+2	10+2
46	33	01 of 2016	School Education Deptt	Teacher	Baramulla	10+2	10+2
47	38	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Budgam	10+2	10+2
48	40	01 of 2016	Education Deptt	Lab Assistant	Budgam	10+2	10+2
49	54	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Ganderbal	10+2	10+2
50	62	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Jammu	10+2	10+2
51	77	01 of 2016	Education Dept	Teacher	Kathua	10+2	10+2
52	87	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Kulgam	10+2	10+2
53	95	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Kupwara	10+2	10+2
54	98	01 of 2016	Education Deptt	Lab Assistant	Kupwara	10+2	10+2
55	105	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Poonch	10+2	10+2
56	111	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Pulwama	10+2	10+2
57	114	01 of 2016	School Education Deptt	Teacher	Pulwama	10+2	10+2
58	125	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Ramban	10+2	10+2
59	131	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Reasi	10+2	10+2
60	138	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Samba	10+2	10+2
61	151	01 of 2016	Health and Medical Education Department	Jr. Lab Technician	Srinagar	10+2	10+2
62	153	01 of 2016	School Education Deptt	Lab Assistant	Srinagar	10+2	10+2
63	155	01 of 2016	School Education Deptt	Teacher	Srinagar	10+2	10+2
64	162	01 of 2016	School Education Deptt	Teacher	Udhampur	10+2	10+2

65	209	03 of 2016	Health & Medical Education Deptt	Telephone Operator	Div Jammu	10+2	10+2
66	233	03 of 2016	Health & Medical Education Deptt	Jr. Central Sterlization System Department Technician (JCSSD)Technician	Div Kashmir	10+2	10+2
67	236	03 of 2016	Industries & Commerce	Knitting Instructor	Div Kashmir	10+2	10+2
68	258	03 of 2016	Social Welfare	Craft Assistant	Anantnag	10+2	10+2
69	266	03 of 2016	Education Department	Teacher	Anantnag	10+2	10+2
70	267	03 of 2016	Rural Dev. Department	VLW	Anantnag	10+2	10+2
71	269	03 of 2016	Social Welfare	Craft Teacher	Bandipora	10+2	10+2
72	281	03 of 2016	Social Welfare Deptt	Craft Assistant	Baramulla	10+2	10+2
73	296	03 of 2016	Social Welfare	Craft Teacher	Budgam	10+2	10+2
74	313	03 of 2016	Social Welfare	Craft Teacher(male)	Doda	10+2	10+2
75	318	03 of 2016	Education Department	Teacher	Doda	10+2	10+2
76	319	03 of 2016	Rural Development Department	Village Level Worker	Doda	10+2	10+2
77	321	03 of 2016	Social Welfare	Craft Assistant	Ganderbal	10+2	10+2
78	322	03 of 2016	Social Welfare	Craft Teacher	Ganderbal	10+2	10+2
79	350	03 of 2016	Rural Dev Deptt	Village Level Worker	Kathua	10+2	10+2
80	358	03 of 2016	Education Department	Teacher	Kishtwar	10+2	10+2
81	360	03 of 2016	Rural Dev Deptt	Village Level Worker	Kishtwar	10+2	10+2
82	365	03 of 2016	School Education Deptt	Teacher	Kulgam	10+2	10+2
83	366	03 of 2016	Rural Dev Deptt	Village Level Worker	Kulgam	10+2	10+2
84	376	03 of 2016	Social Welfare	Craft Teacher	Pulwama	10+2	10+2

85	387	03 of 2016	Social Welfare Deptt	Craft Assistant (Male)	Rajouri	10+2	10+2
86	389	03 of 2016	Social Welfare Deptt	Craft Teacher (Female)	Ramban	10+2	10+2
87	393	03 of 2016	Education Department	Teacher	Ramban	10+2	10+2
88	394	03 of 2016	Rural Dev. Department	VLW	Ramban	10+2	10+2
89	395	03 of 2016	Social Welfare	Craft Teacher (Female)	Reasi	10+2	10+2
90	402	03 of 2016	Education Department	Teacher	Reasi	10+2	10+2
91	404	03 of 2016	Rural Dev Deptt	Village Level Worker	Reasi	10+2	10+2
92	407	03 of 2016	Social Welfare	Craft Teacher (Male)	Samba	10+2	10+2
93	416	03 of 2016	Social Welfare	Craft Assistant	Shopian	10+2	10+2
94	417	03 of 2016	Social Welfare	Craft Teacher	Shopian	10+2	10+2
95	433	03 of 2016	School Education Deptt	Teacher	Srinagar	10+2	10+2
96	435	03 of 2016	Ind. & Com (I&C)	Craftsman Leather	Udhampur	10+2	10+2
97	26	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Baramulla	Specific -Theatre	Annexure "A3"
98	37	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Budgam	Specific -Theatre	Annexure "A3"
99	46	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Doda	Specific -Theatre	Annexure "A3"
100	53	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Ganderbal	Specific -Theatre	Annexure "A3"
101	80	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Kishtwar	Specific -Theatre	Annexure "A3"
102	88	01 of 2016	Health and Medical Education Department	Jr. Theatre Technician	Kulgam	Specific -Theatre	Annexure "A3"
103	96	01 of 2016	Health and Medical Education Department	Jr. Theatre Technician	Kupwara	Specific -Theatre	Annexure "A3"
104	104	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Poonch	Specific -Theatre	Annexure "A3"
105	110	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Pulwama	Specific -Theatre	Annexure "A3"

106	119	01 of 2016	Health and Medical Education Department	Jr. Theatre Technician	Rajouri	Specific -Theatre	Annexure "A3"
107	150	01 of 2016	Health and Medical Education Department	Jr Theatre Technician	Srinagar	Specific -Theatre	Annexure "A3"
108	168	02 of 2016	Health & Medical Educaton Deptt	Jr. Theatre Assistant	Div. Cadre Jmu	Specific -Theatre	Annexure "A3"
109	169	02 of 2016	Health & Medical Educaton Deptt	Theatre Assistant-II	Div. Cadre Jmu	Specific -Theatre	Annexure "A3"
110	289	03 of 2016	Health & Medical Education Deptt	Theatre Assistant	Baramulla	Specific -Theatre	Annexure "A3"
111	348	03 of 2016	Health & Medical Education Deptt	Theater Assistant	Kathua	Specific -Theatre	Annexure "A3"
112	29	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Baramulla	Specific - X-RAY	Annexure "A5"
113	39	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Budgam	Specific - X-RAY	Annexure "A5"
114	48	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Doda	Specific - X-RAY	Annexure "A5"
115	55	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Ganderbal	Specific - X-RAY	Annexure "A5"
116	65	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Jammu	Specific - X-RAY	Annexure "A5"
117	74	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Kathua	Specific - X-RAY	Annexure "A5"
118	89	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Kulgam	Specific - X-RAY	Annexure "A5"
119	97	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Kupwara	Specific - X-RAY	Annexure "A5"
120	106	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Poonch	Specific - X-RAY	Annexure "A5"
121	112	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Pulwama	Specific - X-RAY	Annexure "A5"
122	120	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Rajouri	Specific - X-RAY	Annexure "A5"
123	127	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Ramban	Specific - X-RAY	Annexure "A5"
124	139	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Samba	Specific - X-RAY	Annexure "A5"
125	152	01 of 2016	Health and Medical Education Department	Jr. X-Ray Technician	Srinagar	Specific - X-RAY	Annexure "A5"
126	171	02 of 2016	Health & Medical Educaton Deptt	X-Ray Assistant	Div. Cadre Jmu	Specific - X-RAY	Annexure "A5"

127	293	03 of 2016	Health & Medical Education Deptt	X-Ray Assistant	Baramulla	Specific - X-RAY	Annexure "A5"
128	340	03 of 2016	Health & Medical Education Deptt	X-Ray Assistant	Jammu	Specific - X-RAY	Annexure "A5"
129	668	07 of 2015	Health & Medical Education Deptt	Jr Anesthesia Assistant	Baramulla	Specific - Anaesthesia	ANNEXURE "A"
130	671	07 of 2015	Health & Medical Education Deptt	Jr Anesthesia Assistant	Budgam	Specific - Anaesthesia	ANNEXURE "A"
131	674	07 of 2015	Health & Medical Education Deptt	Jr Anesthesia Assistant	Ganderbal	Specific - Anaesthesia	ANNEXURE "A"
132	685	07 of 2015	Health & Medical Education Deptt	Jr Anesthesia Assistant	Kupwara	Specific - Anaesthesia	ANNEXURE "A"
133	693	07 of 2015	Health & Medical Education Deptt	Jr Anesthesia Assistant	Pulwama	Specific - Anaesthesia	ANNEXURE "A"
134	170	02 of 2016	Health & Medical Education Deptt	Anaesthesia Assistant	Div. Cadre Jmu	Specific - Anaesthesia	ANNEXURE "A"
135	5	01 of 2016	Law Department	Legal Assistant	Div Cadre Jmu	Specific - Legal	Annexure "S"
136	185	03 of 2016	Law Department	Presenting Officer	State	Specific - Legal	Annexure "S"
137	201	03 of 2016	Consumer Affairs and Public Distribution Department	Prosecutor	Div Jammu	Specific - Legal	Annexure "S"
138	227	03 of 2016	Industries & Commerce Department	Enforcement Inspector	Div Kashmir	Specific - Legal	Annexure "S"
139	8	01 of 2016	Health and Medical Education Department	Jr Physiotherapist	Div Cadre Kmr	Specific - Jr. Physio	Annexure "P"
140	21	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Bandipora	Specific - PET	Annexure "V"
141	56	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Ganderbal	Specific - PET	Annexure "V"
142	90	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Kulgam	Specific - PET	Annexure "V"
143	100	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Kupwara	Specific - PET	Annexure "V"
144	146	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Shopian	Specific - PET	Annexure "V"
145	163	01 of 2016	Technical Education/YSS Department	Physical Education Teacher	Udhampur	Specific - PET	Annexure "V"
146	11	01 of 2016	Health and Medical Education Department	Dental Assistant/ Junior Dental Technician	Anantnag	Specific - Dental	Annexure "F"
147	18	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Bandipora	Specific - Dental	Annexure "F"



148	51	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Ganderbal	Specific - Dental	Annexure "F"
149	69	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Kathua	Specific - Dental	Annexure "F"
150	102	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Poonch	Specific - Dental	Annexure "F"
151	117	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Rajouri	Specific - Dental	Annexure "F"
152	123	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Ramban	Specific - Dental	Annexure "F"
153	143	01 of 2016	Health and Medical Education Department	Dental Assistant/Junior Dental Technician	Shopian	Specific - Dental	Annexure "F"
154	272	05 of 2015	Housing and Urban Development Department	Tracer	Div. Jammu	Specific - Draftsman Civil	Annexure "G"
155	224	03 of 2016	PHE/I&FC Department	Draftsman (Civil)	Div Kashmir	Specific - Draftsman Civil	Annexure "G"
156	225	03 of 2016	Public Works Deptt	Draftsman Civil	Div Kashmir	Specific - Draftsman Civil	Annexure "G"
157	260	03 of 2016	Election Department	Election Assistant	Anantnag	Specific - Election	ANNEXURE "J"
158	336	03 of 2016	Election Department	Election Assistant	Jammu	Specific - Election	ANNEXURE "J"
159	337	03 of 2016	Election Department	Election Assistant (Junior Scale)	Jammu	Specific - Election	ANNEXURE "J"
160	342	03 of 2016	Election Department	Election Assistant	Kathua	Specific - Election	ANNEXURE "J"
161	363	03 of 2016	Election Department	Election Assistant (Junior Scale)	Kulgam	Specific - Election	ANNEXURE "J"
162	396	03 of 2016	Election Department	Election Assistant (Junior Scale)	Reasi	Specific - Election	ANNEXURE "J"
163	409	03 of 2016	Election Department	Election Assistant (Junior Scale)	Samba	Specific - Election	ANNEXURE "J"
164	228	03 of 2016	ARI and Training	Etcher Artist	Div Kashmir	Specific - Etcher Art	ANNEXURE "I"
165	197	03 of 2016	Industries & Commerce	JSA	Div Jammu	Specific - JSA	Annexure "Q"
166	251	03 of 2016	Health & Medical Education Deptt	Sr. Grade Nurse	Div Kashmir	Specific - Sr Nurse	ANNEXURE "A1"
167	212	03 of 2016	Technical Education Department	Vocational Instructor Mechanic Industrial	Div Jammu	Specific - Voc Intr Elect	Annexure "11"

				Electronics			
168	216	03 of 2016	Higher Education	Assistant PTI	Div Kashmir	Specific - APTI	ANNEXURE "A9"
169	6	01 of 2016	Hospitality & Protocol Deptt	Table Boy	Div Cadre Jmu	Matric	Matric
170	174	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Doda	Matric	Matric
171	175	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Ganderbal	Matric	Matric
172	176	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Jammu	Matric	Matric
173	177	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Kathua	Matric	Matric
174	178	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Rajouri	Matric	Matric
175	179	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Ramban	Matric	Matric
176	180	02 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Reasi	Matric	Matric
177	184	03 of 2016	Tourism Department	Junior Yatchman	State	Matric	Matric
178	186	03 of 2016	Tourism and Culture	Pump Operator	State	Matric	Matric
179	191	03 of 2016	Hospitality & Protocol	Room Bearer	State	Matric	Matric
180	192	03 of 2016	Technical Education/YSS Deptt.	A.V Aida Mechanic	Div Jammu	Matric	Matric
181	194	03 of 2016	Technical Education/YSS Deptt.	Bioler Mechanic	Div Jammu	Matric	Matric
182	196	03 of 2016	Industries & Commerce	Head Weaver	Div Jammu	Matric	Matric
183	200	03 of 2016	ARI & Trainings	Outturn Checker	Div Jammu	Matric	Matric
184	203	03 of 2016	Industries and Commerce Deptt.	Senior Craft Instructor Bamboo	Div Jammu	Matric	Matric
185	204	03 of 2016	Industries & Commerce	Senior Craft Instructor Lathe-Cum-Lacquer	Div Jammu	Matric	Matric
186	205	03 of 2016	Industries & Commerce	Senior Craft Instructor Phoolkari	Div Jammu	Matric	Matric
187	206	03 of 2016	Ind. & Com (Handicrafts)	Sr. Craft Instructor (Carpet Weaving)	Div Jammu	Matric	Matric

188	207	03 of 2016	Ind. & Com (Handicrafts)	Sr. Craft Instructor (Sozni)	Div Jammu	Matric	Matric
189	210	03 of 2016	Health & Medical Education Deptt	Upholster	Div Jammu	Matric	Matric
190	211	03 of 2016	Technical Education/YSS Department	Vocational Instructor (Cutting & Sewing trade)	Div Jammu	Matric	Matric
191	215	03 of 2016	Health & Medical Education Deptt	Assistant Mechanic Man	Div Kashmir	Matric	Matric
192	221	03 of 2016	Agriculture Production Department	Cleaner	Div Kashmir	Matric	Matric
193	231	03 of 2016	Industries & Commerce Department	Instructor Clay Moulding Ladakh	Div Kashmir	Matric	Matric
194	237	03 of 2016	ARI and Training	Lathe Runner	Div Kashmir	Matric	Matric
195	240	03 of 2016	Health & Medical Education Deptt	Refrigerator Mechanic	Div Kashmir	Matric	Matric
196	241	03 of 2016	Industries & Commerce	Senior Craft Instructor (Chain Stitch).	Div Kashmir	Matric	Matric
197	242	03 of 2016	Industries & Commerce	Senior Craft Instructor Tepestry	Div Kashmir	Matric	Matric
198	246	03 of 2016	Ind. & Com (Handicrafts)	Sr. Craft Instructor (Stapple)	Div Kashmir	Matric	Matric
199	248	03 of 2016	Industries and Commerce	Sr. Craft Instructor Chain Stitch	Div Kashmir	Matric	Matric
200	253	03 of 2016	Hospitality and Protocol Deptt.	Telepone Operator	Div Kashmir	Matric	Matric
201	265	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Anantnag	Matric	Matric
203	292	03 of 2016	Tourism & Culture Deptt	Works Supervisor	Baramulla	Matric	Matric
204	300	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Leather)	Budgam	Matric	Matric
205	301	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Silverware)	Budgam	Matric	Matric
206	302	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Wood Carving)	Budgam	Matric	Matric
207	304	03 of 2016	Industries & Commerce	Junior Instructor Darning	Budgam	Matric	Matric
208	305	03 of 2016	Industries & Commerce	Junior Instructor Paper Machie	Budgam	Matric	Matric

209	316	03 of 2016	Industries & Commerce	Junior Instructor Sozni	Doda	Matric	Matric
210	325	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Crewal)	Ganderbal	Matric	Matric
211	327	03 of 2016	Industries & Commerce	Junior Instructor Chain Stich	Ganderbal	Matric	Matric
212	338	03 of 2016	Industries & Commerce	Junior Instructor Lathe-Cum-Lacquer	Jammu	Matric	Matric
213	345	03 of 2016	Health & Medical Education Deptt	Ophthalmic Assistant	Kathua	Matric	Matric
214	346	03 of 2016	Health & Medical Education Deptt	Projectionist	Kathua	Matric	Matric
215	347	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Kathua	Matric	Matric
216	353	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Carpet Weaving)	Kishtwar	Matric	Matric
217	357	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Kishtwar	Matric	Matric
218	359	03 of 2016	(Animal/Sheep Husbandary Department)	Veterinary Pharmacist	Kishtwar	Matric	Matric
219	369	03 of 2016	Ind. & Com (Handicrafts)	Jr. Craft Instructor (Gubba Emb )	Kupwara	Matric	Matric
222	388	03 of 2016	Information Department	Culture Assistant (Jr.scale)	Rajouri	Matric	Matric
223	392	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Ramban	Matric	Matric
224	399	03 of 2016	Health & Medical Education Deptt	Projectionist	Reasi	Matric	Matric
225	400	03 of 2016	Health & Medical Education Deptt	Refrigerator Mechanic	Reasi	Matric	Matric
226	401	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Reasi	Matric	Matric
227	403	03 of 2016	Animal/Sheep Husbandary Department	Veterinary Pharmacist	Reasi	Matric	Matric
228	412	03 of 2016	Health & Medical Education Deptt	Refrigerator Mechanic	Samba	Matric	Matric
229	413	03 of 2016	Animal/Sheep Husbandry Deptt	Stock Assistant	Samba	Matric	Matric
230	415	03 of 2016	(Animal/Sheep Husbandary Department)	Veterinary Pharmacist	Samba	Matric	Matric
231	419	03 of 2016	Industries and Commerce	Junior Instructor Chain Stich	Shopian	Matric	Matric

232	436	03 of 2016	Information Deptt.	Culture Asstt. (Jr.Scale)	Udhampur	Matric	Matric
233	71	03 of 2015	Health and Medical Education Department	Junior Mechanic	Div. Kashmir	MIDDLE	MIDDLE
234	667	07 of 2015	Health & Medical Education Deptt	Plumber	Baramulla	MIDDLE	MIDDLE
235	684	07 of 2015	Health & Medical Education Deptt	Plumber	Kupwara	MIDDLE	MIDDLE
236	670	07 of 2015	Health & Medical Education Deptt	Dhobi	Baramulla	MIDDLE	MIDDLE
237	676	07 of 2015	Health & Medical Education Deptt	Dhobi	Ganderbal	MIDDLE	MIDDLE
238	687	07 of 2015	Health & Medical Education Deptt	Dhobi	Kupwara	MIDDLE	MIDDLE
239	262	04 of 2013	Health and Medical Education	Assistant Cameraman	Div. Kmr	MIDDLE	MIDDLE
240	329	02 of 2011	Health	Carpenter	Div. Kmr	MIDDLE	MIDDLE
241	195	03 of 2016	Consumer Affairs and Public Distribution Department	Cleaner	Div Jammu	MIDDLE	MIDDLE
242	147	01 of 2011	Technical Education	Computer Operator	Div Jammu	Specific - Comp	Annexure "C"
243	140	01 of 2011	Technical Education	Vocational Instructor Mechanic Computer hardware	Div Jammu	Specific - Comp	Annexure "C"
244	242	05 of 2015	Technical Education/YSS Deptt.	Demonstrator (Information Technology)	Div.Kashmir	Specific - Comp	Annexure "C"
245	192	05 of 2015	Agriculture Production Department	Foreman	Div.Kashmir	Specific - Agri	Annexure "K"
246	163	05 of 2015	Agriculture Production Department	Junior Agriculture Extension Officer	State	Specific - Agri	Annexure "K"
247	204	05 of 2015	Culture Department	Survey Cum Excavation Assistant	Div.Kashmir	Specific - Museum	Annexure "U"
248	205	05 of 2015	Culture Department	Museum Assistant Grade-II	Div.Kashmir	Specific - Museum	Annexure "U"
249	206	05 of 2015	Culture Department	Documentation Assistant	Div.Kashmir	Specific - Museum	Annexure "U"
250	208	05 of 2015	Culture Department	Senior Conservator	Div.Kashmir	Specific - Museum	Annexure "U"
251	207	05 of 2015	Culture Department	Assistant Curator	Div.Kashmir	Specific - Museum	Annexure "U"
252	224	05 of 2015	labour & Employment	Provident Fund Inspector	Div. Kmr.	Specific - SA	Annexure "Y"

253	277	05 of 2015	labour & Employment	provident Fund Inspector	Div. Jammu	Specific - SA	Annexure "Y"
254	243	05 of 2015	Technical Education/YSS Deptt.	Demonstrator (Travel and Tourism)	Div.Kashmir	Specific - DemTourism	Annexure "E"
255	013	01 of 2013	Technical Education Department	Demonstrator Travel and Tourism	State	Specific - DemTourism	Annexure "E"
256	23	01 of 2015	Higher Education Department	Tabla Assistant	Div Jmu	Specific -Tabla	ANNEXURE "A2"
257	321	02 of 2011	Hr. Education	Tabla Assistant	Div. Kmr	Specific -Tabla	ANNEXURE "A2"
258	696	09 of 2013	Higher Education	Tabla Assistant	Div Jmu	Specific -Tabla	ANNEXURE "A2"
259	289	01 of 2011	Technical Education	Vocational Instructor Driver-cum- Mechanical (LV)	Div Kashmir	Specific -MVI	Annexure "A4"
260	3	01 of 2017	Information Department	Assistant Cine Cameraman	State	Graduate	Annexure "A8"
261	5	01 of 2017	Information Department	Hindi Computer Operator	State	Jr Asst Specific	Annexure "A10"
262	6	01 of 2017	Information Department	Steno Typist	State	Jr Asst Specific	ANNEXURE "A10"
263	7	01 of 2017	Information Department	Jr. Scale Stenographer	State	Jr Asst Specific	Annexure "A10"
264	8	01 of 2017	General Administration Deptt	Junior Stenographers	State	Jr Asst Specific	ANNEXURE "A10"
265	9	01 of 2017	Information Department	Junior Assistant	State	Jr Asst Specific	ANNEXURE "A10"
266	10	01 of 2017	Information Department	Information Assistant	Div Cadre Jammu	Graduate	Annexure "A8"
267	11	01 of 2017	Information Department	Steno Typist	Div Cadre Jammu	Jr Asst Specific	ANNEXURE "A10"
268	12	01 of 2017	Higher Education Deptt	Junior Assistant	Div Cadre Jammu	Jr Asst Specific	ANNEXURE "A10"
269	13	01 of 2017	Information Department	Information Assistant	Div Cadre Kashmir	Graduate	Annexure "A8"
270	14	01 of 2017	Information Department	Steno Typist	Div Cadre Kashmir	Jr Asst Specific	ANNEXURE "A10"
271	16	01 of 2017	Health & Medical Education Department	Extension Educator	Div Cadre Kashmir	Graduate	Annexure "A8"
272	17	01 of 2017	Higher Education Deptt	Junior Laboratory Assistant	Div Cadre Kashmir	Graduate	Annexure "A8"
273	23	01 of 2017	Information Department	Junior Assistant	Bandipora	Jr Asst Specific	ANNEXURE "A10"

274	30	01 of 2017	Health & Medical Education Department	Junior Assistant	Ganderbal	Jr Asst Specific	ANNEXURE "A10"
275	35	01 of 2017	Information Department	Junior Assistant	Kupwara	Jr Asst Specific	ANNEXURE "A10"
276	38	01 of 2017	Health & Medical Education Department	Junior Assistant	Rajouri	Jr Asst Specific	ANNEXURE "A10"
277	1	01 of 2017	Transport Department	Greaser/Washer	State	Matric	Matric
279	15	01 of 2017	Information Department	Junior Cultural Assistant	Div Cadre Kashmir	Matric	Matric
280	18	01 of 2017	Higher Education Deptt	Carpenter-II	Div Cadre Kashmir	Matric	Matric
281	19	01 of 2017	Higher Education Deptt	Plumber-II	Div Cadre Kashmir	Matric	Matric
282	25	01 of 2017	Information Department	Junior Cultural Assistant	Baramulla	Matric	Matric
283	21	01 of 2017	Health & Medical Education Department	Laboratory Assistant	Anantnag	10+2	10+2
284	29	01 of 2017	Health & Medical Education Department	Laboratory Assistant	Ganderbal	10+2	10+2
285	32	01 of 2017	Election Department	Election Assistant	Kathua	Specific_Election	ANNEXURE "J"
286	37	01 of 2017	Election Department	Election Assistant	Rajouri	Specific_Election	ANNEXURE "J"
287	13	01 of 2015	Hospitality and Portocol	Junior Assistant	Div. Kashmir	Jr Asst Specific	ANNEXURE "A10"
288	35	01 of 2015	Informtion Deptt.	Junior Assistant	Baramulla	Jr Asst Specific	ANNEXURE "A10"
289	24	01 of 2015	Higher Education Deptt.	Junior Assistant	Div. Jammu	Jr Asst Specific	ANNEXURE "A10"
290	44	01 of 2015	Informtion Deptt.	Junior Assistant	Distt. Doda	Jr Asst Specific	ANNEXURE "A10"
291	66	02 of 2015	Industries and Commerce Deptt.	Junior Assistant	Doda	Jr Asst Specific	ANNEXURE "A10"
292	68	02 of 2015	Industries and Commerce Deptt.	Junior Assistant	Poonch	Jr Asst Specific	ANNEXURE "A10"
293	69	02 of 2015	Industries and Commerce Deptt.	Junior Assistant	Rajouri	Jr Asst Specific	ANNEXURE "A10"
294	70	02 of 2015	Industries and Commerce Deptt.	Junior Assistant	Udhampur	Jr Asst Specific	ANNEXURE "A10"
295	85	03 of 2015	Industries and Commerce Deptt.	Junior Assistant	Doda	Jr Asst Specific	ANNEXURE "A10"

296	87	03 of 2015	Industries and Commerce Deptt.	Junior Assistant	Poonch	Jr Asst Specific	ANNEXURE "A10"
297	88	03 of 2015	Industries and Commerce Deptt.	Junior Assistant	Rajouri	Jr Asst Specific	ANNEXURE "A10"
298	89	03 of 2015	Industries and Commerce Deptt.	Junior Assistant	Udhampur	Jr Asst Specific	ANNEXURE "A10"
299	91	04 of 2015	General Administration Deptt	Junior Assistant	State Cadre	Jr Asst Specific	ANNEXURE "A10"
300	95	04 of 2015	PHE/I&FC Department	Junior Assistant	Div. Kashmir	Jr Asst Specific	ANNEXURE "A10"
301	103	04 of 2015	Revenue Department	Junior Assistant	Anantnag	Jr Asst Specific	ANNEXURE "A10"
302	107	04 of 2015	Rural Development/Revenue Department	Junior Assistant	Bandipora	Jr Asst Specific	ANNEXURE "A10"
303	116	04 of 2015	Rural Development/Revenue Department	Junior Assistant	Budgam	Jr Asst Specific	ANNEXURE "A10"
304	128	04 of 2015	Rural Development/Revenue Department	Junior Assistant	Kupwara	Jr Asst Specific	ANNEXURE "A10"
305	98	04 of 2015	CAPD/Forest/Labour & Employment Deptt.	Junior Assistant	Div. Jammu	Jr Asst Specific	ANNEXURE "A10"
306	138	04 of 2015	Education/Industries and Commerce/ Revenue Deptt.	Junior Assistant	Doda	Jr Asst Specific	ANNEXURE "A10"
307	144	04 of 2015	Education / Revenue Department	Junior Assistant	Kishtwar	Jr Asst Specific	ANNEXURE "A10"
308	148	04 of 2015	Education/Revenue/Power Development Department	Junior Assistant	Poonch	Jr Asst Specific	ANNEXURE "A10"
309	669	07 of 2015	Health & Medical Education Deptt	Jr Pharmacist	Baramulla	Specific - Jr. Pharma	Annexure "W"
310	675	07 of 2015	Health & Medical Education Deptt	Jr Pharmacist	Ganderbal	Specific - Jr. Pharma	Annexure "W"
311	686	07 of 2015	Health & Medical Education Deptt	Jr Pharmacist	Kupwara	Specific - Jr. Pharma	Annexure "W"
312	699	07 of 2015	Health & Medical Education Deptt	Jr Pharmacist	Shopian	Specific - Jr. Pharma	Annexure "W"





GOVERNMENT OF JAMMU AND KASHMIR,  
J&K SERVICES SELECTION BOARD,  
Zum Zum Hotel, Rambagh, Srinagar

([www.jkssb.nic.in/](http://www.jkssb.nic.in/))/  
[www.ssbjk.in](http://www.ssbjk.in) (New online Portal)

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**ANNEXURE “A”**  
**Syllabus**  
**Jr. Anesthesia Assistant / Anesthesia Assistant**

**Max. Marks: 150**  
**Time: 2:30 hrs**

**1. GENERAL PRINCIPLES OF ANESTHESIA (10 MARKS)**

- a) PRE-MEDICATION;
- b) INDUCTION;
- c) MAINTENANCE.
- d) RECOVERY & POST-OPERATIVE.

**2. ANESTHESIA MACHINE / WORK-STATION: - (10 MARKS)**

- a) BASICS;
- b) CHECK-LIST;
- c) MAINTENANCE.

**3. ANESTHESIA BREATHING CIRCUITS & SODA-LIME: - (05 MARKS)**

- a) IDENTIFICATION;
- b) ASSEMBLY;
- c) CONNECTIONS;
- d) CLEANING & DIS-INFECTION;
- e) CHECKS.

**4. MEDICAL GASES – CYLINDERS & PIPE-LINE: - (05 MARKS )**

- a) CHECKS;
- b) MAINTENANCE.

**5. ANESTHESIA EQUIPMENT TROLLEY INCLUDING DIFFICULT AIRWAY  
CART:-**

**(10 MARKS )**

- a) IDENTIFICATION;
- b) USAGE;
- c) MAINTENANCE;
- d) DISINFECTION & STERILIZATION.  
( LARYNGOSCOPES & THEIR BLADES, ENDOTRACHEAL TUBES {PVC & REDRUBBER}  
, AIRWAYS, LARYNGEAL MASK AIRWAYS, BOUGIE'S , MAGILL'S  
FORCEPS, FACEMASKS { HUDSON'S, ANATOMICAL, VENTURI ETC.},  
STYLETS,  
RYLE'S TUBE).

**6. CARE OF EQUIPMENT:- (05 MARKS )**

- a) CLEANING;
- b) STERILIZATION & DIS-INFECTION;

**7. DISPOSAL OF WASTE; INFECTION PREVENTION & CONTROL METHODS  
(05 MARKS)**

**8. THEATRE DISCIPLINE. (05 MARKS)**

**9. MONITORS IN ANESTHESIA:- (10 MARKS)**

- a) E.C.G – BASICS, LEADS & ELECTRODES;
- b) BLOOD-PRESSURE MONITORING (INVASIVE & NON-INVASIVE);
- c) PULSE OXIMETER;
- d) EtCO<sub>2</sub>;
- e) CENTRAL VENOUR PRESSURE MONITORING;

**10.BASIC KNOWLEDGE, CARE & HANDLING OF VENTILATORS & ITS  
ACCESSORIES.**

(05 MARKS)

**11. SUCTION EQUIPMENT & CATHETERS:- (05 MARKS)**

- a) BASICS;
- b) MAINTENANCE;
- c) DIS-INFECTION.

**01.DRUGS:-** USED FOR INDUCTION OF ANESTHESIA, MAINTENANCE OF ANESTHESIA, RECOVERY FROM ANESTHESIA, MAINTENANCE OF BLOODPRESSURE (INOTROPES & HYPOTENSIVE AGENTS ), MAINTENANCE OF CARDIAC FUNCTION; ANTI-EMETICS, ANALGESICS ( PARACETAMOL, NSAIDS, OPIOIDS ETC.), BRONCHODIALATORS, DIURETICS, UTEROTONICS, ANTIBIOTICS, STEROIDS, LOCAL

ANESTHETICS, MUSCLE RELAXANTS );

(10 MARKS)

- a) BASICS;
- b) USES;
- c) DOSAGE;
- d) ADVERSE- EFFECTS;
- e) CONTRA-INDICATIONS;
- f) DILUTION;
- g) STORAGE;
- h) PRECAUTIONS;
- i) MAINTENANCE.

**02. FLUIDS & TRANSFUSION:- (10 MARKS)**

- a) I.V CANNULAS;
- b) TRANSFUSION SETS;
- c) FLUIDS ( R L , N S , D N S, D 5%, D 10%, D 25%, HYPERTONIC SALINE, COLLOIDS;
- d) BLOOD AND ITS PRODUCTS;
- e) TEMPERATURE MAINTENANCE OF TRANSFUSION FLUIDS;

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**03. RECORD MAINTENANCE (PATIENTS, EQUIPMENTS & DRUGS- ESPECIALLY CONTROLLED DRUGS); (05 MARKS )**

**04. BASIC LIFE SUPPORT / CARDIO-PULMONARY RESUSCITATION, ANAPHYLACTIC REACTIONS; (10 MARKS)**

**05. REFRIGERATION & MAINTENANCE OF COLD CHAIN; (05 MARKS)**

**06. THEATRE POLLUTION, FIRE & ELECTRICAL HAZARDS IN OPERATION THEATRES AND WAYS TO MINIMISE THEM; (05 MARKS)**

**07. PREPARATION FOR REGIONAL ANESTHESIA AND EQUIPMENT REQUIRED;**

(05 MARKS)

**08. PATIENT POSITIONING; (05 MARKS)**

**09. BASIC ANATOMY OF :- (10 MARKS)**

- a) AIRWAY;

- b) TRACHEO-BRONCHIAL TREE;
- c) HEART WITH GREAT VESSELS;
- d) PERIPHERAL VESSELS;
- e) GENITO-URINARY SYSTEM;
- f) CENTRAL NERVOUS SYSTEM;

**10. BASIC PHYSIOLOGY OF:- (05 MARKS)**

- a) BREATHING / RESPIRATORY CYCLE, VOLUMES & CAPACITIES, HYPOXIA, HYPERCARDIA;
- b) CARDIAC CYCLE, CARDIAC OUTPUT, STROKE VOLUME, VARIATIONS OF HEART RATE & RHYTHM, NORMAL BLOOD PRESSURE;
- c) AUTONOMIC NERVOUS SYSTEM;
- d) NORMAL URINE OUTPUT, NORMAL CONSTITUENTS OF URINE, NORMAL RENAL FUNCTION PARAMETERS;

**11. BASICS OF PHARMACOLOGY:- (05 MARKS)**

- a) PHARMACO-KINETICS;
- b) PHARMACO-DYNAMICS;
- c) ROUTES OF DRUG ADMINISTRATION;
- d) DRUG HALF- LIFE;
- e) DURATION OF ACTION;
- f) METABOLISM & EXCRETION;
- g) ADVERSE DRUG REACTIONS.

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## **Annexure “B”**

### **Syllabus for Assistant Scientific Officer (Lie detector)**

**Max. Marks: 150**

**Time: 2:30 hrs**

#### **Unit-I Marks: 15**

- I. Nature and Scope of Criminology
- II. Legal and Sociological Concepts of Crime

#### **Unit-II Marks: 45**

Major Historical and Contemporary Theories of Crime Causation:

- i) Pre-classical, Classical and Neo-classical Theories
- ii) Theories of Criminality: Biological Approaches
- iii) Theories of Criminality: Psychological Approaches
- iv) Theories of Criminality: Sociological Approaches
  - (a) Home and Family in relation to Crime
  - (b) Mass Media and Crime
  - (c) Theory of Differential Association
  - (d) Multiple Factor Approach to Crime Causation

#### **Unit-III Marks: 30**

- I. Evolution, Nature and Theories of Punishment
- II. Kinds of Punishment with special emphasis on Imprisonment and Capital Punishment

#### **Unit-IV Marks: 30**

- I. Prison System in India
- II. Police System in India

#### **Unit-V Marks: 30**

- I. Prevention and Control of Crimes and Delinquency
- II. Recidivism: Causes and Prevention
- III. Drug Addiction
  - i) Extent, Causes and Effects
  - ii) Control of Drug Addiction
- IV) Narco analysis and Lie Detector Tests: Constitutional Perspectives

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# Annexure “C”

## Syllabus

Computer Operator, Vocational Instructor Mechanic Computer hardware etc

And

Demonstrator-Info.Tech., Demonstrator-Comp., Sr.Lab. Tech.-Comp. Engineering,  
Demonstrator-OM & Comp. Application Engineering

Marks: 150

Time:-2:30 hours

### **1. DIGITAL ELECTRONICS (10 marks)**

- Introduction, Digital vs. Analog, Number Systems (Decimal, Hexadecimal, Octal, Binary), Conversion between different Number Systems, Number Representation (1's and 2's Complement, ASCII, BCD, Floating Point), Addition and Subtraction using 1's Complement, 2's Complement and BCD; Parity, types and Error Detection.
- Definition, symbols and truth tables of NOT, AND, OR, NAND, NOR, EXOR Gates, NAND and NOR as universal gates.
- Boolean Algebra, postulates, DeMorgan's Law, Various identities. Formulation of truth table and Boolean equation for simple problem. Implementation of Boolean (logic) equation with gates, K-Maps.
- Adders and Subtractors (Full and Half), Multiplexers, DeMultiplexers, Decoders and Encoders.
- Latches and Flip Flops: JK,RS,T and D Flip Flops, Counters and Shift Registers

### **2. Computer Programming USING C (10 marks)**

- Algorithm and Programming Development.
- Program Structure: I/o statements, assignment statements. Constants, variables and data types, Operators and Expressions, Use of Header files & Library functions.
- Control Structure: Introduction, Decision making with IF – statement, IF – Else and Nested IF, While and do-while, for loop, Break and switch statements.
- Functions(Call by Value,Call By Reference, Recursion)
- Arrays(1D,2D),
- Pointers, Structures and Unions, Strings,Files

### **3. Database Management Systems (10 marks)**

- Database and its purpose, Characteristics of the database approach, Advantages and disadvantages of database systems. Classification of DBMS Users.
- Data models, schemas, instances, data base state. DBMS Architecture; The External level, The conceptual level, The internal level, Mappings. Data Independence; Logical data Independence, Physical data Independence. \
- Data Modeling using E.R. Model: Data Models Classification Entities and Attributes and types, Entity types and Entity sets, Key attribute and domain of attributes, Relationship among entities

- Relational Model Concepts: Domain, Attributes, Tuples and Relations. Relational constraints and relational database schemes; Domain constraints, Key constraints and constraints on Null. Relational databases and relational database schemes, Entity integrity, referential integrity and foreign key
- Concept of Normalization, Need of Normalization, Non-loss decomposition and functional dependencies, First, Second and Third normal forms, Boyce/Codd normal form.
- MYSQL/SQL (Structured Query Language). DDL (Data Definition Languages): Creating Tables, Creating a table with data from another table, Inserting values into a table, updating columns of a table, Deleting Rows, Dropping a Table. DML (Data Manipulation Language): Database Security and Privileges, Grant and Revoke Command, Maintaining Database Objects, Commit and Rollback, various types of select commands, various types of join.

#### **4. Operating Systems (10 marks)**

- Overview of Operating Systems: Definition of Operating Systems, Types of Operating Systems, Importance of Operating Systems, Memory organization, Linking, loading and executing control program
- Functions of Operating System: Process Management Functions (Principles and Brief Concept); Job Scheduler, Process Scheduler, Process synchronization. Memory Management Function (Principles and Brief Concept); Introduction, Single Process System, Fixed Partition Memory, System Loading, Segmentation, Swapping, Simple Paging System, Virtual Memory. I/O Management Functions (Principles and Brief Concept); Dedicated Devices, Shared Devices, I/o Devices, Storage Devices, Buffering, Spooling. File Management; Principles and Brief Concept, Types of File System; Simple file system, Basic file system, Logical file system, Physical file system. Dead Lock; Condition for Dead lock, Dead Lock Preventions, Dead Lock Avoidance)
- Linux Operating System: Introduction, history of Linux and Unix, Linux Overview, Structure of Linux, Linux releases, open linux, system requirements, file structures, processor scheduling and memory management in Unix. Linux Commands and Filters: Shell: concepts of command options, input, output redirecting and network file, process and communication commands like: mkdir, cd, ls, who, whoami, cat, more, tail, head, mv, chmod, grep, wc, sort, kill, write, wall, mail, news

#### **5. Multimedia and Applications (10 marks)**

- Introduction to multimedia, hypertext, hypergraphics, animation, application in education and training, science and technology, kiosks, business and games.
- Multimedia Hardware:Multimedia PC configuration, features and specifications of sound and video interfaces, OCR, touch-screen, scanners, digital cameras, speakers, printers, plotters, optical disks and drives as CDROM and DVD. Multimedia networks.
- Multimedia Software:Image and sound file formats, multimedia file formats, compression, standards and techniques, features of software to read and write

such files. Video file formats & compression standards, multimedia operating systems.

- Using Image Processing Tools Photo-shop workshop, image editing tools, specifying and adjusting colors, using gradient tools, selection and move tools, transforming path drawing and editing tools, using channels, layers, filters and actions.
- Multimedia Authoring Tools: Types of Authoring programmes – Icon based, Time based, Story boarding/scripting and object oriented working in macromedia flash, exploring interface using selection of PEN tools. Working with drawing and painting tools, applying colour viewing and manipulating time line, animating, processing, guiding layers, importing and editing sound and video clips in flash

## **6. Data Structures Using C (10 marks)**

- Fundamental Notation :Problem solving concept, top down and bottom up design, structured programming, Concept of data types, variables and constants, Concept of pointer variables and constants.
- Concept of Arrays, Single dimensional array, Two dimensional array storage strategy of multidimensional arrays, Operations on arrays with Algorithms (searching, traversing, inserting, deleting)
- Linked Lists: Introduction to linked list and double linked list, Representation of linked lists in Memory, Traversing a linked list, Searching linked list, Insertion and deletion into linked list, Application of linked lists, Doubly linked lists, Traversing a doubly linked lists, Insertion and deletion into doubly linked lists
- Stacks, Queues and Recursion: Introduction to stacks, Representation of stacks, Implementation of stacks, Uses of stacks, Introduction to queues, Implementation of queues (with algorithm), Circular Queues, De-queues, Recursion
- Trees: Concept of Trees, Concept of representation of Binary tree, Binary search trees Traversing Binary Trees (Pre order, Post order and In order), Searching, inserting and deleting binary search trees
- Sorting and Searching: Search algorithm (Linear and Binary), Concept of sorting, Sorting algorithms (Bubble Sort, Insertion Sort, Quick Sort, Selection Sort, Merge Sort, Heap Sort) and their comparisons.

## **7. Object Oriented Language Using C++ (10 marks)**

- Fundamentals of object oriented programming – procedure oriented programming Vs. object oriented programming (OOP). Object oriented programming concepts – Classes, reusability, encapsulation, inheritance, polymorphism, dynamic binding, message passing, and data hiding.
- Classes and Objects: Creation, accessing class members, Private Vs Public, Constructor and Destructor Objects.
- Member Functions: Method definition, Inline functions implementation, Constant member functions, Friend Functions and Friend Classes, Static functions.
- Overloading Member Functions: Need of operator overloading, operator overloading, instream / ostream operator overloading function overloading, constructor overloading
- Inheritance: Definition of inheritance, protected data, private data, public data, inheriting constructors and destructors, constructor for virtual base classes,



constructors and destructors of derived classes, and virtual functions, size of a derived class, order of invocation, types of inheritance, single inheritance, hierarchical inheritance, multiple inheritance, hybrid inheritance, multilevel inheritance

- Polymorphism and Virtual Functions: Importance of virtual function, function call binding, virtual functions, implementing late binding, need for virtual functions, abstract base classes and pure virtual functions, virtual destructors
- File and Streams: Components of a file, different operation of the file, communication in files, creation of file streams, stream classes, header files, updating of file, opening and closing a file, file pointers and their manipulations, functions manipulation of file pointers, detecting end-of-file.

## **8. JAVA Programming (10 marks)**

- Introduction to Java :A brief history, how Java works?, Java Virtual Machine (JVM), Just In Time (JIT) compiler, Java features, using Java with other tools, native code, Java application types, comparison with C and C++.
- Working with data types, control flow statements, arrays, casting, and command line arguments.
- Java Classes and Memory Management: Introduction to Classes, inheritance, encapsulation and polymorphism.
- Constructors and finalizers, garbage collection, access specifier .
- Interfaces and Packages.
- Over view of exception handling, method to use exception handling, method available to exceptions (The throw statement, the throws class, finally class), creating your own exception classes.
- Multithreading

## **9. Software Engineering (10 marks)**

- Introduction to Software (S/W) Engineering : Introduction, size factors. Quality and productivity factors. Management issues, Models: waterfall, spiral, prototyping, fourth generation techniques, s/w process, Introduction to agile technologies
- Software Metrics Engineering: Size, function and design oriented metrics, halstead software science, McCabe's complexity
- Planning : The development process, an organizational structure, other planning activities .
- Software Cost Estimations Cost factors, cost estimations techniques. Staffing level estimation, estimating software maintenance costs, COCOMO
- Software Requirements Definition Problem analysis, requirement engineering. The software requirements specifications (SRS), formal specifications techniques, characteristics of a good SRS
- Software Design and Implementation Issue Fundamental design, concept design notations, design techniques, structured coding techniques coding styles, documentation guidelines.

- Verification and Validation Techniques Quality assurance work through and inspections static analysis, symbolic execution unit testing, formal verifications. Black box and white box testing techniques
- Maintenance Overview, Configuration Management
- Software Quality: CMM, ISO 9000 series, ISO 9126, Six Sigma

## **10. Microprocessor (10 marks)**

- Evolution of Microprocessor: Typical organization of a microcomputer system and functions of its various blocks. Microprocessor, its evolution, function and impact on modern society
- Architecture of a Microprocessor (With reference to 8085 microprocessor) :Concept of Bus, bus organization of 8085, Functional block diagram of 8085 and function of each block, Pin details of 8085 and related signals, Demultiplexing of address/data bus generation of read/write control signals, Steps to execute a stored programme
- Programming (with respect to 8085 microprocessor):Brief idea of machine and assembly languages, Machines and Mnemonic codes. Instruction format and Addressing mode. Identification of instructions as to which addressing mode they belong. Concept of Instruction set. Explanation of the instructions of the following groups of instruction set. Data transfer group, Arithmetic Group, Logic Group, Stack, I/O and Machine Control Group. Programming exercises in assembly language. (Examples can be taken from the list of experiments).
- Memories and I/O interfacing Memory organization, Concept of memory mapping, partitioning of total memory space. Address decoding, concept of I/O mapped I/O and memory mapped I/O. Interfacing of memory mapped I/O devices. Concept of stack and its function. Basic RAM Cell, N X M bit RAM, Expansion of word length and capacity, static and dynamic RAM, basic idea of ROM, PROM, EPROM and EEPROM.
- Instruction cycle, machine cycle and T-states, Fetch and execute cycle.
- Interrupts:Concept of interrupt, Maskable and non-maskable, Edge triggered and level triggered interrupts, Software interrupt, Restart interrupts and its use, Various hardware interrupts of 8085, Servicing interrupts, extending interrupt system
- Data transfer techniques :Concept of programmed I/O operations, sync data transfer, async data transfer (hand shaking), Interrupt driven data transfer, DMA, Serial output data, Serial input data

## **11. Computer Networks (10 marks)**

- Concept of network :Models of network computing, Networking models, Peer-to – peer Network, Client Server Network, LAN, MAN and WAN,
- Network Services
- Topologies
- Concept of switching, switching techniques-packet switching, circuit switching
- OSI Model in DETAIL\
- TCP/IP Model
- Concept of physical and logical addressing
- Different classes of IP addressing, special IP addresses

- Sub netting and super netting
- Loop back concept
- IPV4 and IPV6 packet Format, configuring IPV4 and IPV6
- Network connectivity Devices: NICs, Hubs, Repeaters, Multiplexers, Modems, Routers, Switches Gateways, Firewall.
- Routing Protocols, Distance vector and Link State.

## **12. Internet and Web Technologies (10 marks)**

- Internet Basics : Specification and technical details for establishing internet. Types and functions of modems, IP addressing, internet domains, domain name server, TCP/IP protocols, internet service providers internets, E-mail, Telnet, FTP, IRC, NNTP, Video conferencing, e-commerce.
- Internet Connectivity: Telephone line, cable, leased line, ISDN, VSAT, RF link.
- World Wide Wed (WWW): World Wide Web and its evolution, web page, web server HTTP protocol. Examples of web servers. Navigation Tools: Mozilla Firefox, Google, Chrome, Internet Explorer, Uniform Resource Locator (URL). Hypertext, hyperlinks and hypermedia, URL, its registration, browsers, search engines, proxy servers.
- Internet Security: Basics of authentication and authorization. Introduction to firewall, various techniques of encryption and decryption, SSL (Secure Socket Layer).
- Developing Portals Using HTML : Introduction to HTML-5 and CSS-3 Basic structure of HTML, designing a web page, inserting links images, horizontal rules, comments. Formatting text, title, headings, colors, fonts, sizes, simple tables and forms. HTML tags, hyperlinks. Adding graphics and images, image maps, image files. Using tables, forms, style sheets and frames.
- Client-side Scripting: Using Java Script, Java Script Event Modelling Validating Forms using Java script.
- Server-side Scripting: PHP: GET POST Method, Control Structures.

## **13. Wireless Communication (10 marks)**

- Introduction Evolution of Mobile Communication Systems, Paging Systems, cordless telephone system, cellular telephone system, comparison of common wireless communication system , 2G cellular networks, 2.5 G wireless network, HSCSD, GPRS, EDGE technology, 3G wireless network, UMTS, 3 G CDMA2000, 3 G TD-SCDMA, wireless local loop, blue tooth and personal area networks.
- System Design Fundamentals: Frequency reuse, channel alignment strategies, handoff strategies, interference and system capacity, improving coverage and capacity in cellular systems, parameters for mobile multipath channel, small scale fading.
- Modulation Techniques: Amplitude modulation, angle modulation, digital modulation, linear modulation techniques, constant envelope modulation, spread spectrum modulation techniques, equalization, equalizers in communication receiver, diversity techniques, RAKE receiver, fundamentals of channel coding.
- Multiple Access Techniques: FDMA, TDMA, CDMA, SDMA.

- Wireless Networking : Difference between wireless and fixed telephone networks, development of wireless networks, ISDN.
- Wireless Systems: GSM, GSM architecture, CDMA digital cellular standard, 15-95 system, IEEE 802.116, 802, 11G, blue tooth and RF.

**14. Visual Programming Using NET (10 marks)**

- Introduction to Microsoft. Net Framework: Introduction to client server architecture, introduction to NET framework, feature of Net framework, architecture and component of Net, elements of .Net. Common Language Runtime (CLR), Common Type System (CTS), Common Language Specifications (CLS), Microsoft Intermediate Language (MSIL), just in time compiler.
- VB.NET Integrated Development Environment : VB.NET Development Environment, Creating Application Building Projects Using simple components, Running VB.NET applications.
- VB.NET : Visual Basic. NET Programming Language-Variables & Data Type, Strings, Arithmetic Operators, Building the project, Common Control Controls, Functions Call and Arguments, Select Case, Loops, Nesting of Loops, Decision Structures, Error handling using Try.. Catch Block.
- Windows Applications: Developing Windows Applications: Introduction to Windows Applications, Using Windows Forms, Visual Inheritance, Windows Forms, Text Boxes, Buttons, Lables, Check Boxes, and Radio Buttons, List Boxes, Combo Boxes, Picture Boxes, Scrollbars, Splitters, Timer, Menus, Built-in Dialogs, Image List, Tree Views, List Views, Toolbars, Status Bar and Progress bars.
- Database Connectivity: Database Programming with ADO.NET: ADO.NET Object Model, Database: Connections, Data adapters and datasets, Data Reader, Connection to database with server explorer, multiple table connection, data binding with controls like text boxes, list boxes, data grid etc. Navigating data source, data grid view, data form wizard, data validation, connection objects, command objects, data adapters, dataset class.

**15. Generic Skills, Management and Entrepreneurship Development (5 marks)**

- Generic Skills, Managing self, team, task management, problem solving.
- Entrepreneurship: Concept, need, Entrepreneurial support system e.g. DIC, NABARAD, SIDBI etc. Business Planning, project report preparation.
- Principles of Management, Work Culture, Leadership and Motivation, Legal aspects of business, Human Resource Development, Inventory Management, Financial Management, IPR.

**16. Numerical Ability and General Aptitude Test (5 marks)**

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**Annexure “D”**  
Syllabus  
PHARMACIST-DAWASAZ

**Marks:-150**

**Time:-2.30 Hours**

- |   |           |
|---|-----------|
| 1) Anatomy.                                 | 10 marks. |
| 2) Physiology.                              | 10 Marks. |
| 3) Hygiene.                                 | 05 Marks. |
| 4) Pathology                                | 05 Marks. |
| 5) Family Welfare /maternal & Child Health. | 10 Marks. |
| 6) Basic principles of Ayd / Unani.         |           |
| a. Basic Principal of Ayurvedic Medicine.   | 15 Marks. |
| b. Basic Princiles of Unani Medicine.       | 15 Marks. |
| 7) Pharmacology.                            |           |
| a. Ayurvedic Pharmacology.                  | 10 Marks. |
| b. Unani Pharmacology (Saidla).             | 10 Marks. |
| 8) Medicine.                                |           |
| a. Ayurvedic Medicine.                      | 15 Marks. |
| b. Unani Medicine.                          | 15 Marks. |
| 9) Eye.                                     | 05 Marks. |
| 10) Eye, Nose & Throat (ENT).               | 05 Marks  |
| 11) Gynae & Obs.                            | 10 Marks. |
| 12) Toxicology.                             | 05 Marks. |
| 13) Surgery.                                | 05 Marks. |

- a) Elementary knowledge of locomotor , Digestive , Respiratory , Circulatory , Excretory, Uro-Genital systems & Sensory Organs of Human body .
  - b) Knowledge of number of bones , types of bones, viz. long bones, short bones , flat bones & their locations & joints.
  - c) Knowledge of number of muscles , types of muscles viz. voluntary muscles ,involuntary muscles , particularly gluteal muscles , deltoid muscles , biceps muscles .
  - d) Personal hygiene, sanitation, ventilation, sterilization , disinfections.
- A) Applied aspect of muscles & vessels related with hollow needle method.
- B) Basic knowledge of B.P , its recording & handling of apparatus .
- C) Recording of pulse , respiration & temperature & their relations .
- D) Preparation of blood & sputum slides .
- E) Duties & qualities of Dawasaz , utility of apron .
- 
- a) Definition of pathology
  - b) Different types of vaccine & diseases protected by vaccines , different schedules & techniques of vaccination
  - c) Role of iron folic acid & vitamin -A in MCH programme.
  - d) Different types of Family Welfare Methods
  - e) Basic principles of Ayurveda / Unani :-

1. Ayurvedic :- Dosh ,Datu , Mala , Agni

2. Unani:- Arkan , Akhlat , Mizaz.

- A) Elementary Knowledge of Churan (safoof) , Vati (qurs & hab) , Asava, Arishta, Bhasmas(kushta) , Avehah (Majoon & Khameera), panak (sharbat ) , Kwath (Kadha) & their doses .
- B) Preservation of medicines & various methods of dispensing & labeling of medicines, & dosages of medicines.
- C) Weights & measures (Metric Systems) & conversion of traditional weights & measures in metric Systems.
- D) Brief description of diseases :

Pyrexia(jwar), diarrhoea, dysentery , jaundice , rheumatism , vomiting , asthma , malaria , typhoid , T.B, influenza, pneumonia, bronchitis, upper respiratory infections , gastritis , worm infestations, scabies , ring worm .

Foreign body in Eye, Ear, Nose & throat.

- E) General principles of examination of the patient & methods of lifting and carrying patients , conscious & non conscious .
- A) General Measures to be adopted for :- retention of urine , sun stroke , different bites , (snakes , scorpion , insects , dog ) , dehydration , hemorrhage , shock.  
  
Food poisoning , carbon monoxide poisoning , poisoning due to different drugs viz. kuchla (nux vomica) , Vatsnabh ( aconitie), Sankhia (Arsenic ) , Para (mercury) , Afeem (opium) , Bhang (cannabis indica), Datura (Datura Stramonium).
- B) Asphyxia , techniques of artificial respiration .

- C) Elementary knowledge of pains , Renal Colic , Billiary Colic, Intestinal Colic , Appendicitis, Labour Pains , Dysmenorrhoea.
- D) Elementary knowledge of inflammation, injury , boil / cellulites, abscess , ulcers, fractures, burns & their management.
- E) Techniques of catheterization , enema , stomach wash.
- F) Techniques of different types of bandages, suturing, splints, incisions & sterilization.
- G) Hollow needle techniques.
- H) Signs & symptoms of pregnancy with antenatal & postnatal care.
- I) Names of different instruments & their uses & identification.

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## Annexure “E”

### SYLLABUS FOR DEMONSTRATOR (TRAVEL & TOURISM)

Marks:-150  
Time: - 2.30 Hrs

#### Unit-I (25)

##### **Basic concepts in Tourism and Hospitality**

Tourism terminology , definitions, abbreviations.

Origin and development of Tourism industry.

Types of tourism, components and elements of tourism

Impacts of tourism-socio cultural, economic and environmental.

Types of accommodation, departments, types of rooms, types of plans.

#### Unit-II (15)

##### **Tourism Infrastructure and tourism activities**

Natural resources -mountains, valleys, wildlife sanctuaries and national parks, deserts, lakes and

Rivers.

Cultural resources - Indian culture and society, performing arts-dance and music forms.

Adventure tourism activities : skiing, mountaineering, kayaking, canoeing, gliding, rock climbing.

Golf tourism.

Cruise tourism.

#### Unit-III (25)

##### **Tourism History and Travel geography**

History of India-An overview.

Indian fairs and festivals.

Monuments of India under ASI.

Major religions and popular places of pilgrimage.

Geography, meaning and relevance in Tourism.

Physical geographical features of India.

International dateline, time zones.

Map reading; Tourist map of India; Road, rail and sea routes.

#### Unit-IV (20)

##### **Tourism Management**

Basic concepts, theories and approaches of management -nature, process, functions.

Management levels, managerial skills; social responsibilities and ethics.

Human Resource Development.

Management trends and problems in travel and tourism industry.

Tourism Planning.

Entrepreneurial areas in Tourism and Hospitality.

Law and legislation relating to tourist entry, stay, departure, passport, VISA and health.

Tourist safety and security.

#### Unit-V (15)

##### **Travel and Tourism Marketing**

Evolution of marketing in tourism.

Basic concepts of service marketing; service characteristics of travel and tourism; the P's of marketing .

Tourism market segmentation

Product life cycle, product design-branding and packaging, price, place and promotion.

Measuring and forecasting of demand and supply

Marketing communication, advertising, promotion and Publicity.

Sales and personal selling.

Linkages and channels of distribution.

Market research and its techniques.

## Unit-VI (15)

### **Eco Tourism**

Concept of eco tourism.

Carrying capacity and sustainable tourism development.

Alternate forms of tourism.

Global Code of Ethics for sustainable tourism.

Local Agenda 21.

Environmental act - EIA guidelines. Wildlife Protection act, Forest protection Act.

## Unit-VII (15)

### **Automation in Tourism**

Agency automation, computer reservation system.

Application of internet technology in tourism and hospitality.

e-marketing in Travel and hospitality.

Travel portals.

Property Management System.

M.I.C.E and Automation.

## Unit- VIII (20)

### **Travel agency and Tour Operations**

Tourism organizations; TAAI, UFTAA, PATA, IATO.

Organization structure of a Travel agency and Tour operator.

Functions of Travel agency and Tour operator.

Tour packaging and Itinerary costing.

Documentation.

Requirements for setting a Travel agency.

Travel agency act and other legal issues.

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# Annexure “F”

## *Syllabus* *DENTAL ASSISTANT / JUNIOR DENTAL TECHNICIAN*

**Max time:-150**  
**Time:-2.30 Hours**

### General Human Biology & Disease: -

20 Marks

1. Elementary Physics and Chemistry.
2. Characteristics of living matter.
3. The Structure of living matter.
4. The Tissues
5. Systems and various parts of human body.
6. Development and types of Bones.
7. Bones of Head & trunk.
8. Bones of the Limb.
9. Joints and Articulations
10. Structure and Action of muscles
11. The Chief Muscles of the Body
12. The Blood
13. The heart and Blood Vessels
14. The Circulatory system
15. The Respiratory System
16. The Digestive System
17. The Liver , Biliary system and -----
18. Nutrition and Metabolism
19. Endocrine Glands and Exec-----
20. The Urinary System
21. The Nervous system.

- 22. The Ear.
- 23. The Eye
- 24. The Skin
- 25. The Reproductive System etc.

Dental Anatomy & Physiology Pharmacology, Pathology including Microbiology.

General & Dental Anatomy.

15 Marks

- Elementary Knowledge of the jaws and teeth, Important between deciduous and permanent teeth. Chronology of eruption , elementary knowledge of occlusion of teeth. Relationship of teeth with investing tissues, muscles of mastication facial expressions and elementary knowledge of temporary mandibular joints.

General & Dental Physiology and Histology.

15 Marks

- Elementary knowledge of the structure and function of various dental and oral tissues e.g. gingival, peridontial membrane, alveollan process, cementum, enamel,dentine, mucous-membrance , pulp.
- Salivary glands and functions of saliya, mastication.

General and Dental Pharmacology.

05 Marks

- The rapeutics of drugs commonly used in denisity and their effects. Practical diagnosis, dispensing of drugs.

Dental Radiology

05 Marks

- Technical aspect of Dental Radiograph i.e. the taking processing and mounting of Dental Radiographs , Radiation Hazards and protection against radiation.

### GENERAL DENTISTRY INCLUDING ORAL SURGERY.

40 Marks

Chairside Assistants.

1. Reception of Patient.
2. Lay -out of reception room and Dental Surgery and Hygienist Clinic.
3. Chairside Assistance and Techniques
4. Local anesthesia and equipment.
5. Methods of Sterilization and care of Dental Instruments.
6. Basic principles in surgery.
7. The use of instruments in Dental practice.
8. Examination of Oral Cavity and Charting of teeth etc.
9. Instructions to patients and recalls.
10. 10.Maintenance of Dental Unit/Instrument.

### PROSTHODONTICS WITH COSMETOLOGY.

15 Marks

1. Introduction and applied anatomy.
2. History taking and Examination.
3. Simple surgical preparation, impression taking.
4. Selection of patient.

5. Phonetics and anatomical articulation.
6. Clasp retained partial denture-plan , treatment, design and management.
7. Partially edentulous arches.
8. Connectors- major and minor and functions.
9. Retainers direct and indirect.
10. 10.Dentures functions, biomechanics, Survey, diagnosis, planning ,  
partial and temporary relining, resilient lining , aids to retention and relief.
11. Cosmetology and appearance.
12. Dental Materials and its manipulation.

ORTHODONTICS: -

10 Marks

1. Etiology, Classification and malocclusion.
2. Skeletal maturation, growth, dentition with special reference to endocrines.
3. Classification of dentofacial abnormalities , anthropometrics, cephalometrics.
4. Examination of patient, differential diagnosis and treatment planning .
5. Principle of mechanotherapy

6. Basics about tweed method, twin wire appliance, activators , plates appliances including tissue reaction and evaluation of treatment.

GENERAL HYGIENE, NUTRITION, COMMUNITY WELFARE,  
CONSERVATIVE & PREVENTIVE DENTISTRY  
DENTAL HYGIENE AND ORAL PROPHYLAXIS

15 Marks

1. Definition of Hygiene.
2. Objective of Dental Hygiene.
3. Oral prophylaxis-various methods.
4. Stains on teeth-and their management.
5. Dental Plaque, Dental calculus.
6. Brief description and the role of oral Prophylaxis in Gingivitis, Peridontitis etc.

CLINICALS: -

1. Instruments, technique of Oral Prophylaxis.
2. Polishing of teeth.
3. Topical application of fluorides.
4. Care of Oral Cavity and appliances during treatment of Maxillo-facial cases.

CONSERVATIVE & PREVENTIVE SURGERY.

10 Marks

1. Dental Caries-Prevalence and Prevention.
2. Periodontal Diseases, saliva in relation to Dental Health and diseases.
3. Dental Health & Diseases. Dietary habits and dental Health, Malocclusion, Oral Cancer.

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# Annexure “G”

## SYLLABUS

### “DRAFTSMAN (CIVIL)”

**Marks:-150**

**Time: - 2.30 Hours**

#### **INTRODUCTION-**

**30 marks**

- Drawing is a language of technicians. Drawing office organization. Drawing instruments, equipments materials their use, care & maintenance, safety precautions. Introduction to BIS code of practice and Architectural drawings.
- Importance of lettering, printing of letters and figures sizes, proportion etc. as per BIS code.
- Forms and proportions for single stroke lettering, Lettering stencils.
- Geometrical drawing. Definitions, construction of plain geometrical figures. Orthographic projection, dihedral angles and recommended methods of projection according to B.I.S codes.
- Principles, representation and construction of different types of scales, graphic scales, recommended scales for drawing with reference to BIS codes.
- Dimensioning technique, order of finishing, technical, Sketching, technique of sketching model drawing, orthographic sketching etc.
- Conventional signs and symbols as per B.I. S. Bricks characteristics of good bricks, hollow bricks and manufacture of bricks.
- Tiles, terracotta, stone ware and earthen ware, sand types, characteristics, cement, lime.

#### **INTRODUCTION-**

**40 marks**

- Sequence of construction of a building. Names of different parts of building. Bricks masonary- principles of construction of bonds. Tools and equipment used. Scaffolding.
- Stone masonry, terms used, principles of construction, classification, composite masonry and strength of walls. Timber: Structure- Indian timber uses.



- **Foundation:** Purpose, causes of failure of foundation, bearing capacity of soils, dead and live loads, examination of ground. Types of foundation. Drawing of footing foundation, setting out of building on ground excavation, shorting & simple machine foundations.
- Dampness in building and damp proof course. Method of prevention of dampness in building. Mortar-types, proportion & mixing. Plastering & pointing. White washing & distemping.
- Types of ground floor and methods of constructing granolithic, mosaic, brick tiles etc. floors.
- **Arches**-technical terms forms –brick and stone centering lintel. Market forms and sizes.
- Carpentry joints-terms, Classification of joints.
- **Door**- parts of door, location, sizes, and types.
- Windows and ventilators including steel window and ventilators fixtures and fastenings used in doors. Window and ventilators.
- **Roof**-Pitched roof types, roof covering, component parts of roof. Theory of trussing king and queen post trusses.
- Classification and construction of upper floors including waterproofing, general Principles of construction of masonry & R. C.C
- **Stairs:** Terms, forms, materials planning and designing of Stairs. Details of construction.
- Residential building. Principles of planning. Orientation-local building by law as including BIS code, type of residential building rooms, services, utilities which constitute as dwelling house. Estimating.
- Method and find out quantities for a single storied residential building.
- Perspective view types. Method of construction, technique of colouring and shading.
- Inking & tracing, operating of Leroy set & care of its accessories. Method of preparing Blue prints or Ammonia Prints, Folding of prints.

- Safety precaution & elementary first aid, forge and fuel. Lighting fire Common hand tools-their description and use. Description of plumbing operations.
- Safety precautions & elementary first aid- carpenter's hand tools, their names, description and use. Common joints. Use of nails, screws hinges, dowels etc. preparation of glue & putty, Grinding & sharpening of tools. Their care & maintenance. Use of different types of joints. Properties and uses of different timbers used in construction work.
- Safety precautions and elementary first aid. Artificial respiration and treatment of electrical Shock. Elementary electricity. General idea of supply system. Wireman's tool kits. Wiring materials. Electric fittings. System of wiring. Wiring installation for domestic lighting.

### **Safety precautions:-**

**30 marks**

- Tools their description, uses and their care.
- Details of different bonding wall and section according to BIS
- **Introduction:-** Chain surveying principles, Instruments employed, use, care & maintenance. Field problems. Field book plotting. Introduction to plane table survey, Instruments employed, use, care & maintenance. Prismatic compass. Planimeter and pentagraph.
- Instruments and accessories- their uses and description level book. Differential leveling. Application of chain and leveling to building construction. Plotting, preparation of contour computing earth work by spot level and contours. Setting out work.
- **Road:-** Introduction to roads, general principles of alignment . classification and construction of different types of roads.
- Indian railways-their gauges, construction of permanent ways . Different rail sections. Use of stone balst in railways track. Use and types of sleepers , types of signals, fixtures & fastening in Railway Tracks including base plates and fishplates.

- **Bridges:-** Introduction to bridges, component parts of a bridge. Classification of culverts (I.R.C.)
- Bridges— types, location of bridge. Tunnels rules used for the sizes of different members.

## **Introduction of Water Resources Engineering.**

**25 marks**

- Definition of terms used in irrigation.
- Hydrology like duty delta, intensity of irrigation, Hydrograph, peak flow, runs off, catchments area CCA, crops like, Rabi, Kharif etc.
- Storage/ diversion head works definitions:
- Types of Dam –Masonry, concrete & composite Dams
- Gravity Dam, Arch and Buttress Dams, Earth and Rock fill dams.
  - a. **Reservoir-** types of Reservoirs viz. single purpose and multi-purpose, area/ capacity curves of Reservoir.
  - b. **Canals-** Canals, classification of canals and distribution system, canal structures viz. Head Regulators, Cross Regulators, Canal outlet, Escape etc, Drawing of canal alignment including longitudinal and cross sections of canals with the given data. Type of cross drainage Works viz. Aqueducts. Super passage, level crossing, Irrigation, culvert- Inlets and Outlets, General Description, Element of water power development and various civil engineering structure of Hydro Electric Schemes, i. e., fore bay. Penstock, Turbines, Power House etc.
- Introduction—terms used in public health engineering system of sanitation-house plumbing, sanitary fitting etc. Types of supply system and purification of water.
- Introduction to RCC uses, materials proportions and form work, including bending of bars and construction reference to BIS code Reinforced brickwork. Materials used for RCC, construction selection of materials coarse aggregate, fine aggregate cement – water, reinforcement, characteristics. Method of Mixing concrete-hand and machine, slump test.
- Forms of rivets, proportions. Types of riveted joints.
- Design of Riveted connection, failure of riveted joints.

## **Building Estimating.**

**25 marks**

- Types of estimate, standard method of taking out quantity, labour & material detailed & abstract estimate. Analysis of rates for simple items of work. Schedule of rates, specifications.
  
- Residential building, Planning of building, local by –laws including BIS code Types of residential building rooms , service utilities which constitute a dwelling house. Building by –laws of State urban Development authorities , Improvement trust etc.
  - What is a Computer-
  - General terms used in computer
  - Elementary DOS commands.
  - Window command and their uses
  - Auto CAD commands and use of different Icons of Auto CAD
  - Knowledge about different co ordinate systems
  - Knowledge about 3d Drafting
  - Knowledge about Architectural Desk top and creating modeling.

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# Annexure "H"

## **Syllabus** **Drawing Instructor**

**M.M : 150**  
**Time : 2:30 hrs**

### **A) 30 Marks**

Semiconductors, Diode and its application as rectifiers, various types of diodes, Operation of PNP and NPN transistors.

Digital logic gates, Number System,

Basics of measurement, Voltage, current and resistance measurement, Cathode ray oscilloscope-Its construction and block diagram.

Amplitude, frequency and phase modulation.

Introduction to Printed circuit boards

Thyristors and its applications.

Principle of operation and applications of various types of transducers.

### **B)**

#### **1. Engineering Drawing.**

**15**

##### **Marks**

1. Drawing office practice, Lines and Lettering.
2. Dimensioning.
3. Simple Geometrical Constructions used in Engineering Practice.
4. Scale
5. Principles of projection.
6. Sectional views.
7. Isometric views
8. Development of surfaces.
9. Screw threads and Threaded fasteners.
10. Keys and cotters.
11. Rivets and Riveted joints.
12. Couplings
13. Symbols and conventions.
14. AUTO CAD

#### **2. General Workshop Practice**

**15 Marks**

1. Carpentry Shop: Types of wood, functions and use of commonly used hand tools, care, maintenance of tools and safety measures to be observed. Wooden Joints, their relative advantages and uses.
2. Fitting Shop: Introduction to fitting shop tools, common materials used in fitting shop, Identification of materials.
3. Welding Shop: Introduction to welding and its Importance in engineering practice; Types of welding; common materials that can be welded, Introduction to welding equipment, Electric arc welding, Gas welding, Spot/Seam welding, TIG and MIG welding
4. Electric Shop-1: Common electrical materials, electrical safety measures, common electrical appliances.

5. Smithy shop: Demonstration and detailed explanation of tools and equipments used. Forging operation in smithy shop. Safety measures to be observed in the smithy shop.
6. Sheet metal shop-1: Introduction to sheet metal shop, use of hand tools and accessories.

**C)**

Force system, Moment of force, centre of gravity, simple machines, torsion in shafts/ bars, Moment of inertia, Concept of pure/simple bending, bending moment and shear force.

**10 Marks**

Septic tank, drains and sewers, Bathroom and WC, Road geometrics, Sewerage system, chain surveying, timber and wood based products, stone masonry, doors and windows, stair cases

**10 Marks**

Properties of concrete, transportation of concrete, Analysis of rates, Cross drainage works, Bonds, foundations, flooring, Simple circular curves.

**10 Marks**

**D)**

**30**

**Marks**

information technology, its concept and scope.

Generation of computer, block diagram of computer, input/output devices.

Introduction to operating system such as MS DOS , windows.

Basics of networking- LAN, MAN, WAN and topologies.

MS-office (MS-word, excel and PowerPoint).

Internet and its applications.

**E)**

**30 Marks**

1. Basic Electrical Quantities.

Basic concept of charge, current, voltage, resistance, power, energy and their units

Conversion of units of work, power and energy from one form to another

2. Ohm's law, resistances in series and parallel. Kirchhoff's laws and their applications in solving electrical network problems. Basic idea about primary and secondary cells

3. Introduction to electromagnetism, Magnetic field around a straight current carrying conductor and a solenoid and methods to find its direction, force between two parallel current carrying conductors. Concept of hysteresis, loop and hysteresis loss

4. Faraday's Laws of electromagnetic induction. Lenz's law. Fleming's Right and Left Hand Rule

5. Difference between a.c and d.c. Concept of alternating current and voltage, equation of instantaneous values, average value, r.m.s value, form factor. Power factor and its practical significance. Advantages of 3 phase over single phase system.

6. Basic concept of --- conductors and insulators

7. Various Electrical Symbols used in Domestic and Industrial Installation and Power System as per BIS.

8. Study of electrical safety measures as mentioned in the Electricity Rules and shock treatment including first aid. Tools, accessories and instruments required for

- installation, maintenance and repair work Of Electrical equipment. Different types of wire Joints. Types of Domestic Wiring.
9. Elementary concept of an electrical machine. Comparison of generator and motor. Types of DC machines. Starter-Need and Purpose. Basic Principle and EMF equation of Transformer. Transformer accessories. Types and uses of Single phase induction Motors. Types of Electrical measuring Instruments and their applications.
  10. Main resources of energy, conventional and non-conventional. Substation Components. Power Tariff---Types
  11. Definition: Luminous flux, solid angle, luminous intensity, illumination, luminous efficiency, depreciation factor, coefficient of utilization, space to height ratio, reflection factor, glare, shadow, lux.  
Laws of illumination.

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# **ANNEXURE “I”**

## **Syllabus**

### **Etcher Artist**

**Marks:-150  
Time:-2:30 Hours**

- 1. Plate Making (50 Marks)**
- 2. Offset Plate making equipment, material and accessories. (30 Marks)**
- 3. Introduction of Offset Plate Process ( 50 Marks)**
- 4. Substrates for offset plates merits, limitations And suitability (20 Marks)**

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## ANNEXURE "J"

### SYLLABUS

### ELECTION ASSISTANT (JR SCALE) / ELECTION ASSISTANT

Max time:-150  
Time:-2.30 Hours

#### **Note:**

1. Part "I" will comprise of **Multiple Choice Objective Type Questions**, each carrying **one (01) mark**. Part "II" (Urdu portion) will be of **descriptive nature**.
2. Both the parts viz Part "I" and part "II" will be compulsory
3. For qualifying the written test, It is compulsory for an OM candidate to secure minimum 40% marks and for the candidates belonging to various reserved categories, 35% marks.

### *Part I*

#### *General English*

*30 Marks*

#### 1. Tenses

*Rearranging of jumbled sentences.*

(III) *Narration*

(IV) *Models*

*Articles*

(VI) *Comprehension with blanks to be filled in with Phrases, Pronouns, Homonyms / homophones.*

(VII) *Clauses*

(VIII) *Synonyms and antonyms*

(IX) *Pairs of words and their use in meaningful sentences.*

B) *Idioms and phrases.*

(XI) *Uses of Prepositions.*

#### *General Knowledge*

a) *GENERAL KNOWLEDGE AND CURRENT AFFAIRS*

*30 Marks*

*Important dates in Indian History / Freedom struggle, different dates and events.*

- (II) *First in world (Adventure, Sports, Discoveries). First in India (Adventure, Sports, Discoveries). Popular names of Personalities (Religion, Politics, Scientific discoveries, Geographical, Sports, History)*
- (IV) *The Newspaper world – (Current Dailies & Weeklies of India).*
- (V) *Books & Authors – General*
- (VI) *Languages.*
- (VII) *Capitals & Currencies.*
- (VIII) *United Nations Organisations – Veto Powers  
No. of Countries as its Members.  
Principal organs and their functions.*
- (IX) *SAARC, ASEAN.*
- Everyday Science
- (XI) *World famous Awards (1. in Science)  
(2. in Literature)  
(3. in Sports)*
- (XII) *National Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)*
- (XIII) *The world of Sports.*
- (XIV) *Climate & Crops in India.*
- (XV) *Democratic institutions.*
- (XVI) *Forms of Government.*
- (XVII) *Political & Physical divisions of world & India.*
- (XVIII) *Important rivers & Lakes in India.*
- (XIX) *Current Events of National and International Level.*
- (XX) *Role of Mathematics in Economics.*
- (XXI) *Agriculture in economic development; Industrialization and economic development.*
- (XXII) *Indian Foreign Trade*
- (XXIII) *New economic reforms and growth of foreign trade.*
- (XXIV) *Inflation – Concept and types; Causes and consequences*

**b) GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K 15 Marks**

- Abbreviations, Important dates, popular names of personalities and their achievements/ Contribution (National and International).  
Constitution of J&K – Formation, Fundamental rights, Directive Principles.  
Weather, Climate, Crops, Means of Transport.*
- (IV) *Important power projects and their impact on State Economy.  
Rivers and Lakes.*
  - (VI) *Important Tourist Destinations.*
  - (VII) *History of J&K State.*
  - (VIII) *Historical places of the State and their importance.*
  - (IX) *RTI Act.  
Indus Water Treaty and its impact on State economy.*

*Fundamentals of computer sciences*

*Hardware & Software*

(i) *Input and output devices*

(IV) *Operating system*

*M.S Word, M.S Excel, M.S Access and Powerpoint, Presentation, PDF*

(VI) *E\_mail & Internet, Printing, Scanning*

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**Annexure “K”**  
**SYLLABUS**  
**FOREMAN (AGRICULTURE PRODUCTION DEPTT.) AND**  
**JUNIOR AGRICULTURE EXTENSION OFFICER (JAE0)**

*Time: 02.30 Hrs.*

*Marks: 150*

- Agriculture, its importance in natural economy, factors determining agro ecological zone and geographic distribution of plants. **(15 marks)**
- Important crops of India with special reference to the crops grown in Jammu and Kashmir. Cultural practices for cereals, pulses, oil seeds, sugar and tuber crops. Scientific basis for crop rotation, multiple and relay cropping, inter cropping and mixed cropping. **(20 marks)**
- Soil as a medium of plant growth and its composition, mineral and organic constituents of the soil and their role in crop production, physical, chemical and biological properties of the soil. Essential plant nutrients, their functions, occurrence of cycling in soils, principles of soil fertility and its evaluation for judicious fertilizer use. Organic manures and fertilizers, straight fertilizers, complex and mixed fertilizers manufactured and marketed in India. **(20 marks)**
- Farm planning and resource management for optimal production. Farming systems and their role in regional economies. **(15 marks)**
- Agriculture extension, its importance, philosophy, principles and objectives of agriculture extension. Extension organization at the State, District and Block levels, their structure, functions and responsibilities. Methods of communication, role of farm organizations in extension service. Socio economic survey and status of big, small and marginal farmers and agricultural landless labourers. Farm mechanization and its role in agricultural production and rural employment. Training programmes for extension workers, lab to land programmes. **(25 marks)**
- Principles of plant physiology with reference to plant nutrition, absorption, translocation of nutrients. Diagnosis of nutrient deficiencies and treatment, photosynthesis, respiration, growth and development, auxins and hormones in plant growth. **(15 marks)**
- Important fruit and vegetable crops of Jammu and Kashmir, landscape and floriculture including raising of ornamental plants and design and layout of lawns and gardens. Principles and methods of preservation of important fruits and vegetables. **(10 marks)**
- Elements of Genetics and plant breeding as applied to improvement of crops, development of plant hybrids, important varieties of major crops. **(10 marks)**
- Serious pests and diseases of major crops, causes and classification of plant diseases, principles of pest control, Integrated control of pests and diseases, plant protection equipments, their care and maintenance. Biological control of plant diseases. **(20 marks)**

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**Annexure “L”**  
**SYLLA BUS**  
**VOCATIONAL INSTRUCTOR HORTICULTURE AND**  
**VOCATIONAL INSTRUCTOR FLORICULTURE & LAND SCALPING**

**Marks:-150**  
**Time: - 2.30 Hours**

**Section – I**

**Marks: 40**

**Fruit Science**

Economic importance and classification of horticultural crops, nursery management practices, planting and layout, management of orchards, planting systems and planting densities, nursery techniques and their management. Principles and methods of pruning and training of fruit crops, types and use of growth regulators in horticulture, water management, weed management, fertility management in horticultural crops, intercropping, multi-tier cropping, mulching, bearing habits, factors influencing the fruitfulness and unfruitfulness. Rejuvenation of old orchards, top working, frame working, principles of organic farming.

Need and potentialities for plant multiplication, sexual and asexual methods of propagation, advantages and disadvantages. Seed dormancy (scarification & stratification) internal and external factors. Propagation Structures: Mist chamber humidifiers, greenhouses, glasshouses, cold frames, hot beds, poly-houses, nursery (tools, and implements), uses of growth regulators in seed and vegetative propagation, methods and techniques of cutting, layering, grafting and budding; physiological & bio chemical basis of rooting, factors influencing rooting of cuttings and layering, selection and maintenance of mother trees, collection of scion wood stick, scion-stock relationship, and their influences, Nursery registration act.

Horticultural zones of India, production and export potential, varieties, climate and soil requirements, propagation techniques, planting density and systems, after care, training and pruning. Management of water, nutrient and weeds, special horticultural techniques including plant growth regulators, their solution preparation and use in commercial orchards. harvest indices, harvesting methods, of the following crops. Mango, banana, grapes, citrus, papaya, guava, litchi, loquat. Bearing in mango and citrus, , causes and control measures of special production problems, alternate and irregular bearing overcome, control measures. Rainfed horticulture, importance and scope of arid and semi-arid zones of India. Characters and special adaptation of crops: ber , pomegranate, fig.

Classification of temperate fruits, detailed study of areas, production, varieties, climate and soil requirements, propagation, planting density, cropping systems, after care training and pruning , self incompatibility and pollinizers, use of growth regulators, nutrient and weed management, harvesting, of apple, pear, peach, apricot, cherry, strawberry, kiwi, almond, walnut chest nut. Replant problem, rejuvenation and special production problems like pre-mature leaf fall, physiological disorders.

Orchard management, importance, objectives, clean cultivation, sod culture, Sod mulch, herbicides and inorganic and organic mulches, competitive and complimentary effect of root and shoot, systems of irrigation.

**Section – II**

**Marks: 20**

## **Vegetable Science**

- Classification of vegetable crops.
- Economic and medicinal importance and nutritive value.
- Area and production, exports and imports.
- Description of varieties and hybrids.
- Types of vegetable gardens, kitchen garden; principles of planning and layout.
- Nursery management practices.
- Soil and climate, nutrition, seed rate, preparation of field, transplanting, planting for directly sown/transplanted vegetable crops, spacing, planting systems, water and weed management; nutrient management and deficiencies, physiological disorders and their corrective measures, use of chemicals and growth regulators, harvest, yield, post-harvest handling and storage and marketing and seed production of Tomato, Brinjal, Chilli, Sweet pepper, Potato, Beans, Okra, Bottle gourd, Cucumber, Bitter gourd, Squash, Kale, Cabbage, Cauliflower, Knol-khol, Sprouting broccoli, Lettuce, Garlic, Onion, Leek, Radish, Carrot, Turnip, Beet root, Peas, Broad beans, Cowpea, Spinach, Fenugreek, Fennel and Coriander.
- Factors affecting production and productivity of vegetables.
- Cropping systems.
- Raising of vegetable crops organically.
- Nutrient management through the use of organic manures, vermicomposting, green manuring, biofertilizers.
- Disease and pest management organically.
- Types of protected structures.
- Cultivation of vegetable crops under green houses.
- Important diseases and pests of vegetable crops.
- Integrated disease management in vegetable crops
- Integrated insect-pest management in vegetable crops
- History and scope of vegetable seed industry.
- Principles of vegetable seed production.
- Methods of vegetable seed production.

## **Section – III**

**Marks: 15**

### **Floriculture and Landscaping**

Principles and elements of landscape design, plant material for maintaining flowering calendar in landscaping, symbols, Landscape and Landscaping with basic principles and basic components, walk-paths, bridges, constructed features etc in landscaping.

Scope and importance of commercial floriculture in India, production techniques of ornamental plants like rose, tulip, Narcissus (Daffodils), Liliium, chrysanthemum, orchid, carnation, gladiolus, tuberose, anthurium, marigold

and Gerbera for domestic and export market, growing of flowers under protected environments such as glass house, plastic house etc. Soilless cultivation or hydroponics and its implementation in floriculture. Post harvest management of cut flowers (Pulsing, pre cooling, recut of stem, packaging, storage etc), Flower dehydration techniques for different flower crops.

History, scope of gardening, aesthetic values, Gardens in India, types of gardens, landscaping, historical background, Definition: Floriculture industry, importance, area and production, industrial importance in India. Special types of gardens (bog garden, sunken garden, terrace garden, rock garden, bottle garden, water garden, Childrens garden, roof garden), formal, informal and free style gardens, Mugal garden, Japanses garden, English garden, ornamental trees, shrubs, herbaceous perennials, climbers, creepers, palms, ferns, grasses and cacti succulents for home gardening and landscaping along with different methods of Proagation. Flower arrangement, Bio-aesthetic planning, round country planning, urban planning and planting avenues, schools, villages, beautifying railway stations, dam sites, hydroelectric stations, colonies, river banks, Culture of bonsai. Different methods for turf making including dibbling, turfing, astro turfing, sodding etc. Important grasses for lawns with special features.

Seed production techniques in ornamental annuals, Prospects of seed production in Kashmir. Scope ,Constraints , Agro climatic zones, Selection of Variety, Maintaining Genetic Purity of flower seeds, Production module for seed production in different annual Crops, Summer season annuals and winter seasonals, Botanical description : Common name, Botanical name, local name, family, Origin, pollination type. Nursery raising, Sowing time and Transplanting Isolation distance, Intercultural operations, Rouging, weed Control, Irrigation, Nutrition, Pinching, Staking, Plant protection, Harvesting: Hand Picking, Shattering, yield, Post harvest management, Seed treatment, Packaging and Seed Storage in *D. caryophyllus*, *D. barabatus*, *Lathyrus odoratus*, *Lupinus sp.* and *Impatiens balsamina*, *Antirrhinum sp.*, *Godetia sp.*, *Linaria sp.*, *Lobelia sp.*, *Petunia sp.*, *Phlox sp.*, *Salvia splendens*, *Verbena sp.* and *Viola tricolor.*, *Althea rosea*, *Alyssum sp.*, *Calendula sp.*, *Celosia plumosa*, *Centaurea sp.*, *Chrysanthemum sp.*, *Clarkia sp.*, *Cosmos sp.*, *Coreopsis sp.*, *Gaidardia sp.*, *Gomphrena sp.*, *Helianthus sp.*, *Helichrysum sp.*, *Iberis sp.*, *Impatiens sp.* and *Zinnia sp.*

#### **Section – IV**

**Marks: 15**

#### **Natural Resource Management (NRM)**

Introduction to soil fertility and productivity- factors affecting. Essential plant nutrient elements- functions. Salt affected soils - characteristics and management. Role of microorganisms in organic matter- decomposition. Integrated plant nutrient management. Critical limits of plant nutrient elements and hunger signs. luxury consumption, nutrient interactions, deficiency symptoms,

Water resources of J&K . Importance and consumptive use of water. Available and unavailable soil moisture. Water budgeting. Rooting characteristics and moisture extraction pattern. Water requirement of horticultural crops -lysimeter studies, use of pan evaporimeter. Critical stages of crop growth for irrigation. Irrigation scheduling, different approaches. Methods of irrigation - surface and sub-surface pressurized methods viz., sprinkler and drip irrigation, their suitability, merits and limitations, fertigation. Irrigation management practices for different soils and crops.

Methods of soil and plant sampling and processing for analysis. Soil structure and aggregate analysis. concepts of soil moisture estimation. Methods of estimation of redox potential. Soil fertility evaluation methods.



Soil micro-organisms and their importance. Saline, alkali, acid, waterlogged and sandy soils, their appraisal and management. Chemical and mineral composition of horticultural crops. Leaf analysis standards, index tissue, interpretation of leaf analysis values. Quality of irrigation water.

Introduction, concept. Organic production requirements; Biological intensive nutrient management, organic manures, vermicomposting, green manuring, recycling of organic residues, biofertilizers. Weed management.

## **Section – V**

**Marks: 15**

### **Plant Pathology**

Introduction to the science of Phyto-pathology and its objectives. Classification of plant diseases, symptoms, signs, and related terminology. Parasitic causes of plant diseases (fungi, bacteria, viruses, phytoplasma), and their characteristics. Non-parasitic causes of plant diseases. Survival and dispersal of plant pathogens. Plant disease epidemiology and forecasting. Principles and methods of plant disease management. Fungicide classification based on chemical nature and commonly used systemic, non-systemic fungicides and bactericides. Preparation of fungicidal solutions, slurries, pastes and their applications. Importance of micro organisms. Mushrooms-edible (*Agaricus* and *Pleurotus*) and poisonous types, preparation of culture/spawn and production techniques.

Symptoms, disease development and integrated management of the diseases of fruits, plantation, medicinal and aromatic crops viz. apple, pear (scab, alternaria blotch, powdery mildew, root and collar rot, cankers, pear fabraea leaf and fruit spot, pear fire blight and apple mosaic virus), peach, plum, cherry, apricot, almond, walnut (peach leaf curl, shot hole, powdery mildew, cercospora leaf spot, peach scab, cryptosporopsis leaf & twig blight and walnut anthracnose), grapes (anthracnose, powdery mildew, downy mildew, bunch rot), strawberry (leaf spot, fruit rot), mango (mango malformation, black tip), banana (panama wilt, bunchy top), citrus (citrus canker, tristeza virus), guava (wilt), tea & coffee rust, belladonna (leaf spot, root rot), dioscorea (leaf blight, rust) and pyrethrum (leaf blight and wilt). Important post harvest diseases of pome and stone fruits and their management.

Symptoms, disease development and integrated management of the diseases of diseases of vegetables, ornamental and spice crops viz., tomato & potato (early blight, late blight, septoria leaf spot, damping off), brinjal (phomopsis, alternaria blight, damping off), chilli (wilt, anthracnose, damping off), cabbage, cauliflower, radish & knol-khol (alternaria leaf blight, wire stem, white rust) onion & garlic (downey mildew, stemphylium blotch) pea (powdery mildew), beans (anthracnose, rust, mosaic), cucurbits (alternaria leaf spot, anthracnose, downey mildew, powdery mildew, angular leaf spot), saffron (leaf blight, bulb rot), cumin (alternaria blight), turmeric (rhizome rot, leaf spot), ginger (bacterial wilt, soft rot), rose (black spot, powdery mildew), gerbera (alternaria leaf blight, powdery mildew), tulip (basal rot, penicillium rot, grey mould rot).

## **Section – VI**

**Marks: 15**

### **Agricultural Entomology**

Introduction to phylum arthropoda. Importance of class Insecta. Insect dominance. Definition, division and scope of entomology. Types of mouth parts, antennae, legs and wings. Metamorphosis. Classification of insects up to orders

Definition, economic importance. General characters of plant parasitic nematodes, symptomatology and control of important plant parasitic nematodes of fruits - (subtropical and temperate) and vegetable crops economic classification of insects; Distribution, host range, bio-ecology, injury, integrated management of important insect pests affecting sub-tropical and temperate fruits, Storage insects-host range, bio-ecology, injury, integrated management of important insect pests attacking stored fruits, Toxicology-insecticide residue problems in fruit and their tolerance limits.

Economic importance of insects in vegetable crops. Distribution, host range, bio-ecology, injury, integrated management of important insect-pests affecting vegetable and ornamental crops. Important storage insect - pests of vegetable and ornamental crops, their host range, bio-ecology, injury and integrated management. Insecticidal residue problems in vegetables, Tolerance limit.

Introduction of Bee keeping, important Bee flora, Bee keeping equipments, differentiation of bee castes.

## **Section: VII**

**Marks: 20**

### **Post Harvest Technology**

Maturity indices, harvesting, handling, grading of fruits, vegetables and cut flowers. Factors responsible for deterioration of horticultural produce, physiological and bio-chemical changes, hardening and delaying ripening process. Methods of storage for local market and export. Pre-harvest treatment and precooling, pre-storage treatments. Different systems of storage, packaging methods and types of packages. Types of containers and cushioning materials, vacuum packaging, cold storage. Poly -shrinks packaging.

Importance and scope of fruit and vegetable preservation industry in India, losses in post-harvest operations, unit operations in food processing. Principles and methods of preservation by heat. Canning and bottling. Methods of preparation of juices. Squashes, syrups, cordials, fermented beverages, jam, jelly, marmalade, pickles, chutneys and sauces. Preservation by sugar and chemicals; candies, crystallized fruits, preserves, chemical preservatives, preservation with salt and vinegar. Freezing. Govt. policy on import and export of processed fruits. Food laws.

Classification, functions, deficiency and sources of Carbohydrates, Protein and Lipids. Mineral nutrition: macro and micro-minerals (Ca, Fe and P), function, utilization, requirements, sources, deficiency. Vitamins: functions, sources, deficiency, requirements of water soluble and fat-soluble vitamins. Recommended dietary allowances for various age groups.

## **Section VIII**

**Marks: 10**

### **Biotechnology**

History of biotechnology. Fundamental principles: micro-propagation and scope for commercialization. Application of micro-grafting in horticultural crops, meristem culture, anther culture, pollen culture, embryo culture, callus culture, cell culture, somaclonal variation, protoplast isolation, culture, fusion and applications. Cryopreservation .Genetic engineering. Future scope and present trends. Importance of biotechnology in horticulture.

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**Annexure “M”**  
**SYLLABUS**  
**“HORTICULTURE TECHNICIAN-IV”**

**Marks:-150**  
**Time: - 2.30 Hours**

**Soil-General Concept and importance, soil texture (Social Particles):** **(30 Marks)**

- Types of Soil- Sandy, Clayey and loam soils and their general properties i.e. water retention, aeration, nutrient status,
- Soils organic matter- meaning, sources and importance.
- Soil reaction- meaning, acidic and alkaline soils concepts, their effect on plant growth and management.
- Plant Nutrients- names of essential macro and micro nutrients, important functions of N,P and K, their deficiency symptoms in plants.
- Manures- definition, different, types and importance (FYM, compost, Green Manure).
- Fertilizers- Definition, names of common NPK fertilizers, their nutrient percentage, recommended NPK doses for paddy, maize, sarson, Wheat, Apple and Cherry trees grown in Jammu & Kashmir, their mode and methods of application.
- Soil Testing- and its importance.
- Soil erosion- causes, types of erosion, soil conservation a methods with reference to J&K State.
- Introductory Botany.
- Plant parts, root, leaf, stem, flower and their functions  
Modified plant parts with functions,
- Photosynthesis and Importance.
- Seed Structure, Importance, Conditions necessary for germination, Minimum Standards for seed certification, Breeder foundation and certified seed.
- Self and cross- Pollination.
- Elementary studies of following plant families of economic importance.
  - Graminance (Padey and Maize)
  - Rosacae (Apple)

- Solanacea (Tomato)
- Cucurbitaceae  
(Bottlegourd)
- Leguminacca (Pea)

## **Plant protection fundamentals:**

**(30 Marks)**

- Definition of disease and their causes
- Symptomology (leaf spot, wilt, blight, mildew, scab etc.)  
Different management Methods
- Fungicides: Definitions, types, formulations, names of common fungicides used in Jammu & Kashmir; care in handling.
- Plant protection equipment, spraying and dusting machines, their working, calibration and maintenance,
- Definition of insect pest, general morphology of insect  
Different insect pest viz, borera, bug, gesed, their
- Economic threshold values
- Insecticides, definition, types. Formulation, names of common insecticides used in Kashmir, cadre in handling.
- Insect pest management methods.  
Extension Education
  - Agri. Extension Education Definition and Importance. Principles, Objectives.
  - Qualities and role of Extension Worker
  - Extension teaching Methods; Classification, approaches i.e., individuals, Group, Mass, discussions, pamphlets, bulletins, charts, diagrams, exhibitions, campaigns, Kissan mela.
  - Brief description of IRDP, SFDA, IAQP, NAEP, KVK with social reference to
  - J&K STATE
  - Farm Planning
  - Village Panchayat and its functions
  - Collections of socio- Economic data; kind of schedules

## **Nursery Management and propagation**

**35 Marks**

- Location, Soil, fencing, nearness to water source, layout of seed bed, nursery bed, stool bed, stratification.
- Building nursery store and workshop, Store and workshop, tools and implements. Maintenance of nursery.
- Selection of mother plant for bud wood, root stock.  
Budding, grafting, layering
- Fruit production
- Selection of Orchard site.  
Layout of Orchard.
- Orchard floor Management  
Planting, Training, Pruning.
- Cultural Practices including irrigation.
- Cultivation of Apple, Pear, Cherry, Plum, Grapes, Almond, Walnut, Strawberry, Mango and Guava Under following headings;
- Soil, Commercial varieties, spacing, fertilizers, irrigation, harvesting, yield.

## **Orchard Diseases**

**25 Marks**

- Major diseases, Symptoms, damaging stage and control measures of;
- Apple and pear viz; Scab, Leaf Spot, Mildew Canker. Viz; Stone fruits ( Peach, Plum, Apricot, Cherry, Almond) viz Blight and leaf spots.
- Walnut viz; Mistletoe etc
- Grapes viz; Anthracnose, Mildews. Plants protection –(B)
- Major Insect Pests, damaging stage, Symptoms and control measures with respect to following fruit plants (under Jammu and Kashmir Conditions);
- Apple and Pear viz; Sanjose Scale, Borer, Leaf Minor, Aphids mites, Caterpillars.
- Stone fruits (Peach, Plum, Cherry, Almond, Walnuts) viz; Leaf curling aphids, Chaffer beetle etc.
- Pomegranate viz; Anar butter fly.

## **Physiology (Introductory)**

**15 Marks**

- Introduction to the subject of postharvest technology; nature and extent of postharvest losses in fruits; Factors responsible for post harvest loss. Factors affecting rate of respiration and transpirations; ripening of fruits, Quality attributes of fruits.

## **Fruit Handling and Storage**

**15 Marks**

- Harvesting techniques of fruits, criteria for harvest maturity of fruits, principle and techniques of pre-cooling, advantages of scientific grading; grade standards for apple, advantages of fruit packing; use of various packing materials; principles of refrigerated and controlled atmosphere storage of fruits, transportation of fruits and its problems; Marketing channels of apples.

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## **Annexure “N”**

### **Syllabus**

#### **Incharge Work Cum Production Centre &**

#### **Quality Control Supervisor**

**Marks: - 150**

**Time: - 02:30**

#### **Wood Structure, identification, forest farming**

**30 Marks**

Plant physiology, physical features of different types of wood, natural defects in wood, wood structure, wood chemistry:

Chemical constituents of wood, wood destroying insects, termites and their control, wood destroying fungi, types o wood,

Wood physics.

Density, specific gravity, porosity, fibre saturation point, capillary movement, calorific value, Nursery raising, morphology or bark, stem, leaf, flower, root.

#### **Seasoning & Preservation of wood**

**20 Marks**

Seasoning definition, necessity, seasoning defects, seasoning kilns, types of preservatives, natural durability of timber, fire protection preservatives.

#### **Timber mechanics & Engineering**

**20 Marks**

Physical and mechanical properties of wood, stress, strain hooks law, timber grading, prefabrication techniques, timber joints and mechanical fasteners, prevention of termite attack in buildings by constructional methods.

#### **Wood composites & adhesives**

**10 Marks**

Wood adhesives, types and classification, manufacturing process of plywood, particle board, bamboo mat board.

#### **Wood working & finishing**

**10 Marks**

Various wood working & finishing operations, carving tools and properties, portable power tools, wood working joints, powder coating, paints, oils, varnishes, logging tools.

#### **Product design & fabrication**

**10 Marks**

Concept of design, role of color, figure, texture, grain direction, time motion studies, role of multiple joints, nails, screws, fasteners and dowels, concept of antique furniture.

**Repair & maintenance of wood working machines**

**10 Marks**

Types of maintenance, total predictive maintenance, lubrication, concept of tribology, properties of specific lubricants, use of lubrication equipment like oil gun, grease gun.

**Standardization Quality control, costing accounting**

**10 Marks**

Statistical methods, Measures of central tendency (mean, mode, median), Instrumentation (vernier caliper, micrometer, radius gauge, Dial Indicator) Depreciation, cost estimation, journal, cash book.

**Generic Skills & entrepreneurship Development**

**10 Marks**

Task management (initiation, planning, execution), knowledge in problem solving Entrepreneurship (meaning and its needs), Entrepreneurship support system (district industries, NABARD, state financial corporation).

**Basics of Engineering**

**10 Marks**

Voltage, current, power & energy with their units. Difference between AC & DC, types of pumps & their applications, belt drive, gear drive

**Pollution Control and Waste management**

**10 Marks**

Ecosystem, energy flow in an ecosystem, water pollution, conservation of natural living resources, solid waste management, environmental education and awareness.

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# **Annexure “O”**

## *Syllabus Jr Librarian / Library Assistant*

**Marks:150**

**Time:-2.30 hours**

### **Unit - I**

**Marks 25**

- Types of Libraries and their Features
- Role of Libraries in contemporary Society
- Five Laws of Library Sciences
- Library legislation in different states of India
- Intellectual Property Rights( IPR)
- National and International Library Associations: ILA, IASLIC, IATLIS, SIS IFLA, FID ALA, ASLIB SLA etc.
- National and intercalation Agencies : UNESCO, OCLC, PRRLF, UGC,
- INFLIBNET, DELNET ,etc
- Information Centres, DRTC, ISI, INSDOC( NISCAIR),NASSDOC, DESIDOC, SENDOC, etc

### **Unit - II**

**Marks 25**

- Basic Terminology: call Number, Class Number, Book Number, Isolates
- Classification; concept, purpose and species
- Features of DDC, UDC, and CC
- Five Fundamental Categories
- Notation: Definition and Purpose
- Library Catalogue; Definition and purpose
- OPAC AND WebOPAC
- Cannons of Classification and Cataloguing

### **Unit - III**

**Marks 25**

- Principles of Book Selection
- Selection Tool; Print and Non-Print Materials
- Processing of Documents; Accessioning, Classification, Cataloguing labeling and shelving
- Serials/ Journals; Selection and procurement
- Book Transaction System: Traditional and Modern
- Stock verification of Books; Methods and Tools
- Weeding Process

#### Unit-IV

Marks 25

- Information Sources: Print and No- Print ; Primary, Secondary and Tertiary Sources
- Types of Dictionaries, Encyclopedias
- Geographical and Biographical Sources
- Indexing and Abstracting Sources
- Types of Bibliographies
- Bibliographies Sources

#### Unit-V

Marks 25

- Types of Reference service ,Ready reference service, Long Rang Reference Service
- Reference Librarian: Role Skills and Competences
- User Education/ Information Literacy Skills
- CAS/SDI
- International Information System;
- INIS, AGRIS, MEDLARS/MEDLINE, INSPEC
- Information Seeking Pattern

#### Unit-VI

Marks 25

- Computer Genesis

- Computer Generations
- Primary and Secondary Memory; Storage Devices
- Operating System: MS DOS, Windows, Linux
- Programming; Algorithm, Flowcharts, Languages
- MS-WORD , MS-Excel -Ms-Power point, DBMS,CDS/ISIS, WINISIS

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**Annexure “P”**  
**SYLLABUS**  
**“JR. PHYSIOTHERAPIST”**

**Marks:-150**

**Time: - 2.30 Hours**

**1. A) Anatomy : 10 Marks**

- I. Histology-cell tissue of the body, epithelium, connective tissue, cartilage, bone, blood, lymph, muscles, nervous system.
- II. Osteology- formation, classifications, functions, growth and repair of bones.
- III. Embryology- Ovum, Spermatozoa, Fertilization, organogenesis, Development of various systems.
- IV. Blood Vascular system –arteries, capillaries, veins, lymphatic system.
- V. Respiratory System –anatomy of larynx, trachea and bronchi, the pleura, the lungs.
- VI. Digestive system
- VII. Urogenital system
- VIII. Surface Anatomy.

**C) Neuro- anatomy: Microscopic and gross study of :**

**(08 Marks)**

- I. Peripheral Nerves
- II. Neuromuscular Junction
- III. Sensory Organs
- IV. Spine Cord- Segment & Areas
- V. Brainstem
- VI. Cerebellum
- VII. Inferior colliculi
- VIII. Superior Colliculi
- IX. Diencephalon
- X. The Hypothalamus
- XI. The Hypothalamus
- XII. The thalamus
- XIII. The Cerebral Hemispheres
- XIV. The Corpus Striatum
- XV. The Rhinencephalon
- XVI. The Lateral Ventricles
- XVII. The Meninges

XVIII. The Blood supply of the Brain

2. HUMAN PHYSIOLOGY

09 Marks

- I. Structure of Human Cell
- II. Elementary tissues of Body
- III. Blood , composition, function , Grouping Blood Disorders.
- IV. CVS(Cardio Vascular System) Structure of Heart, Cardiac cycle, Hypertension Cardiac disorders reference to Physiology.
- V. Digestive System –Physiology anatomy, Process of digestion, organs of digestion and disorders.
- VI. Respiratory system –structural Physiology process of respiration
- VII. Excretory system; detailed structure of kidney , funtction, disorders,
- VIII. Elementary knowledge of structure and function of organ of taste, smell, eye and skin.
- IX. Endosionology ; All the endosine glands in detail
- X. Reproductive system; physiology /Anatomy
- XI. Introduction to pathology
- XII. Repair and inflammation XIII.
- XIII. Pathological terms
- XIV. Pathology of various organs
- XV. Role of pathology in physiotherapy
- XVI. Review of pathology changes of various organs and their treatment
- XVII. Drugs action on central nervous system. Anesthetics, alkaloids , narcotics, analgesics, antipyretics, sedatives, anticonvulsants,
- XVIII. Drugs action on cardiovascular System, neuromuscular system, respiratory system.
- XIX. Drugs acting with Peripheral Nervous system
- XX. Chemotherapy
- XXI. Hormones and drugs effecting Endocrine functions
- XXII. Vitamins
- XXIII. Metallic and other Inorganic compounds
- XXIV. Immunological agents
- XXV. Diagnostics.

3. EXERCISE THERAPY & MASSAGE

08 Marks

- I. Mechanical anatomy of motion and posture
- II. Exercise of the shoulder and hip and evaluation
- III. Exercise of the Foot and Hand evaluation

- IV. Exercise of the Knee and elbow and evaluation
- V. Vicarious motion
- VI. Joint motion assessment
- VII. Manual muscle examination
- VIII. The therapeutic gymnasium
- IX. Exercise based on Neuro Physiological Principles
- X. Crutch and cane exercises
- XI. Gait training
- XII. Principles of therapeutic exercise
- XIII. Postures
- XIV. Exercises for healthy persons
- XV. Activities of daily living
- XVI. Exercise of spine
- XVII. Massage
- XVIII. Suspension therapy
- XIX. Neuro muscular co-ordination
- XX. Starting postions
- XXI. Cryotherapy.

#### 4. ELECTRO THERAPT & ACTINO THERAPY

30 Marks

##### A)Medical Electronics

- I. Electrical fundamentals
- II. Electron tubes
- III. Power supplies
- IV. Amplifiers
- V. Oscillators
- VI. Cathocde ray tubes
- VII. Transistors
- VIII. Recorders
- IX. Transducers
- X. Radiation
- XI. Principles of designs and circuits of infrared and ultra violet generators, shortwave diathermy, microwaves, ultrasonics and electrical stimulator
- XII. Signal processes
- XIII. Display devices and indicators
- XIV. Magnetic tape recorders
- XV. Data transmission and processing

##### B)

- I. Physics of heat
- II. Thermometry
- III. Biophysics of diathermy

- IV. Physiology of heat and cold
- V. Thermal radiation, pain and injury
- VI. General principle of thermotherapy
- VII. Conducting heating
- VIII. Luminous and infra-red heating
- IX. High frequency instrumentation
- X. Short wave diathermy
- XI. Microwaves
- XII. Ultrasound therapy
- XIII. Instrumentation of electrotherapy
- XIV. Therapeutic electro stimulation
- XV. Iontophoresis
- XVI. Electrosleep Therapy and anaesthesia
- XVII. Instrumentation for ultraviolet therapy
- XVIII. Physiological affects of Ultraviolet radiation
- XIX. Low frequency currents
- XX. T.N.S.
- XXI. Inteferential therapy
- XXII. Wax Therapy

#### B) ELECTRO –PHYSIOLOGY

- I. Bio-Electricity
- II. Electric potential generated by cell
- III. Electrogenic membrane response
- IV. Chemo responsive eletrogenic system
- V. Propagation of nerve impulse
- VI. Neuromuscular Junction
- VII. Synapse
- VIII. Muscle Electronic
- IX. Electrophysiology of CNS
- X. Chronaxy
- XI. Strength duration curves
- XII. Electromyography
- XIII. Electrical duration curves
- XIV. Nerve conduction studies
- XV. Microneurography
- XVI. Reflex Physiology Monosynaptic and Polysynaptic reflexes
- XVII. Spinograms
- XVIII. Cerebrai evoked potentials.

#### 5. PSYCHOLOGY

05 Marks

- I. Definition and scope of psychology in relation to occupational therapy Physiotherapy.
- II. Methods of studies in Psychology.
- III. Psychological Development of human individual from conception to birth to old age.
- IV. Special needs, characteristics and problems of the various groups of Handicapped.

- V. Learning, factors affecting learning, disabilities techniques to deal with implications of various handicaps in the learning process. Principles of learning for various handicapped groups, Techniques of motivating the handicapped children.
- VI. Adjustment, criteria of mental health, adjustment problems faced by handicapped children, counseling and guidance with special reference to the physically and mentally handicapped.
- VII. Interaction with the family, community and poor groups Communication pattern, specific problems faced by handicapped, development of social skills and sensitivity training.
- VIII. Role of Psychologist in Rehabilitation of the handicapped.

## 6. MEDICINE

12 Marks

### General Medicine including Respiratory Diseases

- I. Infection and antibacterial agents.
- II. Infections and Diseases
- III. Poisons and Venoms
- IV. Chemical and Physical agents carrying diseases
- V. Diseases of Metabolism.
- VI. Deficiency Diseases
- VII. Diseases of Endocrine Glands.
- VIII. Diseases of Digestive System.
- IX. Diseases of Lymphatic System
- X. Diseases of Blood
- XI. Diseases of Cardio-vascular system, Circulatory failure, Ischemic heart disease, Hypertension Pulmonary Heart Diseases, Congenital heart Disease, Peripheral vascular diseases, Embolism and Thrombosis, Collagen diseases.
- XII. Diseases of the Respiratory System-the trachea, the bronchi, the lungs, the diaphragm, the pleura.
- XIII. Diseases of the Kidney
- XIV. Diseases of the Skin sensory disorders, Pigmentary Anemias, vasomotor, Disorders, Dermatitis, Coccal Infections, Fungus Infections, Cutaneous, Tuberculosis, Virus infection, Parasitic infections, Erythematous conditions, Scleroderma of the Hand, Tropical skin diseases.
- XV. Psychiatry:
  - Definition and introduction to Psychiatry in relation to OT & PT Concept of normal and abnormal
  - Behavior disorders:- Causes & management
    - a) Psychoneurotic disorders
    - b) Psychotic disorders
    - c) Psychosomatic disorder
  - Techniques of Therapy  
Psycho Therapy:



- a) Group Therapy
- b) Psychodrama
- c) Behaviour modification

## 7. SURGERY

13 Marks

### A) General surgery and cardio-vascular and thoracic surgery.

- I. Surgical wounds, haemorrhage, shock, water and Electrolyte Balances, Burns.
- II. Surgery of head and neck , alimentary systems and genitor-urinary system x
- III. Neuro Surgery
- IV. Cardio-Vascular and Tghoracic surgery
- V. Gynaecology and obstetrics: pelvic inflammatory conditions, complications during and following pregnancy prolapsed uterus.
- VI. ENT

### B) ORTHOPAEDICS

- I. Postural defects anteroposterior and lateral curve of the spine, the feet genu valgum genu varum.
- II. Back pain
- III. The spine, the intervertebral disease, osteoporosis, Ankylosing spondylitis, spina bifida, torticollis, tuberculosis of the spine and sacro- iliac joints Osteomyehtis, Tumours.
- IV. The Hip congenital dislocation , coxa vara, tuberculos bursits
- V. The knee- injuries to medial ligament, lateral ligament, Semulunar cartilages, crucate ligament, chronic strain , chondromalacia patella, locking rheumatoid Arthritis
- VI. The Foot and ankle painful feet, pesavus, halux, valus gout, painful heel, the ligaments of the ankle tuberculosis,
- VII. The foot and ankle painful feet, pesavcus hallux valgus Gout painful heel the ligaments of the ankle, Tuberculosis, stress fracture
- VIII. The shoulder grirdle pain the shoulder, cervical spondylosis, carpal Tunnel syndrome, cervico Brachial Junction Recurrent dislocation of the shoulder, Tuberculosis.
- IX. The elbow tennis elbow, myositis ossificans, ulnar palsy, tuperculosis.
- X. The wrist and hand tenosynovitis, tuberculosis ganglion, rupture of tendons contractures.
- XI. Pyogenic infection
- XII. Tuberculosis
- XIII. Chronic aerthritis rheumatoid and osteoaetrghritis
- XIV. Diseases of nervous system, ploliomtyelitie, cerebral Palsy
- XV. Common fractures o spine and extremities.
  - Trauma Therapy
  - Play thereaphy
  - Drug Therapy
  - E.C. T.

The role of psychiatrist in dealing with the problems of mental health

- XVI. Paediatrics.
- XVII. Geriatrics
- XVIII. Nursing and Bandaging

C)

- I. Disorders of functions in the context of Pathophysiology & Anatomy
- II. The Cranial Nerves
- III. Infections of the Nervous System
- IV. Disorders of the Cerebral Circulation
- V. Demyelinating diseases of the nervous system
- VI. Extrapyramidal syndrome
- VII. Tumours and the nervous system
- VIII. Conventional and degenerative disorders
- IX. Disorders of the spinal Cord and Cauda Equina
- X. Toxic disorders
- XI. Metabolic disorders
- XII. Deficiency disorders
- XIII. Disorders of the peripheral nerves
- XIV. Disorders of the Muscles
- XV. Disorders of autonomic nervous system
- XVI. Psychological aspects of neurology.

8. PHYSICAL THERAPY IN MEDICAL CONDITIONS 15 Marks

A) PHYSICAL THERAPY IN NEUROLOGICAL CONDITIONS

- 
- I. I. Examination of Neurological disorder and principles of treatment
  - II. Hemiplegia, paraplegia, cerebral palsy, Tabes dorsalis, cerebellar ataxia, extrapyramidal lesions.
  - III. Disseminated sclerosis, muscular atrophy, amyotrophic lateral sclerosis, progressive muscular atrophy, syringomyelia, sub acute combined degeneration of cord
  - IV. Peripheral Nerves lesions
  - V. Neuritis and Neuralgia Brachial sciatica and facial palsy
  - VI. Infections-Poliomyelitis, Meningitis, Encephalitis, Polyneuritis
  - VII. Myopathies
  - VIII. Paediatrics and Geriatrics

B)

- I. Pathological conditions:
  - I. Review of pathological changes and principles of the treatment by physiotherapy of: Inflammation, acute, chronic and suppurative.

- II. Oedema Traumatic, Obstructive, Paralytic, Oedma due to poor muscle and laxity of the fascia.
- II. Arthritis and Allied conditions:
  - i. Osteo arthritis generalized , degenerative and traumatic, spondylosis and disorders
  - ii. Rheumatoid arthritis, stills disease, infective arthritis
  - iii. Spondylitis, Ankylosing spondyliitis
  - iv. Non articular Rheumatism Fibrositism, Myalgia, Bursits, Periathritis etc
- III. Diseases of the Respiratory System:
  - i. Mechanism of Respiration
  - ii. Examination of chest of patient and principles of physiotherapy treatment.
  - iii. Bronchitis, Asthama, Lung Abscess, Bronchiectasis, Emphsema
  - iv. Pleurisy and Empyemam, Pneumonia
  - v. Bacterial Disease-Tuberculosis
  - vi. Tumors
- IV. Common conditions of skin  
Ane, Psoriasis, alopecia, Leucodema, Leprosy etc
- V. Common Cardiac Discords:  
Thrombosism, Embolism, Burger's disease, Arterisclerosis, Thrombophlebitis, Phlebitis, Gangrene, Congestive Cardiac failure, Hypertension, Rheumatic fever etc
- VI. VI. Deficiency Diseases:  
Rickets, Osteomalacia etc.  
Rickets, Osteomalacia etc.
- I. Orthopaedic and fractures
  - i. Fractures and dislocations
  - ii. Types of displacement
  - iii. Classification
  - iv. Immediate , late signs and symptoms
  - v. Changes at fracture site and its surrounding tissues
  - vi. Reasons for union, non-union , delayed union
  - vii. Healing of fractures and factors influencing it
  - viii. Common fractures of upper and lower extremity and their complications
  - ix. Methods of reduction and fixation
  - x. Corrective surgery
  - xi. Arthoplasty, Arthodesis, Osteotomy, Tendon, Transplant, Soft Tissue release, Grafting.
  - xii. Phsiotherapy treatment as applicable to above conditions.
- II. INJURIES
  - i. Soft tissue injuries: synovitis, Capsulitis Volkmann's ischemic contracture etc
  - ii. Crush injuries
  - iii. Repair of injured tendon and nerves
  - iv. Injuries of semilunar cartilage and cruciate ligaments knee: Physicala Therapy treatment as applicable to above conditions.

- III. Deformities:
  - i. Congenital, torticollis, Cartilage and cruciate ligaments knee: Physicala Therapy Treatment as applicable to above conditions
  - ii. Acquired: Scoliosis, Kyphosis, Lordosis, coxa vara, Genu Valgum, Genu varum and pervurvatum, Planus and other common deformities.
  - iii. Other miscellaneous Orthopaedic conditions commonly treated by Physiotherapy.
  - iv. Physical therapy treatment related to above conditions.
- IV. Amputations:
  - i. Traumatic, elective, common sites of amputation in Upper & Lower extremities Advantages and disadvantages physical Therapy treatment as applicable to care of prosthetic training with emphasis on Lower extremity.

## B)

- I. Complications common to all operations: pre and post operative physiotherapy.
- II. Wounds, local infections, ulcers Surgical porocedures related to peripheral vascular disease.
- III. Burns –Degree, Grafting of skin.
- IV. General abdominal surgery and obstertrics and Gyneaecology.
  - a) Thoracis Surgery
    - i. Thoracis incisions pre and post operative treatment and later rehabiltitation of the patent.
    - ii. Lobectomy, pneumonectomy, Thoracotomy, Thoracoplasty
    - iii. Operations on Chest Walls
    - iv. Common complications with emphasis to altectasis Peneumothorax, bronchopulmonary fistula, pre and post operative physiotherapy related to Cardio thoracic surgery
    - v. Operations on Precardium and Heart, Chronic Constructive pericarditis, valvular in competence and Stasis, mitral, valvotomy, tetrolgy of Fallot.
  - b) Ear, Nose and thorat conditions:
  - c) Neuro surgery otitis simusites vaso motor, Rhimorrhoea, tonsillitis  
physiotherapy it above conditions.
    - i. Cranial Surgery:
    - ii. Head Injury, intra cranial abscess, Intracranial Tumours.

- iii. Surgery of spinal Cord and Couda Equina, spina Bifida and its complications, infections of the spine , Epidural Abscess, Tuberculosis, pre and post operative physiotherapy laminectomy, treatment related to above conditions.
- iv. Surgery of peripgheral Nerves , peripheral nerve injuries , pre and post operative physictherpy treatment related to above conditions.
- d) Pre and Post Operative Physiotherapy, related to Plastic Surgery:
  - i. Tendon transplantation in Leprosy, Polio etc. Pre and Post operative Physic therapy treatment related to above conditions.

## 10. Bio-Mechanics and Kinesiology 05 Marks

- I. General Principles
- II. Force, axis, planes, center of gravity levers
- III. Classification of force systems
- IV. The linear force system resultant force equilibrium
- V. Parallel forces in one plane
- VI. Concurrent and genral force system
- VII. Friction
- VIII. The fundamental principles of motion
- IX. Locomotion.

## 11. Disability prevention and Prehabilitation 10 Marks

- I. Introduction
- II. Definition concerned in the phase of disability process
- III. Definitions concerned with cause of impairment, factional limitation and disability
- IV. Rehabilitation and disability prevention
- V. Present rehabilitations services
- VI. Reseration & Legislation for rehabilitation services for the disabled
- VII. Community and Rehabilitation
- VIII. Basic principles of Administration, Budget, Approach Personnel and Space etc.
- IX. Contribution of Social worker towards rehabilitation
- X. Vocational evaluation and goals for disabled.
- XI. Rural rehabilitation in-corporated with PHC's
- XII. Principles of Orthotics & Prosthetics:
  - Lower Extremity orthotics/Upper extremity; orthosis
  - Spinal Orthotics
  - Upper ectremity prosthetics

- Lower Ectrerimity Prosthetics
- XIII. Principle of Communiation: Impariment
  - Speech Production
  - Communication disorders secondary to Brain damage
  - Aphasia and its treatment
  - Dysarthria and its treatment
  - Non- aphasic language disorders
- XIV. Code and Conduct
- XV. Ethics and Management:
  - a. Principles in Management of Social Problems:
    - Social needs of the patient
    - Rehabilitation centre Environment
    - The Social worker as a Member of the Rehabilitation Team
    - Community Resources
  - b. Principles in Management of Vocational Problems:
    - Vocational Evaluation
    - Vocational goals for the disabled
- XVI. Mental Subnormality:
  - Identification and assessment of the mentally subnormal
  - Classification of the Mentally subnormal
  - Common characteristics of different categories of the mentally subnormal
  - Training of the mentally subnormal
- XVII. Definition Scope and importance of A. D. L.
- XVIII. Goals of Self Help Devices
- XIX. Teaching A. D. L. in the following areas:-
  - Wheel Chair Activities Bed Activities
  - Self Care Activites
  - Toilet, Eating Dressing, Miscellaneous Hand Activities.
- XX. Principles of design materials used
- XXI. A. D.L Form
- XXII. A. D. L. Room
- XXIII. Relationship of ADL to occupational Therapy and Physiotherapy
- XXIV. National Health Programmes
- XXV. Bio-Medical Waste.

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# Annexure “Q”

## Syllabus

### JUNIOR STATISTICAL ASSISTANT (JSA)

Marks:-150

Time: - 2.30 Hours

#### **General Knowledge And Current Affairs**

**20 Marks**

- Important dates in Indian History / Freedom struggle, different dates and events.
- First in world (Adventure, Sports, Discoveries).  
First in India (Adventure, Sports, Discoveries).
- Popular names of Personalities (Religion, Politics, Scientific discoveries, Geographical, Sports, History)
- The Newspaper world – (Current Dailies & Weeklies of India).
- Books & Authors – General
- Languages.
- Capitals & Currencies.
- United Nations Organisations – Veto Powers  
No. of Countries as its Members.  
Principal organs and their functions.
- SAARC, ASEAN.
- Everyday Science
- World famous Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- National Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- The world of Sports
- Climate & Crops in India.
- Democratic institutions
- Forms of Government
- Political & Physical divisions of world & India
- Important rivers & Lakes in India.
- Current Events of National and International Level.
- Role of Mathematics in Economics.
- Agriculture in economic development; Industrialization and economic development.
- Indian Foreign Trade
- New economic reforms and growth of foreign trade.
- Inflation – Concept and types; Causes and consequences

## **GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K**

**10 Marks**

- (I) Abbreviations, Important dates, popular names of personalities and their achievements/Contribution (National and International).
- (II) Constitution of J&K – Formation, Fundamental rights, Directive Principles.
- (III) Weather, Climate, Crops, Means of Transport.
- (IV) Important power projects and their impact on State Economy.
- (V) Rivers and Lakes.
- (VI) Important Tourist Destinations.
- (VII) History of J&K State.
- (VIII) Historical places of the State and their importance.
- (IX) RTI Act.
- (X) Indus Water Treaty and its impact on State economy.

## **Statistical Methods**

**20 Marks**

- Primary and secondary data.
- Methods of collecting primary data and
- Preparation of questionnaires-
- Tabulation and compilation of Data
- Measures of central Tendency
- Theory of Probability
- Correlation and regression- Concept and simple applications.
- Theory of Attributes- Basic concepts and their applications,

## **Applied Statistics**

**20 Marks**

- Sampling Techniques- Simple Radom Sampling (with and without replacement), Stratified Sampling,
- Sampling and Non- Sampling errors
- Analysis of Time Series components,
- Theory of Index Numbers: Tests of Index numbers- Wholesale and consumer price Index numbers.
- Demography-Census, its features and functions.
- Vital Statistics- Measures of fertility ,Crude fertility rates, specific fertility rates, gross and net reproduction rates., Measures of Mortality

## **General Economics**

**30 Marks**

- Meaning, Scope and Methodology,
- Theory of consumers demand using indifference curve technique.
- Demand Analysis
- Factor Pricing –Marginal productivity Theory & Ricardian Theory of Rent
- Pricing under various forms of Market.
- Factors of production::factors of production & laws of Production..
- Concept of Economic Growth and its measurement
- Characteristics and problems of developing economy
- Rationale of Planning in Developing Countries.



- Objectives & Strategies of Indian Planning.
- Five Year Plan
- Fiscal and Monetary Policy.
- Inflation & Deflation.
- Concepts of National Income.

### **Knowledge of Computer Applications**

**10 Marks**

- Fundamentals of computer sciences,
- Hardware & Software, Concept of Open Source Technologies
- Input & Output Devices,
- Flow Charts and Algorithms
- Operating System:- MS Word, MS Excel, MS Access, MS Power-Pont ,PDF
- Internet &E-mail
- Concept of Computer Virus & latest Anti-Virus.
- Terms and Abbreviations used in IT

### **Principles of Business Management**

**20 Marks**

- Nature Scope and Significance of Management
- The process of Management
- Process of Control: Production Planning & Control, Quality Control, Inventory Control, Budgetary Control and Cost Control. PERT, CPM and GNATT Charts.
- Personnel Management : Definition, meaning and Scope, Performance appraisal, Evaluation and Monitoring, Human Resource Planning.
- Marketing Management : Definition, Meaning and Scope, Marketing Environment in India, Consumer Behavior, Marketing Strategies, Challenges of Marketing In India, Social Responsibilities & Marketing Ethics.
- Financial Management : Definition, meaning and Scope, , Financial Statement Analysis:, Income & Expenditure Statement, Profit & Loss Account, Balance Sheet, Ratio Analysis, Working Capital Analysis
- Taxation – Meaning, Classification an Principles of taxation.
- Public Finance: Nature Scope and Importance of Public Finance.
- Registration of Companies- Memorandum of Associations, Articles of Associations, Mergers, Acquisition, Diversification, Expansion.
- Zero Based Budgeting & Performance Budgeting.
- Indian Financial System.

### **Mathematics**

**20 Marks**

- Set Theory - Basic Concepts & Applications.
- Matrices & Determinants, Simultaneous Linear Equations- Cramer's Rule.
- Analytical Geometry.
- Differentiation- Basic Concepts (Addition, Product & Chain rule)
- Integration-Reduction & Substitution Method.

- Differential Equations.
- Interpolation & Extrapolation.

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## **Annexure “R”**

### **SYLLABUS FOR THE POSTS OF LEATHER TECHNICIAN**

**Max time:-150  
Time:-2.30 Hours**

#### **LEATHER MANUFACTURE – 30 MARKS**

Flaying, availability, classification and grading, defects, anatomical structure, chemical composition and constituents of hides and skins. Proteins, Curing and Preservation. Pretanning & Post tanning operations.

Different types of tanning (chrome, vegetable, oil, aldehyde, alum, zirconium & combination Tannage). Selection of wet blue. Different Operations carried out in dye house & crust yard. Waterproofing & water repellent agents. Finishing (Machine Operations). Finishes (composition, classification, materials & techniques).

#### **ORGANIC CHEMISTRY- 10 MARKS**

Purification of organic compounds (crystallization) distillation and sublimation

detection of elements(N.S and Halogens). Estimation of Hydrogen and sulphur.

Empirical and Molecular formulae. Isomerism (structural and stereo). Hydrocarbon saturated and unsaturated. Substitution and addition reactions. Chlorination of methane.

Aldehydes, Acids.

#### **FOOTWEAR TECHNOLOGY- 15 MARKS**

Foot Anatomy, Foot abnormalities, foot ailments, cures, Shoe lasts, Size systems, classifications/types of footwear, Designing and pattern cutting, Materials for insole, sole, adhesives, Pattern-layout, Clicking, Tools, equipments and machinery for footwear's, Elementary knowledge of layout, cost analysis and marketing strategy for footwear unit.

#### **TANNERY WASTE MANAGEMENT -20 MARKS**

Sources, composition, types and characteristics of tannery wastes, Hazards created by untreated tannery effluents. Recovery and reuse of chrome from wastes chrome liquor, Elementary idea of different treatment methods ,primary secondary and tertiary, Sludge treatment and disposal, model treatment plants, Various solid wastes, their composition and characteristics ,Environmental problems in handling tannery solid wastes, Utilization and disposal of tannery solid wastes, Manufacture of Glue and Gelatin, Manufacture of Leather boards .

#### **LEATHER TRADE engineering -10MARKS**

Selection of Site, Location - geographical background. Water and Pits. Power supply & boiler. Transmission of Motion and Power ( Belt drive, slipping of belts, power transmitted by belts).Drums

and Paddles. General description/characteristics, foundation, installation, erection and commissioning of various tanning machinery like fleshing, unhairing, scudding, setting, shaving, splitting buffing, & stacking. Principles of working of various finishing machines, Conservation of Energy and Water

## **LEATHER PROCESS TECHNOLOGY -20MARKS**

Study of raw Cow & Buffalo hides and calf skins, their selection / grading as per end use.

General practices in vegetable tanning. Pit tanning and drums tanning. General practices in chrome tanning. Wet white – properties & general methods of manufacture.

Vegetable tanned and Chrome tanned sole leathers. Water proofing of sole leathers.

Belting leathers, Picking band leathers. Football & cricket ball leathers. Nubuck, suede & dry milled leathers. Finished Leathers and Composition of Finishes .Finished Leathers from Hair Sheep and Wool Sheep Skins. Exotic leathers, furs, Morocco, pleated leathers, book binding and chamois leathers. Reptiles leathers from Crocodiles, Lizards, etc. Dressing of fur skins. Up gradation of Leathers. Up gradation through special effects by Embossing, Snuffing & Buffing, General concepts of eco-friendly processing of leathers with cleaner beam house operations, Chrome / mineral free alternative tanning system, processing leathers with cleaner post tanning and finishing operations.

## **TESTING & QUALITY CONTROL- 20 MARKS**

Curing and pre-tanning chemicals including spent liquors. Vegetable tanning materials and extracts. Chrome liquors and Chrome Tanning Components. Aluminum and Physical testing help in analyzing quality of leather as per norms. zirconium tanning salts, pH measurements, indicators and their use in testing. Physical testing of various types of leathers for tensile strength, elongation, dynamic water absorption, abrasion resistance, rub fastness, shrinkage. Use of instruments such as spectrophotometer, colorimeter, ion exchange resins etc in testing of tanning chemicals. Conservation of chemicals and water in the tannery. Analysis of limed and pickled pelts and chemical testing of vegetable tanned /chrome tanned leather. Analysis of chrome leather, vegetable tanned leather. Analysis of combination tanned leather for their constituent. Quality control in leather processing, role of testing in process and quality control specification (physical and chemical) from various types of leathers.

## **ESTIMATING & COSTING- 10 MARKS**

Principles of calculating quantities of materials required for the manufacture of different types of footwear and leather goods, classification and distribution costs raw materials, labor, plant, overheads, wastes, packing and forwarding costs. Estimation of the costs of manufacturing different types of leathers and processes involved in leather manufacture

Price structure and marketing, foreign trade in raw hides and skins. Different types of leathers, stores management, packing and dispatch. Costing of various types of leathers, import, export policies, Incentives, drawbacks.

## **ANALYTICAL CHEMISTRY OF LEATHER MANUFACTURE- 15 MARKS**

Principles of analytic methods employed in analysis of water. Effect of hardness of water on various processes in leather manufacture-Softening of water. Analysis of Various Chemicals and Auxiliaries used in Leather Processing. Salt, lime. Analysis of Fresh and Used Liquors of Beam House Processes. Analysis of Tanning Agents. pH measurement, indicators and their uses in testing. Instrumental Methods of Analysis used in Leather Chemistry. Spectrophotometry and colorimetry, ion-exchange resins etc. In testing of tanning chemicals.

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# Annexure “S”

## Syllabus

LEGAL ASSISTANT, Enforcement Inspector, Presenting Officers, Prosecutor

MAX. MARKS: 150

Time: 2.30 hrs

CONSTITUTIONAL LAW:

20 Marks

- *Salient features of Indian Constitution.*
- *Parliamentary form of Government.*
  
- *President of India- Election, Qualifications, Impeachment, Position, Powers and Privileges.*
- *Cabinet System, Collective responsibility-Individual responsibility, President-Prime Minister relationship*
- *Principles*
  - *Distribution of Legislative Powers (Art. 245, 246 & 254)*
  - *Failure of Constitutional Machinery (Art. 356)*
  - *J&K Special Status (Art. 370)*
  
- *Constitutional Amendments – Methods and limitation (Art. 368)*
- *Freedom of Trade and Commerce*
- *Regulatory and Compensatory measures (Articles 301-304).*
- *Articles 141 and 143.*
- *Appointment and impeachment of the Judges of the High Courts and Supreme Court.*
- *Services under the Constitution- Doctrine of Pleasure (Art. 310), Restrictions (Art. 311)*
- *Fundamental Rights (Articles 14-16, 19-22 and 25-30).*
- *Constitutional remedies. Writ Jurisdiction*
  - *Scope of Article 32*
  - *Scope of Article 226*
- *Directive Principles of State Policy; Relationship between Directive Principles and Fundamental Rights.*
- *Emergency Provisions: Arts 352 to 354, 358 and 359.*

ADMINISTRATIVE LAW:

15 Marks

- *Classification of Administrative Action:*
  - *Definition of*
  - *administrative actions.*
  - *Need for classification*
  
  - *Identification of legislative action*
  
  - *Identification of quasi-judicial and administrative actions.*
- *Legislative powers of administration.*

- *Necessity for delegation of legislative powers and its constitutional validity.*
- *Principles of Natural Justice:*
  - b) *No man shall be judge in his own cause.*
  - c) *No man shall be condemned unheard.*
- *Administrative Discretion*
  - *Need for Administrative Discretion*
  - *Administrative Discretion and rule of law*
  - *Need for safeguards.*
- *Doctrine of Excessive Delegation of Discretion*
  - *Constitutionality of discretionary powers*
  - *Administrative discrimination and arbitrariness*
- *De tournament De preuvoir*
  - *Malafide exercise of discretion*  
*Improper purpose*
  - *Irrelevant considerations*  
*Unreasonableness*
  - *Non-exercise of discretionary powers*
- *Liability of the Government*
  - *Statutory- immunity*
  - *Act of State*
  - *Contractual liability of Government*
  - *Government privileges in legal proceedings*
  - *Public accountability*
- *Ombudsman*
- *Vigilance Commission.*

**MUSLIM LAW:**

**05 Marks**

- *Sources and Schools of Muslim Law.*
- *Nature, scope, validity and classification of marriage under Muslim Law*
- *Polygamy, Divorce and matrimonial remedies under Muslim Law*
- *Dissolution of Muslim Marriage Act, 1939.*
- *Maintenance under section 125 of the Code of Criminal Procedure, 1973.*
- *Maintenance under Muslim Women (Protection of Rights on Divorce) Act, 1986*

**HINDU LAW:**

**05 Marks**

- *Nature, concept and essential conditions of Hindu Marriage.*
- *Grounds of divorce and divorce by mutual consent under Hindu Law*
- *Matrimonial remedies under Hindu Law:*

- Nullity of marriage
  - Restitution of conjugal rights
  - Judicial separation
  - Dissolution of marriage
- Joint family and coparcenary under Mitakshara law
  - Karta-his powers, privileges and obligations.
  - Adoption and Guardianship.

## Law of Contract

15 Marks

- Agreement and contract – Definitions, elements and kinds.
- Proposal and acceptance: their various forms, essential elements, communications and revocation.
- Intention to create legal relationship.
- Consideration: its need, meaning, kinds, essential elements-privy of contract, promissory estoppel, exceptions to consideration; adequacy of consideration; present, past and executory consideration; unlawful consideration and its effects; views of Law Commission of India on consideration; evaluation of the doctrine of consideration.
- Capacity to contract: meaning, definition of minor, necessities supplied to a minor, agreements beneficial and detrimental to a minor affirmation- restitution in cases of minor's agreement-fraud by minor- agreements made on behalf of a minor's agreement and tested-evaluation of the law relating to minor's agreement.
- Quasi-contracts of certain relations resembling those created by contracts
- Damages: kinds- Remoteness of damages- ascertainment of damages.
- Specific performance of contracts.
- Contract that can be specifically enforced.
- Rescission and cancellation.
- Injunction.
- Indemnity: Definition, nature and extent of liability of the indemnifier, commencement of liability of the indemnifier.
- Guarantee: Definition, basic essentials for a valid guarantee contract, Nature and extent of surety's liability, discharge of surety's liability.
- Bailment: Definition, kinds of bailees, duties of bailor and bailee towards each other, rights of bailor and bailee, finder of goods as a bailee.
- Agency: Kinds of agents and agencies; Distinction between agent and servant; Essentials of agency transaction; Various methods of creation of agency; delegation.
- Sale of Goods: Concept of sale as a contract; Essentials of a contract of sale; Implied terms in contract of sale; Rule of Caveat Emptor and the exceptions thereto; Changing concept of Caveat Emptor; Unpaid seller and his rights.

## Company Law

10 Marks

- Concept of registration and incorporation; Memorandum of Association, Doctrine of ultra vires; Articles of Association; Doctrine of constructive notice and indoor management; Prospectus-statement in lieu of prospectus;



- *Promoters- position, duties and liabilities;*
- *Directors- position, appointment, qualifications, vacation of office, removal, resignation, powers and duties of directors; meeting registers, loans, remuneration of directors, role of nominee directors- compensation for loss of office- managing directors- compensation for loss of office-managing directors and other managerial personnel;*
- *Meetings- kinds- procedure- voting;*
- *Debentures- meaning- fixed and floating charge- kinds of debentures- shareholder and debenture holder- remedies of debenture holders.*
- *Protection of minority rights.*
- *Winding up- types- by court- reasonable- grounds- who can apply- power of court-consequences of winding up order- voluntary winding up by members and creditors- winding up subject to supervision of courts- liability of past members- payment of liabilities- preferential payment, unclaimed dividends, winding up of unregistered company.*

#### *Labour Laws*

15 Marks

- *Definition of Trade Union and the right to form the Trade Union.*
- *Legal Control and Protection of Trade Union: Registration, amalgamation, rights, immunities, liabilities and dissolution. Trade Union Funds.*
- *Collective bargaining.*
- *Strikes, lock-outs, lay off and retrenchment. Transfer and closure.*
- *Unfair labour practices.*
- *Disciplinary proceedings.*
- *Labour welfare: concept, classification and importance.*
- *Obligations of employer for health, safety and welfare.*
- *Working hours of adults and Annual Leave with wages.*
- *Employment of young persons: prohibition of employment of children, regulation of employment of young persons.*
- *Concept of minimum wage, fair wage, living wage and need based minimum wage.*
- *Procedure for fixation and revision of minimum wages.*
- *Components of wages: dearness allowance, principle of fixation.*
- *Definition of wage under Payment of Wages Act, 1936 and responsibility for payment of wages.*
- *Concept of employer, workmen, dependent, disablement.*
- *Workmen's compensation: employer's liability for compensation, amount and distribution of compensation.*
- *Employee's State Insurance: benefits, ESI fund and contribution.*

#### *CRIMINAL LAW*

15 Marks

- *Indian Penal Code: General defences (Sections 76-106); Group liability (Sections 34 & 149); Unlawful Assembly, Rioting and Affray; Abetment; Criminal Conspiracy; Criminal Attempt; Offences against body (Sections 299-304, 319-326, 339-343, 349-353 and 359-363); Offences against property (Sections 378, 379, 383, 384, 390-392, 395, 405, 415-417, 425 and 426).*

#### *JURISPRUDENCE*

15 Marks

- *Meaning and scope of Jurisprudence; Nature and definition of "Law"; Schools of Law (Analytical positivism, Natural Law, Historical School and Sociological School); Sources of Law (Legislation,*

*precedents, customs and juristic writings); Rights and duties- concept and co-relationship); Concept of person, Ownership and Possession.*

## INTERNATIONAL LAW AND HUMAN RIGHTS

25 Marks

- *Origin, Development, Definition, Nature and Theories of International Law; Its relation with Municipal Law.*
- *Sources of International Law, Custom. Treaties. General Principles of Law and writings.*
- *Subjects of International Law: State including Recognition of States; Individuals and peoples; International Organizations.*
- *Jurisdiction of States: Territorial, Personal and Universal.*
- *Extradition and Asylum.*
- *Law of State Responsibility.*
- *Peaceful Settlement of Disputes including settlement by ICJ.*
- *Use of Forces under International Law.*
- *Human Rights: Origin, development and nature of Human Rights; International Bill of Human Rights; Regional Systems of Human Rights Law; Protection of Human Rights Act and International Humanitarian Law.*

## ENVIRONMENTAL LAW

10 Marks

- *Environmental Pollution: Meaning and issues.*
- *Constitutional provisions-Art. 14, 19(1)(g), 21, 48A & 51A, right to wholesome environment-evolution and application. PIL and protection of Environment.*
- *Water and Air Pollution Control Acts:*
  - *Standards, CPCB and SPCB, Consent Mechanism, Control Areas and Restraint Orders*
  - *Citizen Suit and Access to Environmental Information*
- *Corporate and Governmental Liability for Environmental Offences*
- *Environmental Protection Act, 1986 and other environmental legislations*
- International Environmental Law and Norms:*
  - *Stockholm Declaration, Global Warming and Ozone Conventions*
  - *Sustainable development, Public Trust Doctrine*
  - *Precautionary Principle, Polluter Pays Principle*
- *Local Environmental Laws and Problems in J&K:*
  - *Forest Act, 1930, J&K Wildlife Protection Act, J&K Forest (Conservation) Act (Summary of the provisions with special emphasis on Forest Dwellers and Forests, medicinal plants and related traditional knowledge)*
  - *Protection of Biodiversity in J&K- Local Laws and Central Acts- Forest (Protection) Force Act*
  - *Preservation and protection of lakes and waterways in J&K- Existing related laws and future needs.*

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Annexure "T"

SYALLABUS  
MINE SURVEYOR

**Marks:150**

**Time:-2.30 hours**

<u>CHAIN SURVEYING</u>		<u>Marks Allocation</u>
1.	Chain Surveying	10
2.	Terms commonly used in Chain Surveying	
3.	Operations in Chain Surveying	
4.	Offsetting	
5.	Examples on limiting length of offset	
6.	Instruments used for setting our right angles	
7.	Conventional Signs or Symbols	
8.	Field Work in Chain Survey	
9.	Recording Field -notes	
10.	Plotting a Chain Survey	
11.	Obstacles in Chaining	
<u>COMPUTATION OF AREAS</u>		10
1.	Calculation of Areas from the plan	
2.	Graphical Method	
3.	Examples on Application of various Formulae	
4.	Instrumental method(Plani meter)	
<u>COMPASS SURVEYING</u>		10
1.	Compass Surveying	
2.	Compass	
3.	Bearing of Line	
4.	Designation of Bearings	
5.	Fore and Back bearings	
6.	Examples on Bearing	
7.	Calculation of Angles from Bearings	
8.	Calculations of Bearings and Angles	
9.	Examples pm Bearing and Angles	
10.	Local Attraction	
11.	Examples on Local Attraction	
12.	Dip of the magnetic needle	
13.	Magnetic Declination	
14.	Calculation of True Bearings	
15.	Examples on Declination	
16.	Field work in compass Surveying	
17.	Plotting a compass Traverse	
18.	Permissible Errors in Compass Surveying	
19.	Closing Error and its Graphical Adjustment	
20.	Precautions in using the Compass	
21.	Sources of Error in Compass work	

22.	Testing and Adjusting the Compass	
CONTOURING		
1.	Contour and Contouring	15
2.	Contour Interval and Horizontal Equivalent	
3.	Characteristics of Contour	
4.	Method of Contouring	
5.	Interpolation of Contouring	
6.	Examples on Contouring	
7.	Drawing the Contour lines	
8.	Tracing the Contour Gradient for Alignment of Roads, Railways and Canals etc	
9.	Finding Volume of Earth work and capacity of a reservoir from Contour Lines	
10.	Uses of Contour maps	
THEODOLITE SURVEYING		
1.	Theodolite	15
2.	Description of a Transit Vernier Theodolite	
3.	Terms use while Manipulating a Transit Theodolite	
4.	Fundamental lines of a Transit Theodolite	
5.	Adjustments of a Theodolite	
6.	Vernier Scale	
7.	Measurement of Horizontal Angles	
8.	Practical Hints on Measuring Horizontal Angles with a Theodolite	
9.	Laying out a Horizontal Angle	
10.	Measuring a Vertical Angle	
11.	Reading Magnetic Bearing of a line	
12.	Prolonging a straight line	
13.	Levelling with a Theodolite	
14.	Examples on Finding the heights of objects	
15.	Traversing with a Theodolite	
16.	Methods of Traversing	
17.	Checks on closed Travers	
18.	Checks on open Traverse	
19.	Permissible Errors in Theodolite Traversing	
20.	Sources of Errors in Theodolite works	
21.	Traverse Computations	
22.	Adjustments of Closed Traverse	
23.	Gales Traverse Table	
24.	Problems in Theodolite Traversing	
25.	Permanent Adjustments of a Transit Theodolite	
TACHEOMETRIC SURVEY		
1.	Tacheometry	
2.	Instruments used in Tacheometry	
3.	Methods of Tacheometry	

4.	The Stadia System of Tacheometry	10	
5.	General Principles of Stadia Tachemetry		
6.	Determination of Stadia Constants of a Tacheometer		
7.	Theory of Anallatic Lons		
8.	Fixed hair method of Stadia Tacheometry		
9.	Movable hair method(Subtense method) of Stadia Tacheometry		
10.	Reduction of Readings Examples of Stadia Tacheometry		
11.	The Tangential system of Tacheometry Examples		
12.	Direct reading Instruments		
13.	Subtense Bar measurements		
14.	Levelling by Stadia		
15.	Field-work in Tacheometri Survey		
16.	Errors in Stadia Surveying		
17.	Degree of Accuracy		
EARTH WORK			10
1.	Measurement of volume of Earth work from cross-section		
2.	Formulae for Areas of X-sections		
3.	Formulae for Volume		
4.	Prisomoidal correction		
5.	Curvature Correction for Volumes		
6.	Measurement of Volumes from Spot levels		
7.	Measurement of Volumes from Contour		
8.	Mass Diagram		
9.	Lift and Lead	70	
1.	Metalliferous Mines Regulations,1961		
2.	Coal Mines Regulations,1957	150	
	Total Marks		

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## Annexure “U”

### Syllabus

#### Survey-Cum-Excavation Assistant/ Assistant Curator / Museum Assistant Garde-II / Documentation Assistant / Senior Conservator (in Culture Deptt.)

Total marks 150  
Time 2:30 hrs

#### Part A. 40 marks

1. Definition of Museum, Museology and Musergraphy.
2. History and development of Indian Museum.
3. Museum Collection.
  - a. Primary source
  - b. Secondary sources
  - c. Documentation system.
  - d. Catalogue.
  - e. Exhibition.
4. What is documentation system.
5. Museum as an educational research institution.
6. Communication policy of the Museum.
7. Importance of design of Museum galleries and Museum building.
8. Museum as an agency of non formal education.

#### Part.B 20 marks

1. Indian treasure true act 1978
2. Antiquates and Art Treasure Act 1971.
3. Ancient Monument and Archaeological sites and remains Act 1958.

#### Part C 20 marks

1. ICOM code of professional ethics.
  - a. Definitions 1.2 Museum Article 2.
  - b. 1.3 Museum profession Article (2)
  - c. 1.4 the governing body.
  - d. 2.1 basic principles of museum governance.
  - e. 2.8 display and special activates.
  - f. 2.10 Museum shop and communication activities.
  - g. 4.3 The accession policy and procedures.
  - h. 6.3 Conservation and restoration of collection.

#### Article: ii Institutional ethics.

- a. Education and community role of the Museum.

#### Article.iii Acquisition to Museum collection.

- a. Collection Policy.
- b. Acquisition of illicit material.
- c. Loan to Museum
- d. Accessioning policy and procedures.
- e. Return and restoration of cultural property.

#### Part D 10 marks

- A. What is the function of ECO Museum.

- B. What is the function of multipurpose Museum.
- C. What is the role of Tribal Museum in tribal community.
- D. What is the importance of Ethnography Museum.

**Part E** **20 marks**

- 1. Describe the circumstance that led to J&K to come into being.
- 2. What types of sources provided the information about the past.
- 3. Indus valley civilization.
- 4. History and Art of Mauryan Dynasty.
- 5. History and Art of SungaS dynasty.
  - a. Stupas
  - b. Chaityas
  - c. Viharas.
- 6. Mahayana phase of Rock cut architecture
  - a. Agnate
  - b. Ellora.

**Conservation.**

**Part I** **10 marks**

Climate and environment (preventive conservation) 10 marks

- 1. Light
- 2. Insects
- 3. Fungus
- 4. Atmosphere.
- 5. Pollution.

**Part II** **10 marks**

Stone objects.  
Metal ceramics and wood

**Part III** **10marks**

Manuscripts  
Textiles.  
Animal Skin.  
Paintings.  
Photographs.

**Part IV** **10 marks**

Assessment Report  
A tool for conservation.  
Preventive conservation.

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# Annexure “V”

## **SYLLABUS** **“PHYSICAL EDUCATION TEACHER (PET)”**

Marks:-150  
Time: - 2.30 Hours

### **Foundation of Physical Education:** **10 Marks**

- Introduction, Definition, Aim and Objectives of Physical Education.
- Role of Physical Education in General Education.
- Modern trends in Physical Education.
  
- Personal qualities and professional qualifications of Physical Educator.
- Character development through Physical Education.
- Development of leadership qualities through Physical Education.
- Sports in Educational Institutions.

### **Psychological and Sociological Aspects of Physical Education**

**10 Marks**

- Growth and Development.
- Effect of Heredity and Environment on Growth and Development.
- Individual and sex difference, Structural and functional difference
- Concept of Learning, theories and laws of learning.
  
- Personality
  
- Socialization Process through Physical Education & Sports.
- Sports as cultural Heritage of mankind, Customs & traditions

### **Anatomy and Physiology:** **10 Marks**

- Major muscles their origin, insertion and actions.
- Skeletal muscles structure and function
- Joints and their classification.
  
- Structure of the heart, systematic, pulmonary and portal circulation.
- Respiratory system.



- Digestive system
- Endocrine and Nervous System

### **Health Education:**

**20 Marks**

- Concept & Objectives of health Education and factors affecting it.
- Personal and School hygiene.
- School health programs.
- Nutrition and Balance diet
- Common communicable diseases its prevention and treatment.
- Drug abuse-alcohol, smoking and Doaping.
- Pollution

### **Tournaments and Teaching Aids:**

**10 Marks**

- Tournaments- meaning and its types.
- Organization of physical education and sports competition at different Levels.
- Fixture for various tournaments,
- Different methods of teaching.
- Steps of effective teaching.
- Types of class formation in teaching and learning process.
- Teaching aids (audio visual Aids)

### **Recreation & Yoga**

**10 Marks**

- Principles and types of modern recreation.
- Theories of recreation. Recreation during ancient and modern India.
- Recreation Programs for different age groups People.
- Difference between work, leisure and play.
- Camping, organization of Camp, its types, layout and activities.
- Preparation and Nature of Mobile Camp
- Meaning, objective of yoga its Origin. Types of yoga, Advantages of Asanas, Precations and effect of Asanas.

### **Officiating and Coaching:**

**40 Marks**

- Concepts of officiating and Coaching
- Modern Trends in Coaching

- Layout of standard track.
- Dimension and marking for track and field events i.e. running, jumping and throwing.
- Rules and their interpretation of track and field events.
- Rules and regulations of different games (football, volley ball, hockey, basket ball, cricket, kho -kho, kabaddi and badminton)
- Sports personalities, sports awards and sports terminologies.

### **Historical Perspective:**

**10 Marks**

- Physical education in India.
- Physical education in Greece.
- Physical education in USA, and Denmark.
- Physical education in Rome and USSR
- Post independence development of physical education in India.
- Contribution of Different Leaders towards Physical Education:  
  
Per Henrik Ling, Johan Bernarhd Basedow, H.C. Buck, G.D. Sondhi, Guts Muth, Pandit Jawahar Lal Nehru.
- International Movements in Sports (Olympics, Asian & Common Wealth Games)

### **Sports Management**

**15 Marks**

- Meaning and Definition of Sports Management. Definition of Organization and Administration.
- Basic principles and theories of Sports Management. Concept of Organisation and Administration, its importance and Guiding principles of Organization.
- Schemes of Physical Education and sports in School, Districts, Colleges and Universities level.
- Supervision in Managements: Methods of Supervision, techniques and Principles of Supervision.
- Teaching methods, types importance and factors effecting lesson Planning Teaching Method Lesson plan.
- Time-Table Management: Principles and factors influencing the time table lesson Plan: Types and values of lesson plan.

### **Sports Management**

**15 Marks**

- Concept of Sports training, its Characteristics and Principles
- Training Methods (circuit, fartlek, continuous, interval, weight and Ploymetrics)

- Development of Different motor abilities (speed, strength, flexibility, Endurance and coordinative abilities)
- Short term and long term Training plan.
- Talent identification
- Principle of exercise, normal load, and over load.
- Principle of use, disuse and over use

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# Annexure “W”

## Syllabus

JUNIOR PHARMACIST/ Jr. ECG TECHNCIAN / Sr. ECG TECHNCIAN /  
HEALTH & FAMILY WELFARE ASSISTANT/ CARE TAKER

**Marks:-150**  
**Time: - 2.30 Hours**  
**10 Marks**

### First Aid and Emergency Health Services

- Outline of the First-Aid
- Structure and functions of the body
- Dressing and Bandages (use of Triangular Bandages and Cotton Roller Bandage, Rubber Bandage and Different types of Dressing).
- Cardio-pulmonary Resuscitation. Wounds.
- Haeomorrhage
- Shock
- Electric Stock
- Different methods of artificial respiration.
- Asphyxia.
- Fractures and Dislocation.
- Unconsciousness and Fainting
- Epilepsy and Hysteria.
- Poisons including food poisoning.
- Common Conditions:
  - Foreign body in ear, eye and nose
  - Cramps
  - Frost-Bite
  - Bites and Stings etc.
  - Epistaxis
  - Snake Bite
  - Dog Bite
- Transport of injured persons
- Use of common medicines

### STERILIZATION/DISINFECTION

**10 Marks**

Physical, Chemical and Mechanical Methods etc. Disposal of contaminated Media, sterilization of syringes, glass wares, apparatus etc. Biomedical waste management.

**SURGICAL INSTRUMENTS, THEIR NAMES & USES,  
PREPARATION OF PATIENT FOR OPERATION, PRE & POST  
OPERATIVE PATIENT CARE  
SURGICAL INSTRUMENTS (Their Names & Uses)  
(Their Preparation & Uses)**

**SURGICAL INSTRUMENTS:**

**05 Marks**

- Instruments for general surgery
- Operation of the face and neck
- Operations of the Nose, Throat and Ear
- Ophthalmic Surgery
- Operations on the Chest
- Operations on the Genito-Urinary Tract
- Gynecological and Obstetric
- Operations Orthopaedic Operations
- Neuro-Surgical Operations
- Operations on the Vascular System
- Trauma Surgery

**PREPARATION OF INSTRUMENTS TRAY: 05 Marks**

- Major procedures tray
- Basic/Minor procedures tray
- Limited procedures tray
- Thyroid tray
- Long instruments tray
- Biliary Tract Procedures tray
- Choledochoscopy tray

- Basic rigid Sigmoidoscopy tray
- Gastrointestinal procedures tray
- Rectal procedures tray

### **GYNECOLOGIC AND OBSTETRIC TRAYS:**

**05 Marks**

- Dilatation of the Cervix and Curettage of the Uterus (D&C) tray.
- Cervical Cone tray
- Laparoscopy tray
- Abdominal Hystrectomy tray
- Caesarian section tray
- Vaginal Hysterectomy tray

### **GENITOURINARY TRAYS:**

**05 Marks**

- Vasectomy tray
- Open Prostatectomy tray
- Kidney tray

### **THORACIC TRAYS**

**02 Marks**

- Mediastinoscopy tray
- Thoractomy tray
- Pcemaker tray

### **CARDIOVASCULAR TRAYS:**

**02 Marks**

- Vascular procedures tray
- Vascular Shunt tray

- Cardiac Procedures tray

## **ORTHOPAEDIC TRAYS: 05 Marks**

- Basic Orthopaedic procedures tray
- Minor Orthopaedic procedures tray
- Hip replacement tray
- Knee or Ankle Anthroscopy tray

## **NEUROLOGIC PROCEDURES TRAY**

**02 Marks**

- Craniotomy tray
- Laminectomy tray

## **OTORHINOLARNGOLOGIC (ENT TRAYS): 02 Marks**

- Basic Ear procedures tray
- Nasal Procedures tray
- Myringotomy tray
- Tonsillectomy and Adenoidectomy tray
- Tracheostomy tray
- Antral Puncture tray

## **OPHTHALMIC TRAYS: 05 Marks**

- Basic Eye procedures tray
- Eyelid and Conjuntional procedures tray
- Basic Eye Muscle procedures tray
- Dacryocystrohinostomy tray
- Corneal Procedures tray
- Cataract Extraction and Lens procedures tray
- Glaucoma procedure tray

- Basic Eye procedures Microscope tray
- Retinal procedures tray

**PEDIATRIC TRAYS: 05 Marks**

- Pediatric major procedures trays
- Pediatric minor procedures trays
- Pediatric Gastrointestinal procedures trays

**PREPARATION OF PATIENT FOR OPERATION, PRE & POST  
OPERATIVE PATIENT CARE**

**15 Marks**

**PRE-OPERATIVE CONSIDERATIONS:**

- Psychological support of the surgical patient.

**05 Marks**

**PROTECTION OF THE PATIENT IN SURGERY:**

**08 Marks**

- Admission Procedure
- Transfer Procedure Position
- Environmental Controls
- Electro Surgery
- Operative Records
- Counting Procedure
- Sterilization
- Emergencies and Disasters

**SAFETY FOR MEDICAL ASSISTANT, PHARMACIST IN A OPERATION**

**THEATRE:**

**04 Marks**

- In service education
- Body Mechanic



- Fatigue factors
- Radiation Safety
- Infection control
- Chemical hazards.

## **Anatomy and Physiology**

### Course Content

Unit-I Introduction to terms used

Marks 25

Unit-II Organization of body

- |                    |                                 |
|--------------------|---------------------------------|
| • Cell:            | Types, Structures and Functions |
| • Tissues:         | Types, Structures and Functions |
| • Glands:          | Types & Functions               |
| • Membranes:       | Types & Functions               |
| • Organs & Systems |                                 |

Unit: - III Skeletal systems

- Bones: types, structure, functions
  - Axial Skeleton
  - Appendicular skeleton
- Joints:- Definition structure and functions

Unit-IV Muscular system

- Position and action of chief muscles of the body.

Unit-V Cardio-Vascular Systems

- Heart: Position, Structure differences, name and position of chief blood and lymph vessel and function
- Circulation of Blood: systemic pulmonary and portal circulation coronary circulation
- Cardio-Vascular System
- Heart: position, structure, conduction system, functions and cardiac cycle.
- Blood vessel:- types, Structural differences, name and position of chief blood and lymph vessel and functions
- Circulation of Blood: Systemic Pulmonary and portal circulation coronary circulation
- Blood composition and functions, blood groups and RH factor Blood Pressure and Pulse

#### Unit-VI Lymphatic system

Lymph vessels, glands ducts and lymph circulation, lymph tissues in the body , Spleen and reticulo-endothelial system

#### Unit-VII Respiratory system

- Structure and functions of respiratory organs
- Physiology of respiration Characteristics of normal respiration and its deviations

#### Unit-VII Digestive system

Structure and function of organs of digestion

#### Unit-VII Process of digestion and absorption

Metabolism: meaning and metabolism of food constituents.

#### Unit-IX Excretory Systems

Organs of Excretion such as –Lungs colon, Kidney and skin

Structure and function o organs of urinary systems

Structure and functions of the Skin

Fluid and electrolyte balance

#### Unit-IX Nervous system

- Types, structure and functions of neuron.
- Central Nervous system; Structure and functions
- Autonomic Nervous system: Structure and functions

#### Unit-X Endocrine system

Structure and functions of pituitary, pancreas, thyroids-parathyroid, thymus and supra renal glands

#### Unit-XII Sense Organs

Structure and function of eyes, ear, nose and tongue  
Physiology of vision, hearing and equilibrium

#### Unit-XIII Reproductive system

- Structure and functions of female reproductive and accessory organs Process of reproduction, menarche, menstrual cycle and menopause
- Reproductive health
- Structure and function of male reproductive organs.

Applied physics and chemistry

#### Unit-I Unit and Measurement

- Introduction
- Units of length
- Unit of Mass
- Unit of Equivalent
- Principles of Physics

#### Unit-II Mater

- States of matter
- General properties of solids
- General properties of liquids
- Practical Application

#### Unit-III Mechanics

- Centre of Gravity
- Archimedes principle
- Traction
- Friction
- Levers and pulleys

#### Unit-IV Pressure

- Introduction
  - Concept of pressure
  - Hydrostatic pressure
- Atmospheric pressure
- Barometer
- Siphon
- Effects of changes in atmospheric
- Pressure on Human Body
- Practical Application

#### Unit-V Heat

- Production of Heat
- Measurement of Temperature
- Clinical Thermometer
- Transmission of
- Heat Application of
- Heat Sterilization

#### Unit-VI Ionizing and Radiation

- Radioactivity

- Radioisotopes
- Clinical Uses of Radioisotopes and
- Radio Elements
- Radiation Hazards

## Chemistry

Unit I Oxygen

Unit II Water

Unit III Solutions

Unit VI Ionization

Unit VI Acids and Bases

Unit VI Salt

Unit VII Metals and Non -Metals

## Nutrition

Marks 10

Unit Introduction

- Changing concepts-foods habits and customs
- Relationship of nutrition to health

Unit II Food

- Constituents
- Normal Requirements Sources
- Deficiencies

Balance Diet Unit III Normal dietary requirements and deficiency diseases of each of the constituents of food

- Factors affecting selection and planning of meals
- Method of calculating normal food requirements
- Low cost menu

Unit VI Community Nutrition

Marks

20

- Concept of community nutrition

- Nutritional needs for special groups i.e., infants, children, pregnant women, lactation mothers, old people etc.
- Nutrition education: needs and methods
- Substitute for non-vegetarian food
- Methods of improving an ill-balanced diet
- Community nutrition programme
- Food hygiene and law related to food.
- Sterilization/Disinfection/Bio-Medical Waste/ sepsis, Asepsis
- Natural, Physical, Chemical and Mechanical method etc
- Community Health

#### Public Health and Hygiene

- Modern concept of public health
- Comprehensive Health care
- Five year plans, priorities allocation of medical and health services
- Health and family planning organizations set up at the nation the state, the District and Block levels
- Functions of primary Health Centre , CHC Distt. Hospital and Sub centers.

#### Unit-II Epidemiological Methods Approaches and investigations

#### Unit-III Health Education

- Health Education(Information, Education and Communication)
- Principles Ethics, Attributes of Health Educator
- Various Methods of Health Education

#### Unit-IV National Health Programme

- National Malarial Eradication programme
- National leprosy Eradication programme

- National tuberculosis control programme
- National Aids control programme
- National programme for control of Blindness
- National iodine Deficiency Disorders programme
- National Universal Immunization Programme
- National Family Welfare programme
- National Guinea-Worm Eradication programme
- National Cancer Control Programme
- National filarial Control Programme
- National Water Supply and Sanitation Programme

Unit V Records Keeping and vital statistics

Unit -VI Minor Ailments

- Classification,, early detection and management
- Standing instructions/orders

Unit -VI Environmental Hygiene

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# **Annexure “X”**

## *Syllabus* **PHOTO LIBRARIAN**

**Marks: 150**  
**Time:-2.30 hours**

### **Unit-I** Marks 25

- Types of Libraries and their Features
- Role of Libraries in contemporary Society
- Five Laws of Library Sciences
- Library legislation in different states of India
- Intellectual Property Rights( IPR)
- National and International Library Associations: ILA, IASLIC, IATLIS, SISIFLA, FIDALA, ASLIB, SLA etc
- National and intercalation Agencies : UNESCO, OCLC, PRRLF, UGC, INFLIBNET, DELNET ,etc
- Information Centres, DRTC, ISI, INSDOC( NISCAIR), NASSDOC, DESIDOC, SENDOC, etc

### **Unit-II** Marks 25

- Basic Terminology: call Number, Class Number, Book Number, Isolates
- Classification; concept, purpose and species
- Features of DDC, UDC, and CC
- Five Fundamental Categories
- Notation: Definition and Purpose
- Library Catalogue; Definition and purpose
- OPAC AND WebOPAC
- Cannons of Classification and Cataloguing

### **Unit-III** Marks 25

- Principles of Book Selection
- Selection Tool; Print and Non-Print Materials
- Processing of Documents; Accessioning, Classification, Cataloguing labeling and shelving
- Serials/ Journals; Selection and procurement
- Book Transaction System: Traditional and Modern



- Stock verification of Books; Methods and Tools
- Weeding Process

#### Unit-IV

Marks 25

- Information Sources: Print and No- Print ; Primary, Secondary and Tertiary Sources
- Types of Dictionaries, Encyclopedias
- Geographical and Biographical Sources
- Indexing and Abstracting Sources
- Types of Bibliographies
- Bibliographies Sources

#### Unit-V

Marks 25

- Types of Reference service ,Ready reference service, Long Rang Reference Service
- Reference Librarian: Role Skills and Competences
- User Education/ Information Literacy Skills
- CAS/SDI
- International Information System;  
INIS,AGRIS,MEDLARS/MEDLINE,INSPEC
- Information Seeking Pattern

#### Unit-VI

Marks 25

- Computer Genesis
- Computer Generations
- Primary and Secondary Memory; Storage Devices
- Operating System: MS DOS, Windows, Linux
- Programming; Algorithm, Flowcharts, Languages
- MS-WORD , MS-Excel -Ms-Power point, DBMS,CDS/ISIS, WINISIS

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## Annexure “Y”

# SYLLABUS

## Provident Fund Inspector

Marks:-150  
Time: - 2.30 Hours

### **General Knowledge And Current Affairs**

**20 Marks**

- Important dates in Indian History / Freedom struggle, different dates and events.
- First in world (Adventure, Sports, Discoveries).
- First in India (Adventure, Sports, Discoveries).
- Popular names of Personalities (Religion, Politics, Scientific discoveries, Geographical, Sports, History)
- The Newspaper world – (Current Dailies & Weeklies of India).
- Books & Authors – General
- Languages.
- Capitals & Currencies.
- United Nations Organisations – Veto Powers
- No. of Countries as its Members.
- Principal organs and their functions.
- SAARC, ASEAN.
- Everyday Science
- World famous Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- National Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- The world of Sports
- Climate & Crops in India.
- Democratic institutions
- Forms of Government
- Political & Physical divisions of world & India
- Important rivers & Lakes in India.
- Current Events of National and International Level.
- Role of Mathematics in Economics.
- Agriculture in economic development; Industrialization and economic development.
- Indian Foreign Trade
- New economic reforms and growth of foreign trade.
- Inflation – Concept and types; Causes and consequences

### **GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K**

**10 Marks**

- Abbreviations, Important dates, popular names of personalities and their achievements/Contribution (National and International).
- Constitution of J&K – Formation, Fundamental rights, Directive Principles.
- Weather, Climate, Crops, Means of Transport.
- Important power projects and their impact on State Economy.
- Rivers and Lakes.
- Important Tourist Destinations.
- History of J&K State.
- Historical places of the State and their importance.
- RTI Act.
- Indus Water Treaty and its impact on State economy.

**Statistical Methods****20 Marks**

- Classification and Tabulation of Data
- Measures of central Tendency and Dispersion their relative merits and demerits.
- Theory of Probability
- Elementary Knowledge of Theoretical Distributions (Binomial, Poisson and Normal).
- Correlation and regression- Concept and definition and simple applications.
- Theory of Attributes- Basic concepts and their applications,
- Co-efficient and Association and Coefficient of Contingency.
- Hypothesis Testing- Chi Square Test & T-Test.

**Applied Statistics****20 Marks**

- Sampling Techniques- Simple Radom Sampling with and without replacement,
- Stratified Sampling,
- Ratio and Regression estimates,
- Cluster Sampling and Systematic Sampling,
- Sampling and Non- Sampling errors
- Analysis of Time Series components,
- Measurement of Trend and Seasonal variation.
- Theory of Index Numbers: Tests of Index numbers- Wholesale and consumer price Index numbers.
- Interpolation and Extrapolation.
- Demography-Census, its features and functions.
- Methods of Census taking.
- Vital Statistics- Measures of fertility ,Crude fertility rates, specific fertility rates, gross and net reproduction rates., Measures of Mortality

**General Economics****30 Marks**

- Meaning, Scope and Methodology,
- Theory of consumers demand using indifference curve technique.
- Consumer Surplus-Basic concept & measurement.
- Theory of distribution:- Marginal productivity Theory, Ricardian Theory of Rent, Kenysian Theory of Interest.
- Pricing under various forms of Market.

- Theory of production:- Returns to Scale & Returns to Factor
- Factors of production & Production functions.
- Concept of Economic Growth and its measurement
- Characteristics and problems of developing economy- Demography and economic development.
- Rationale of Planning in Developing Countries.
- Poverty Concepts & Measurement.
- Unemployment- Concept & Measurement.
- Objectives & Strategies of Indian Planning.
- Problems of resource mobilization- Successes & Failures.
- Decentralization & Role of PRIs.
- Planning for Inclusive Growth & Development Schemes.
- Fiscal and Monetary Policy.
- Inflation & Deflation.
- Concepts of National Income.
- RBI and Developmental Banks.
- SEBI, Foreign Trade, Balance of Payments
- Deficit Financing.

### **Computer Applications**

**10 Marks**

- Fundamentals of computer sciences,
- Hardware & Software, Concept of Open Source Technologies
- Input & Output Devices,
- Flow Charts and Algorithms
- Operating System:- MS Word, MS Excel, MS Access, MS Power-Point ,PDF
- Internet & E-mail
- Concept of Computer Virus & latest Anti-Virus.
- Terms and Abbreviations used in IT

### **Principles of Business Management**

**20 Marks**

- Nature Scope and Significance of Management and Administration. The modern concept of Management.
- The process of Management
- Process of Control: Production Planning & Control, Quality Control, Inventory Control, Budgetary Control and Cost Control. PERT, CPM and GNATT Charts.
- Personnel Management : Definition, meaning and Scope, Performance appraisal, Evaluation and Monitoring, Human Resource Planning.
- Marketing Management : Definition, Meaning and Scope, Marketing Environment in India, Consumer Behavior, Marketing Strategies, Challenges of Marketing In India, Social Responsibilities & Marketing Ethics.
- Financial Management : Definition, meaning and Scope, , Financial Statement Analysis:, Income & Expenditure Statement, Profit & Loss Account, Balance Sheet,

Ratio Analysis, Working Capital Analysis, Fund Flow Statement, Cash Flow Statement, Capital Budgeting/Financial Leverage, Price level Accounting, Cost of Capital & Capital Structure , Issue of Shares & Debentures, Dividend Policy, Bonus , Share Markets: Primary & Secondary, Inventory & Receivable Management, Budgeting & Budgetary Control, Standard costing & Cost Sheets, Marginal Costing and Break Even Analysis, Differential Cost Analysis.

- Income Tax : Calculation of Income Tax-Salary
- Public Finance: Nature Scope and Importance of Public Finance.
- Registration of Companies- Memorandum of Associations, Articles of Associations, Mergers, Acquisition, Diversification, Expansion.
- Zero Based Budgeting & Performance Budgeting.
- Indian Financial System.

## **Mathematics**

**20 Marks**

- Set Theory - Basic Concepts & Applications.
- Matrices & Determinants, Simultaneous Linear Equations- Cramer's Rule.
- Analytical Geometry.
- Differentiation- Basic Concepts (Addition, Product & Chain rule)
- Optimization using Differential techniques.
- Integration-Reduction & Substitution Method.
- Linear Differential Equations.
- Differential Equations Existence theorem for the solution of  $dy/dx = f(x,y)$ .
- Interpolation, Extrapolation & Inverse interpolation.

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# Annexure "Z"

## Syllabus

### Finishing Master / Quality Control Inspector

MM: 150 Marks

TIME: 2:30 HRS

1. Introduction to textile – fibre, yarn, and fabric (30 Marks)
  - a. Classification fo important textile fibres based on their origin and constituents
  - b. Important properties of fibres – cotton, wool, silk, and artificial fibres
  - c. Physical and Chemical properties
  - d. Need and importance of identification of textile fibres.
  - e. Care of cotton, wool, silk
2. Yarn Processing (25 Marks)
  - a. Elementary Knowledge of spinning of – cotton, wool, silk.
  - b. Chemical spinning – Melt spinning, Dry spinning, Wet spinning .
  - c. Types of yarns and their properties – simple yarns:- single, ply, cord.  
Novelty yarns:- slub, boucle, chenille, nubs, corkscrew, grindelle.
3. Weaving Fundamentals (25 Marks)
  - a. Types of looms – conventional looms, automatic looms, shuttles loom.
  - b. Basic weaves – plain, twill, satin and sateen.
  - c. Weaving Defects.
4. Finishes (25 Marks)
  - a. Introduction, object and its importance
  - b. Classification of various finishes
  - c. Mechanical and chemical finishes
5. Application of colour (20 Marks)
  - a. Dyeing - Definition, stages of dyeing
  - b. Dyeing of – fibre, yarn, piece and garment dyeing
6. Printing (25 Marks)
  - a. Definition, and methods and types of printing techniques
  - b. Direct: block, Screen, Resist
  - c. Batik: tie and dye

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# ANNEXURE “A1”

## Syllabus for written test (Objective Type) for the posts of Sr. Grade Nurse

Marks: 150  
Time:-2.30 hours

### Anatomy

Marks 10

- Introduction to Anatomical terms organization of the human body
- The Skeletal System
  
- The Muscular System
- The Nervous system
- The sensory organs
  
- Circulatory and lymphatic system
- The Respiratory System
  
- The Digestive System
  
- The Excretory System(Urinary)
- The Endocrine system
  
- The Reproductive System including breast

### Physiology

Marks 10

#### Cell Physiology

- Skeletal System
- Muscular System
- Nervous Systems
- Circulatory system
- Respiratory system
- The Digestive system
- The excretory system
- The sensory organs
- The endocrine system
- The reproductive system
- Lymphatic and immunological system

### Nutrition

Marks 05

- Introduction
- Carbohydrates
- Fats
- Proteins
- Energy
- Vitamins
- Minerals
- Water electrolytes
- Cookery rules and preservation of nutrients
- Balanced diet
- Role of nurse in nutritional programmes

## Biochemistry

Marks 05

- Introduction
- Structure and functions of cell membrane
- Composition and metabolism of carbohydrates
- Composition and metabolism of lipids
- Composition and metabolism of Amino acids and proteins
- Composition of Vitamins and minerals
- Immunochemistry

## Nursing Foundation

Marks 20

- Introduction
- Nursing as profession
- Hospital admission and discharge
- Communication and Nurse patient relationship
- The Nursing Process
- Documentation and Reporting
- Vital signs
- Health Assessment
- Machinery Equipment and linen
- Meeting needs of patients
- Infection control in Clinical setting
- Administration of Medications
- Meeting special needs of the patient

## Psychology

Marks 05

- Introduction
- Biology of behavior
- Cognitive process
- Motivation and emotional processes
- Personality



- Developmental Psychology
- Mental hygiene and mental Health
- Psychological assessment tests

## Microbiology

Marks 05

- Introduction
- General characteristics of Microbes Infection control
- Pathogenic organisms Immunity

## Sociology

Marks 05

- Introduction
- Individual
- Culture
- Social groups and processes
- Population
- Family and Marriage
- Social Stratification
- Types of communities in India (Rural, Urban, and Regional)
- Social Change
- Social Organization
- Social control
- Social Problems

## Pharmacology

Marks 05

- Introduction to pharmacology
- Chemotherapy
- Pharmacology of commonly used antiseptics, disinfectants and insecticides
- Drugs action on G.I. system
- Drugs used on Respiratory systems
- Drugs used on urinary system
- Miscellaneous
- Drugs used on skin and mucous membranes
- Drugs action on Nervous system
- Cardiovascular drugs
- Drugs used for hormonal disorders and supplementation, contraception and medical termination of pregnancy
- Introduction to Drugs used in alternative system of medicine

## Pathology

Marks 2<sub>1/2</sub>

- Bronchial asthma
- Cardio-vascular system
- Gastro intestinal Tract
- Liver Gall bladder pancreas

- Kidney urinary tract
- Male genital system
- Female genital system
- Cancer Breast
- Central Nervous system
- Metastatic tumour
- Skeletal system
- Clinical Pathology
- Examination of body cavity fluids, transudates and exudates
- Urine and faeces

## Genetics

Marks 2<sub>1/2</sub>

- Introduction
- Maternal prenatal and genetic influences on development of defects and diseases
- Genetic testing in the neonates and children
- Genetic conditions of adolescents and adults
- Services related to Genetics

## Medical Surgical Nursing (ADULT INCLUDING Geriatrics)-I

Marks 10

- Introduction
- Common signs and symptoms and management
- Nursing management of patients (adults including elderly) with respiratory problems
- Nursing management of patient adults including elderly) with blood and cardio vascular problem
- Heart
- Nursing management of patient adults including elderly with genitor- urinary problems
- Nursing management of disorders of male( adults including elderly) reproductive system
- Nursing management of patient( adults including elderly) with disorders of endocrine system
- Nursing management of patient (adults including elderly) with disorder of integumentary system
- Nursing management of patient adults including elderly) with musculoskeletal problems
- Nursing management of patient adults including elderly with immunological problems
- Nursing management of patient adults including elderly) with communicable Diseases
- Peri operative nursing

## Community Health Nursing-I

Marks 05

- Introduction
- Determinates of health
- Epidemiology
- Epidemiology and nursing management of common Communicable
- Diseases



- Assessment of Mental health
- Status
- Therapeutic communication and nurse –patient relationship
- Assessment of mental health status
- Therapeutic communication and nurse-patient relationship
- Treatment modalities and therapies used in mental disorders.
- Nursing management of patient with Schizophrenia, and other psychotic disorders
- Nursing management of patient with mood disorders.
- Nursing management of patient with neurotic, stress related and somatization disorders
- Nursing management of patient with Substance use disorders
- Nursing management of patient with personality, Sexual and eating disorders
- .Nursing management of childhood and adolescent disorders including mental deficiency
- Nursing management of organic brain disorders
- Psychiatric emergencies and crisis intervention
- Legal issues in Mental Health Nursing
- Community Mental Health Nursing

## Midwifery and obstetrical Nursing

Marks 10

- Introduction to midwifery and obstetrical Nursing
- Review of anatomy and physiology of female reproductive system and foetal development
- Assessment and management of pregnancy (ante-natal)
- Assessment and management of intra-natal period
  - Second stage
  - Third stage
  - Fourth Stage
- Assessment and management of women during post natal period
- Assessment and management of normal neonates
- High-risk pregnancies-assessment management
- Abnormal labour assessment and management
- Abnormalities during postnatal periods
- Assessment and management of High risk newborn
- Pharmaco-therapeutics in obstetrics

## Community Health Nursing-II

Marks 05

- Introduction
- Health planning and policies and problems
- Community health nursing approaches, concepts and roles and responsibilities of nursing personnel
- Assisting individuals and groups to promote and maintain their health
- Assessment of self and family
- Seek health services for
- Maintenance of Health Records for self and family
- Continue Medical care and follow up in community for various diseases and disorders

Nursing research and statistics  
05

Marks

- Research and research process
- Research problem/ Question
- Review of literature
  
- Research approaches and designs
- Sampling and data collection
  
- Analysis of data:
  
- Introduction to statistics
  
- Communication and utilization of research

Management of Nursing Services and Education

Marks 05

- Introduction Management Process
- Management of nursing services in the hospital and community Organizational behavior and human relations
- In Service education
- Management of nursing educational institutions Nursing as profession
- Professional Advancement:

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## **ANNEXURE “A2”**

### **Syllabus** **“Tabla Assistant”**

**Max. Marks: 150**

**Time: 2:30 hrs**

1. Origin and Evolution of Tabla. **(15 Marks)**
2. Sangeet and Taal. **(15 Marks)**
3. Tabla and its six Gharanas with examples. **(15 Marks)**
4. Taal and its “Ten Pranas”. **(15 Marks)**
5. Jaati and its Five Kinds. **(15 Marks)**
6. Writting ability of different copositionsin different Taals with different Layakaries. **(15 Marks)**
7. Brief knowledge of “Rasas”and its use in Tabla. **(15 Marks)**
8. Knowledge about :Hindustani”and “Karnataki”Taal Padhati. **(15 Marks)**
9. Knowledge about the following Layakaries:- 2:3, 4:5, 4:7 **(15 Marks)**
10. Brief Biographical Sketch of:- **(15 Marks)**
  - (a) Ustad Allah Rakha Khan
  - (b) Pandit Krishan Maharaj
  - (c) Pandit Samta Prasad
  - (d) Ustad Zakir Hussain

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## Annexure “A3”

*Syllabus for written test (Objective Type) for the posts of  
Jr. THEATRE TECHNICIAN, Jr. THEATRE ASSISTANT, THEATRE ASSISTANT-II and  
THEATRE ASSISTANT*

**Max time:-150  
Time:-2.30 Hours**

1. Pre-operative Consideration:

05 Marks

Psychological support of the surgical patient.

2. Protection of the patient in surgery:

25 Marks

- -Admission Procedure
- -Transfer Procedure Position
- -Environmental Controls
- -Electro-Surgery
- -Operative Records
- -Counting Procedure
- -Sterilization
- -Emergencies and Disasters.

3. Surgical Instruments:

15 Marks

- Instruments for general surgery
- Operation of the face and neck
- Operations of the Nose, Throat and : Accessory Nasal Sinuses
- Ophthalmic surgery
- Sinuses, Ear & throat

- Operations of the Chest, Operations on the Genito-Urinary

## Tract

- Gynecological and Obstetric Operations
- Orthopedic Operations
- Neuro-surgical Operations
- Radium Insertion
- Traumatic Surgery.

## 4. Surgical Procedures:

05 Marks

### Neck Surgery:

- Thyroidectomy
- Parathyroidectomy
- Thyroglossal Cystectomy

### Preast Procedures :

- Breast Biopsy
- Mastectomy

### Abdominal Extraintestinal Surgery: -

- Abdominal laprotomy
- Abdominal Hernlography
- Cholecystectomy
- Drainage of Pancreatic Cyst (Pseudocyst)
- Pancreaticoduodectomy (Whipples procedure)
- Pancreatectomy
- Dranage of Abscess (es) in the region of liver
- Hepatic Resection
- Splenectomy.



- Gastrointestinal Surgery

- Esophagoscopy
- Gastroscopy
- Colonoscopy
- Sigmoidoscopy
- Vagotomy and Pyloroplasty
- Gastrostomy
- Gastrectomy
- Small Bowel Resection
- Cutaneous ileostomy
- Appendectomy
- Colostomy
- Closure of colostomy
- Right Hemicolectomy
- Transverse Colectomy
- Anterior Resection of the Sigmoid Colon and Rectum
- Haemorrhoidectomy
- Pilonidal Cystectomy and Sinusotomy
- Theirsch Procedure
- Ripstein Procedure (Prosacral Rectopexy)

5) Gynaecologic and Obstetric Surgery

05 Marks

- Dilatation of the Cervix and Curettage of the Uterus (D&C)
- Conization of the Uterine Cervix
- Therapeutic Abortion by suction Curettage
- Marsupialization of Bartholin's Duct Cyst
- Abdominal Ligabion (Different Procedures)
- Culdoscopy
- Anterior and /or Posterior Colporraphy
- Laparoscopy
- Total Abdominal Hysterectomy
- Spingo-Oophorectomy
- Tuboplasty of the Fallopian Tubes

- Pelvic Exenteration
- Caesarian Section.

• Genitourinary Surgery:

- Hypospadias repair
- Epispadias repair
- Penile Implant
- Marshall-Marchetti-Krantz Procedure
- Hydrocolectomy
- Vasectomy
- Vasovasostomy
- Cutaneous Vasostomy
- Spermatolectomy
- Orchiectomy
- Cystoscopy
- Cystoscopy
- Transurethral Resection of the Prostate
- (TURP) and /or Lesions of the Bladder or Bladder Neck (TURB)
- Open Prostatectomy
- Nephrectomy
- Upper Tract Urolithotomy(Ureterolithotomy, Phelolithotomy, Nephrolithotomy)
- cutaneous vresterstomy
- Llegal conduit
- Extracproeal shock wave Lithotrpsy (ESWL)
- Ultrasonic Lithortripsy
- Electrohydraulic Lithotripsy

6) Thoracic Procedures:

05 Marks

- Bronchoscopy
- Mediastioscopy
- Segmental Resection of the Lung
- Wedge Resection of the Lung
- Pulmonary Lobectomy Pneumonectomy
- Decortication of the Lung
- Insertion of Transvenous Endocardial Pacemaker
- Correction of Pectus
- Excavatum
- Thymectomy

## Cardiovascular Surgery: -

- Carotid Endarterectomy
- Abdominal Aortic Procedures(Abdominal Aortic Aneurysmectomy, Abdominal Aortic Endarterectomy) with Aortobifemoral Graft
- Femoropopliteal Bypass
- Greater Saphenous vein Ligation and Stripping
- Portosystemic Shunt
- Arteriovenous Shunt
- Arteriovenous Fistula
- Cardiac procedures
- Bypass Surgery(Different Procedures)

## Orthopaedic Surgery:

- Open reduction of a carpal Bone Fracture
- Excision of a Ganglion
- Carpal tunnel Release
- Open reduction of the Humerus
- Open reduction of the Radius and /or Ulna
- Open reduction of an Olecranon process Fracture
- Repair of recurrent Anterior Dislocation of the Shoulder
- Open reduction of Fracture of the Humeral Head (including Humeral Head Prosthesis)
- Internal Fixation of the Hip
- Femoral head Prosthetic Replacement
- Total Hip replacement
- Open reduction of the femoral Shaft
- Triple Arthrodesis of the Ankle
- Total Ankle joint Replacement
- Open reduction of ankle
- Arthrotomy of the Knee
- Excision of Popliteal(Baker's Cyst)
- Total knee replacement

- Open reduction of the Tibial shaft
- Bunionectomy
- Correction of hammer toe Deformity with interphalangeal Fusion
- Metatarsal Head Resection
- Procedure for correction of scoliosis
- Amputation of lower Extremity

7) Neurological Surgery :

05 Marks

- Craniotomy
- Cranioplasty
- Transphenoidal Hypophysectomy
- Ventricular Shunts
- Laminectomy
- Excision of a Cervical Intervertebral Disc with fusion, Anterior Approach.

Plastic Surgery :

- Cleft Lip repair
- Cleft Palate repair
- Reduction of Nasal Fracture
- Reduction of Mandibular Fracture
- Reduction of a Zygomatic Fracture
- Open reduction of an Orbital Floor Fracture
- Rhinoplasty
- Mentoplasty Augmentation
- Blepharoplasty
- Rhytidectomy
- Dermabrasion
- Otoplasty
- Repair of Syndactyly
- Digital Flexor Tendon repair
- Peripheral Nerve repair
- Palmar Fasciectomy

- Reduction Mammoplasty
- Abdominoplasty /Abdominal Liposuction
- Liposuction

8) Otorhinolaryngologic (ENT) Surgery: 05 Marks

- Myringotomy
  - Mastoidectomy
  - Tympanoplasty
  - Stapedectomy
  - Submucous Resection of the Nasal Septum(SMR) / Septoplasty
  - Intranasal Antrostomy / Intranasal Fenestration of the Nasoantal Wall.
  - Caldwell-Luo procedure(Radial Drainage of the antrum of the Maxillary Sinuses)
- Nasal Polypectomy
- Drainage of the Frontal Sinus
- Tonsillectomy and Adenoidectomy (T and A) Laryngoscopy
- Traheostomy
- Excision of the Submaxillary (Submandibular Gland)
- Parotidectomy
- Laryngectomy
- Radial Neck Dissection
- Excision of lesions of the oral cavity
- (Partial Glossectomy with Margyinal Rsection of the Mandible)

Ophthalmic Surgery :

- General Information
- Excision of a Chalazion Canthotomy
  - Corection of Ectroplon
  - Blepharoptosis repair
  - Lacrimal Duct Probing

- Dacryocystosthinostomy
- Correction of Strabismus
- Esyiscertation of the Globe
- Orbital Exenteration
- Corneal Transplant /Ekeratoplasty
- Cataract Extraction
- Iridectomy
- Trabeculectomy
- Excision of a pterygium
- Repair of Retinal Detachment /Scieral Bucking
- Vitrectomy
- Refractive keratoplasty

9) Pediatric Procedures: -

02 Marks

- Pediatric General Information
- Pediatric Tracheostomy
- Branchial sinusectomy
- Repair of Congenital Diaphragmatic Hernia
- Omphalocele Repair
- Pediatric Umbilical Herniography
- Repair of congenital Atresia of the Esophagus
- Insertion of a central Venous Catheter (Paediatric)
- Pyloromyotomy for congenital Hypertrophic Pyloric Stenosis
- Pediatric Gastrostomy
- Reduction of pediatric intususception
- Pediatric Colostomy
- Pediatric Colorctal Resection for Aganglionic Megacolon/Hirschsprung's Disease
- Repair of Imperforate Anus

10. Anaesthesia :

13 Marks

- General Information
- General Anaesthesia
- Conduction

1. General anaesthesia: Conduction anaesthesia:

- Spinal
- Epidural
- Caudal
- Regional
- Local

- Topical

11 Methods for preparation of the Patients for Anaesthesia :

05 Marks

- Methods and Procedures (during after operation)

12 Surgical Procedures and Monitoring: Safety for operation

Room Personnel :

25 marks

- In Service education
- Body mechanic
- Fatigue Factors
- Radiation Safety
- Infection control
- Chemical Hazards

13 Preparation of Instruments Tray: -

20 Marks

- Major procedures tray
- Basic /Minor procedures tray

- Limited procedures tray
- Thyroid tray
- Long instruments tray
- Biliary tract procedures tray
- Choledochoscopy tray
- Basic rigid sigmoidoscopy tray
- Gastrointestinal procedures tray
- Rectal procedures tray

14 Gynecologic and obstetric Trays:

05 Marks

- Dilatation of the Cervix and Curettage of the Uterus (D&C) Tray
- Cervical Cone Tray Laparoscopy
- Abdominal Hystrectomy  
Caesarian Section tray
- Vaginal Hysterectomy tray

• Genitourinary Trays:

- Vasectomy tray
- Open Prostatectomy
- Kidney tray

15 Thoracic Trays:

05 Marks

- Mediastinoscopy tray
- Thoractomy Tray
- Pacemaker tray

• Cardiovascular Trays: -

- Vascular Procedures tray
- Vascular Shunt Tray
- Cardiac procedures tray

Orthopadeic Trays:



- Basic orthopaedi procedures tray
- Minor orthopaedic procedures tray
- Bone holding instruments tray
- Hip retractor tray
- Knee Arthotomy tray
- Knee or Ankle Anthroscopy tray

16 Neurologic Procedures Tray:

05 Marks

- Craniotomy tray
- Laminectomy Tray
- Kerrison Rongeurs and Pituitary Coreps tray

- Otorhinolaryngologic(ENT) Tray:

- Basic Ear procedures tray
- Nasal procedures tray
- Myringotomy tray
- Tonsillectomy and Adenoidectomy tray
- Tracheostomy tray
- Antral Puncture tray

- Ophthalmic Trays:

- Basic Eye procedures tray
- Eyelid and Conjunctival procedures tray
- Basic Eye Muscle procedures tray
- Cataract Extraction and Lense procedures tray
- Glaucoma Procedures tray
- Basic Eye procedures Microscope tray
- Retinal procedures tray

- Pediatric Tray :

- Pediatric major procedures tray

- Pediatric minor Procedures tray
- Pediatric Gastrointestinal Procedures trays.

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## **Annexure “A4”**

Marks:-150  
Time: - 2.30 Hours

### **Syllabus**

#### **Motor Vehicle Inspector / Vocational Instructor Driver-cum-Mechanical (LV)**

##### **Unit - I    GENRAL ENGLISH**

**30 Marks**

- I.    English & Communication skills
- II.    Basics of Information Technology
- III.    Industrial Managements and Entrepreneurship Development

##### **Unit- II    APPLIED SCIENCE**

**20 Marks**

- I.    Applied Physics
- II.    Applied Chemistry
- III.    Applied Mathematics

##### **Unit –III    BASIC COURSES IN ENGINEERING / TECHNOLOGY**

**20 Marks**

- I.    Applied Mechanics
- II.    Engineering Drawing
- III.    Elements of Mechanical Engineering
- IV.    Fundamentals of Thermal Engineering
- V.    Hydraulic and Hydraulic Mechanic

##### **Unit-IV    APPLIED COURSES IN ENGINEERING / TECHNOLOGY**

**40 Marks**

- I.    Auto Engineering Drawing
- II.    Auto Engine
- III.    Automotive Materials
- IV.    Chasis, Body and Transmission
- V.    MVA and Transport Management
- VI.    Automotive Emission Control
- VII.    Applied thermodynamics
- VIII.    CADD
- IX.    Theory of Machines
- X.    CNC machines
- XI.    Metrology and quality control

XII. Maintenance

**Unit- V MECHANICAL ENGINEERING**

**20 Marks**

- I. Transmission of Power
- II. Internal combustion Engines
- III. Refrigeration and Air Conditioning Systems
- IV. Hydraulics

**Unit- V ELECTRICAL ENGINEERING**

**20 Marks**

- I. Fundamental Dynamics
- II. Engineering Graphics & Computer Modelling
- III. Mechanics of Materials – I & II
- IV. Theory of Machines – I & II
- V. Applied Thermodynamic-I & II
- VI. Theory of Machines – I & II
- VII. Hydraulic Machinery
- VIII. Measurement and Instrumentation

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# **Annexure “A5”**

## ***Syllabus*** ***X-RAY ASSISTANT, JUNIOR X-RAY TECHNICIAN***

**Max time:-150**  
**Time:-2.30 Hours**

### **1) ANOTMY AND PHYSIOLOGY**

**20 Marks**

#### **GENERAL:**

Introduction to the Human body. Terms used in Anatomy, (Surface anatomy, markings and locations of different body parts and important body planes.

Planes and Regions of Thoracic, Abdominal and pelvic Cavities.

#### **Cardiovascular System.**

Heart, pericardium, Arterial system, Venous system, Capillary, systemic circulation.

#### **Digestive System:**

Mouth , oesophagus, stomach, small intestine, large intestine, spleen, liver, Salivary Gland , Gall Bladder, pancreas, Physiology and Digestion Absorption and Assimilation of Food.

#### **Respiratory System:**

Noise , pharynx, larynx, trachea, Bronchi, lungs, pleura, physiology of Respiration-Expiration and Ins;piration, Internal and External Respiration, Breathing control, vital capacity . Tidal volume and Dead space.

#### **Reproductive system:**

a) Male Reproductive system: Male Reproductive organs, Spermatogenesis, Testosterone and Secondary sexual characters.

Female Reproductive System: Vulva, internal reproductive organs menstrual cycle, ovarian hormones & Female breast.

## **Excretory System:**

Introduction to Excretory body organs, structure of kidneys , ureters, Urinary, Bladder, Urethra, Physiology of filtration Reabsorption and secretion.

## **Nervous System:**

Brain Meninges , ventricles spinal cord nerves and cerebro spinal fluids.

## **Endocrine system –**

Definition, Pituitary Gland, Pineal gland.Thymus Gland Adrenal Glands Thyroid, Parathyroid Glands.

## **Sense Organs-**

Structure and function of Eye , Skin , Ear and Tongue.

## **Musculoskeletal System-**

Skull, vertebral column, shoulder girdle, Thoracic cage. Bones upper limbs, Bones of lower limbs, type of bony joints and movements.

## **2) Transformers-**

**20 Marks**

Principles construction of step up & down and Auto transformers, construction of high tension .Transformers rectification . Self rectification.

## **X-Ray**

Production of x-ray, properties, interaction with matter (Photo electric compton effect and pair production) luminescent effect, photographic effect, ionizing effect & biological effects.

## **Units and Measurements of X-Rays-**

Ionization, Roentgen, Rad Rem, R.B.E. Radiation badges, ionization chambers.

## **x-Ray Tube-**

Construction of x-ray tube Targets, cooling and insulation , x-ray circuits, timers and rectifiers in x-ray, circuits, inter locking circuits,

stationary and Rotatory anode tube.

Quantity and Quality x-ray , H.V.T or VVL linear absorption co-efficient grids, cones cylinders, filters, focal spot size LBD FFD or LSD and OFD  
Fluoroscopy and Image intensifier

### **3) Radiographic photography Techniques-**

**30 Marks**

#### **(Dark room Techniques)**

##### **Dark Room-**

Definition and location of dark room, ideal design of dark room , light and radiation protection devices , safe light test, ventilation, dry and wet benches, Duplicator.

##### **Radiographic Films-**

Ortho-chromatic films , panchromatic films, Base, Bonding layer, emulsion and super coating of films. Non screen films CTA base and polyster base films. The structure of Double coated & single coated film.

##### **X-Ray Cassettes-**

Construction of various cassettes, cassettes care, mounting of intensifying screen in cassettes.

##### **Intensifying screens-**

Luminescence (Phosphores cence and fluorescence) construction of screens. Type of phosphors and pigments film screen contact, speed of screens-slow parfast care of intensifying screens . Intensification factors numeral proof and rare earth screens.

- a) Mounting of intensifying screens.
- b) Screen film contact.

##### **Film Processing-**

Auto processing material for processing equipment and annual processing control on temperature chemical in Dark room the PH Scale.

X-ray Developer

X-Ray Fixer

Film Rinsing Washing & Drying

Preparation of processing chemicals, loading and unloading of cassettes,

### **Presentation of Radiograph-**

record filling and report distribution.

### **Film Artifacts-**

Definition, type and causes of radiation and photographic artifacts, factors affecting the quality control of radiograph.

### **4) Radiographic General Procedures**

**30 Marks**

Introduction- The Radiographic image (image formation, magnification image Distortion, Image, sharpness, Image contrast) Exposure factor and Anatomical Terminology.

### **Skeletal System-**

Upper Limb- Procedure for thumb, fingers, meta carpals, hand carpometacarpel joints, wrist joint, carpo-radio-ulnar joint, forearm, elbow joint, arm, special views for scaphoid bone, olecranon process, supra condylar projection in various types of injured patients.

b) Lower limb- Procedure for toes, meta tarsals, complete foot, talar calcaneal, talo calcaneal joint, leg with ankle joint leg with knee joint, knee joint, thigh with hip joint.

c) Shoulder Girdle and Bony thorax- Procedures for scapula clavicle and head of humerus sternoclavicular joint, special views for clavicle. Head of humerus and scapula in various types of injured or dislocation cases.

d) Vertebral Column- Normal curvature relative levels of vertebrae, procedures for atlanto-occipital joint, odontoid process, cervical spine, cervicodorsal spine, dorsal spine, dorso-lumbar spine, and spondylolysis.

### **Chest-**

Procedures for chest at six feet, lying down and erect positions, inspiration and expiration views, special views like lordotic, decubitus, MMR portable telerradiography, chest in pregnancy. High Kilovoltage technique.



## **Abdominal Pelvis-**

Preparation for procedure, procedure for upper abdomen, lower abdomen, KUB Gallbladder Stomach, small intestine and large intestine in supine and erect position, special views in case of perforation etc.

## **Sinus-**

Procedures for paranasal sinuses, (frontal, ethmoid, sphenoid and maxillary sinuses).

## **Soft Tissue Radiography-**

Procedures for STM, STN abdomen and other body organs.

invetogram procedures, manipulation of positions, immobilization, exposure, FFD in abnormal conditions of patients.

## **Hospital Practice and Care of patients-**

Set up of radiology department in Hospital, Hospital staffing and organization. Patients registration, record filling, cases put up and dispatch devices, medico legal aspect of profession. Professional relationship of radiographer with patient and organization staff.

## **5)Special Investigation**

**20 Marks**

### **Urinary Tract-**

Plain Radiographs for UB Intravenous pyelograph, (IVP or IVU) Retrograde pyelography, Micturating cystourethrogram, Retrograde Urethrogram

### **Gastro-Intestinal Tract-**

Plain Radiographs, abdomen, Barium Swallow, Barium UGI Barium meal ET, Barium Enema, double contrast Barium enema and instant Barium enema, Miscellaneous Procedures, Gastrointestinal study, fluoroscopy,

**Biliary Tract-**

Introduction to biliary contrast oral choleystography (OCG) pancreatography (ERCP)

HSG

Fistulogram

Sinogram

6) Basic principle and application of computerized tomography, ultrasound  
Magnetic resonance Imaging, Computer Radiography and Digital Radiography

20 Marks

7) Contrast Agents, Contrast Reaction and their management, Emergency  
Drugs used in Radiology Department

10 Marks

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# Annexure “A6”

## Syllabus FEMALE MULTIPURPOSE HEALTH WORKER (FMPHW)

**Marks:-150**

**Time: - 2.30 Hours**

### **Science –I**

**25 Marks**

- *Anatomy and Physiology*
- *Microbiology*
- *Psychology*
- *Sociology*
- *Hygiene*
- *Nutrition.*

### **Fundamentals of Nursing-I**

**25 Marks**

- *Section “A” introduction to Nursing and Nursing procedures.*
- *Section “B” Nursing techniques*
- *Section “C” First aid and emergency nursing.*

### **Fundamentals of Nursing-II**

**25 Marks**

- *Section A introduction to Child Health.*
- *Section B introduction to Maternal Health.*
- *Section C introduction to Family Health and Community Health.*

### **Community Health Nursing-I**

**20 Marks**

- *Section A Domiciliary Midwifery.*
- *Section B Midwifery and Hepernitoy Nursing.*

- *Section C Family planning and family welfare.*

## **Community Health Nursing-II**

**25 Marks**

- *Section A Nutrition Education.*
- *Section B Health Education.*
- *Section C Communication skills and Audio-visual aids.*

## **Community Health Nursing-III**

**30 Marks**

- *Section A Basic Medicine and Pharmacology.*
- *Section B Health Problems and Plans.*
- *Section C Communicable Diseases.*
- *Section D Mental Diseases.*

## **ANATOMY**

- (i) *Introduction*
- (ii) *Skeletal system over view of skeletal system, Bones, bone development and the repair, axial skeleton, appendicular Skeleton, surface anatomy and land-marks.*
- (iii) *Structure and function of joints, types of joints, muscular system introduction over vies of skeletal muscles chief muscles and group of muscles.*
- (iv) *Heart, Structure.*
- (v) *Respiratory system structure*
- (vi) *Human Reproductive System structure and Embryology (Prenatal).*

## **PHYSIOLOGY**

- (i) *Introduction*
- (ii) *Organization of living things.*
- (iii) *Cells, tissues, organs, cavities and body system.*

- (iv) Typical cell structure, properties of cell, living processes, tissues, types, structure and functions, the skin.*
- (v) Muscular system-Structure.*
- (vi) Muscle contraction and properties of muscle.*
- (vii) Nervous System –division of the nervous system, brain and its functions, cranial nerves, spinal nerves.*
- (viii) Special senses structure function and location of organs of special senses, eye structure and function of visual apparatus, ear structure and function of auditory apparatus.*
- (ix) Maintaining the metabolism of the body circulatory system-blood composition, blood cells and plasma, hemoglobin , blood coagulation bleeding time, blood grouping and cross- matching physiological structure of heart and function, heart sounds and heart rates, circulation – systematic and pulmonary, blood vessels, pulse, venous and capillary system.*
- (x) Digestive system the alimentary tract oral cavity stomach, small and large intestines peristalsis digestion salivary glands. Liver pancreas and gallbladder enzymes absorption and assimilation of food.*
- (xi) **EXCRETORY** system –Excretory organs location, structure and function. The urinary tract, urine formation composition of urine, micturition . Water and salt balance.*
- (xii) Endocrine system-overview of the endocrine system, endocrine glands location, structure and function body temperature regulation.*
- (xiii) Human Reproduction*
- (xiv) **Embryology, parental Development, maturation of reproduction Organs.***

*The male reproductive tract external, organs. The Female reproductive tract external organs, menstrual cycle, hormones and reproduction.*

**Principles of organizing care according to head of the patient.** (Seriously ill, Chronically ill)

*Moderately ill, terminally.*

*Principles of organizing care according at patient group.*

*Maintenance of supplies, equipments and other facilities.*

**Records and Reports.**

*Health records, family care records, medical records, use of diaries by health workers understanding the system of reporting and recording referral system. Maintaining a*

*Healthy environment cleanliness of unit and sick room cleanliness of furniture, floors, space and surfaces doors and windows disposal of waste, garbage.*

## **NURSING PROCEDURES AND TECHNIQUES**

- (i) *Meeting hygienic and comfort needs care of skin , care of hair, care of hands, care of eyes, nutrition mouth care elimination, exercise , body.*
- (ii) *Maternal health factors.*  
*Socio-economic factors affecting maternal health.*

*Section C- Introduction to family health and Community health.*

- a) *Family health care.*

*The family as integral unit of the health services,*

- *Prevention and control of communicable diseases.*
- *Home visiting and domiciliary health.*
- b) *Introduction to Community health.*
- c) *Environmental Health and Sanitation.*
- d) *School health Services.*

## **COMMUNITY HEALTH NURSING - (I)**

### **Domiciliary Midwifery**

- (i) *Contacting antenatal mothers.*
- (ii) *Conducting a delivery in the home.*
- (iii) *Post –Natal care. Records to be maintained.*

### **Midwifery and maternity nursing**

- (i) *The reproductive system*
- (ii) *Growth and development of foetus*
- (iii) *Pregnancy*
- (iv) *Labour*
- (v) *Normal puerperium*
- (vi) *Complication of pregnancy*

- (vii) *Complication of labour.*
- (viii) *Obstetric operations.*
- (ix) *Drugs used in obstetrics*

### **Family planning and welfare.**

- (i) *Introduction.*
- (ii) *National family welfare programme.*
- (iii) *Organizing family welfare work.*
- (iv) *Family planning methods.*

## **COMMUNITY HEALTH NURSING**

### **Nutrition Education:**

- (ii) *Introduction to nutrition education.*
- (iii) *Nutrition education for material and cold health.*
- (iv) *Nutrition education (method and media)*

### **Health Education:**

- (i) *Introduction*
- (ii) *The Teaching (Learning Proceed)*
- (iii) *Approaches used in health education.*
- (iv) *Planning health education activites.*
- (v) *Community resources for health education.*

### **Communication Skills & Audio –Visual AIDS :**

- (i) *Introduction to communication.*
- (ii) *Communication skill for health work.*
- (iii) *Introduction to Audio-visual aids.*
- (iv) *Selection and utilization of audio-visual aids selecting suitable aids for health work.*
- (v) *Preparation of audio- visual aids for health work basic skill/competencies.*

### **Health Problems and Plans :**

- (i) *Health problems.*
- (ii) *Organization and structure of health services and related welfare services.*
- (iii) *Health planning and programme.*

### **Communicable Diseases:**

- (i) Introduction to communicable diseases.*
- (ii) Immunity and immunization.*
- (iii) Care and treatment of patients with infection.*
- (iv) Specific Communicable diseases and infections, symptoms, prevention and control and care in specific communicable diseases and infections.*

*Malaria, filarial, dengue, typhoid, cholera infections hepatitis, other gastrage intestinal infections-acute waste enteritis, dysenteries small-pox, chicken pox mumps, measles, diphtheria. Trachoma, conjunctivitis, worm infestations hookworm round worm. Threadworm, amoebiasis, rabies, tuberculosis, pertussis.*

### **Mental diseases:**

- (i) Introduction*
- (ii) Resources and facilities for prevention and early detection of mental illness, use of family health care services.*
- (iii) Maternal and child health services.*
  - School health services.*
  - Primary health centre facilities.*
  - Community, health worker as a resource.*
- (iv) Prevention of mental illness.*
- (v) Early detection of mental disorders.*
- (vi) Mental diseases.*

## **COMMUNITY HEALTH NURSING I (II)**

### **Environmental sanitation:**

- *Basic sanitation needs all village level towns and semi-urban areas.*
- *Disinfection and disinfectants, sterilization, antiseptics, disinfectants, acaricidal, detergent, sterilization.*
- *Environmental sanitation aspects of communicable diseases and their control.*
- *Venereal diseases.*

### **Microbiology:**



- *Introduction*  
*Classification of micro-organisms, characteristic, of bacteria, viruses, conditions affecting and growth of bacteria, parasites, fungi yeasts and mold.*
- *Universal presence of Micro-organisms useful bacteria and micro-organism in the environment. Micro-organism in the human body normal flora, Micro-organism in water food and mild.*
- *Sources and mode of infection.*  
*Sources of infection, mode of transmission infectin-factors which favour and hinder infection immunity, vicunas.*
- *Pathogenic Micro-organism.*  
*Transmitted from, respiratory tract. Alimentary tract, food, food poisoning blood-borne pathogenic organism.*
- *Collection of specimens for bacteriological examination.*

### **Sociology:**

- (i) *Introduction.*  
*Group-primary and secondary, in group and out groups, structure, activities of groups organization of groups Urban and rural administrative pattern pattern panchyats and corporations, crowd public and audience.*
- (ii) *Social process.*
- (iii) *Social controls.*
- (iv) *Social stratifaction.*
- (v) *Marriage and family.*
- (vi) *Community rural and urban community.*

### **Psychology:**

- (i) *Factors influencing human behavior.*
- (ii) *Life stages and behavioral patterns.*
- (iii) *Emotions and behavior.*
- (iv) *Defence mechanism and behavior.*
- (v) *Social behavior and interpersonal relations.*
- (vi) *Learning, motivation and change in behavior.*

### **Hygiene:**

- (i) *Introduction to hygiene and healthful living, consents of health and disease. Factors influencing health and healthful living. Health habits and practice. Scientific principles related to maintenance of normal circulation, respiration, digestion sensory functions, normal skeletal alignment joint function and motor function.*
- (ii) *Physical health:- Skin care, cleanliness clothing care of the hair, prevention of pediculosis. Dental care and oral hygiene, care of hands, hygiene of elimination and menstrual hygiene, mental hygiene.*
- (iii) *Mental hygiene and health in childhood ensuring mentally healthy growth in later childhood, need for friendship, games and plays, affection and recognition. Mental hygiene, approach to some problems speed problems, reading difficulties, learning problems, day dreaming.*
- (iv) *Mental hygiene and health in adolescence. Preparation of girls for menstruation, sex-education.*
- (v) *Mental hygiene and health in adulthood. Ensuring mental health in adulthood satisfaction on the job, marriage, marital life, parental responsibilities.*
- (vi) *Mental hygiene and health in old age ensuring health in old age and need for preparation for retirement.*
- (vii) *Physical health, feature, exercise, rest relaxation and sleep care of the fact, foot wear, care of eyes, ear more and throat food values.*
- (viii) *Periodic Health Examination.  
Health records, delection and correction of defects. Prevention and early treatments of common ailments, common could, indigestion constipation, headache.*
- (ix) *Health in home.*
  - C) *Disposal of refuse, waste.*
  - D) *Latrines and sanitation, ventilation.*
  - E) *Safety in the home.*
  - F) *Sanitation in animal sheds.*
- (x) *Mental hygiene and health.*

*In adults, in-infancy and early childhood. Like, feeding weaving, thumbsucking, toilet-training, need for security, affection, love, adventure.*

**Nutrition:**

- (i) *Introduction to the study of nutrition, definition, relation of nutrition of health classification and functions of food-body building, energy yielding and protective foods  
Nutrients- Carbohydrates, protein, fats, Eatmine.  
  
Mineral- functions, sources and daily requirements of each caloric requirements, water and cellulose.*

(ii) *Nutritive value of foodstuffs*

*Cereals*

*Fruits*

*Fats and oils*

<i>Pluses</i>	<i>Milk and Milk products</i>	<i>Sugars condiments</i>
<i>Vegetables</i>	<i>Egg, meat and Fish</i>	<i>Spices and beverages</i>

**(iii)***The balance diet.*

- a. Definition, factors to be considered in planning meals, improvement of diars, selection of foods, cultural factors improving maternal nutrition and child nutrition.*
- b. Modified diets- liquid bland, soft, full.*

**(iv)***Preparation and preservation of foods general. General principles of cooking.*

- a. Methods of cooking.*
- b. Effects of cooking on nutrients and common foodstuffs, preservations of food–house-hold methods.*
- c. Food hygiene simple household measures.*

**v)** *Malnutrition.*

*Malnutrition and ;under nutrition.*

*Deficiency diseases in the country.*

*Cultural factors in nutrition, food fats, food habits, food adulteration practive injurious to health.*

*Nutrition education-principles of imparting nutrition knowledge.*

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# Annexure “A7”

## Syllabus

JUNIOR GRADE NURSE / JUNIOR NURSE / JUNIOR STAFF NURSE

Marks :-150

Time :- 2.30 Hours

### ANATOMY PHYSIOLOGY

15 Marks

- Cell, various parts and its function.
- Skeletal System – Bones  
Axial Skelton  
  
Appendicular Skelton structure and function.
- Muscular System- Types Structure and Function.
- Digestive System- Structure, Function of Organs, Process of digestion.
- Respiratory System. Structure, Function of organs, Physiology of Respiration
- Exerelory System - Structure, Function of Urinary System Structure and Function of Skin.
- Cardio Vascular System- Heart Blood Vessels/ Position, Structure, and Function  
*Blood Circulation - Blood Pressure, Pulse Systemic and Pulamanary*
- Lumphalic System - Lhmph Glands Function.*
- Blood Composition - Function Clottong Type  
*Nervious System - Structure and Function of :-*  
  
**(a) Central Nervious System.**  
**(b) Autonomic Nervious System.**
- Endoerine System - Structure, Function of Pituitary Glands.
- Sense Organs - Ear, Eye, Nose, Structure and Function.
- Female Reproductive System- Structure, Functions, Accessory Organs, Menstural Cycle, Menopause and process of Reproduction
- Male Reproductive System- Structure and Functions.

### MICROBIOLOGY 05 Marks

- Bacteriology, Microbiology usefulness in Nursing.
  - **Common disease caused by different types of organisons.**
  - **Sources ofinction, made of exit and transmission of disease,**
  - **Immunity and Immunization schedule.**
  - **Disinfection**
  - **Sterilization.**
  - **Asepsis.**

### PSYCHOLOGY

07 Marks

- Definition of Psychology scope and its importance for Nurses.
- Behaviour-Nature of behavior classification, dynamics types behavior. Motivation.
- Function, Emotions.
- Habits-Meaning, Principals inhabit formation. Frustration and conflicts
- Learning laws, types, factors of learning. Intelligence.
- Personality, meaning, types, development, characteristics.
- Mental health characteristics, national mental health program.

## **SOCIOLOGY**

**03 Marks**

- Society - Def, meaning Gp, Types, structures, Rural and Urban society, Family, types, basic needs of family.

## **NURSING ARTS NUTRITION**

**35 Marks**

- Fundamentals of Nursing
- Nurses qualities, def, nursing principles, scope of Nursing.
  - *History of Nursing.*
  - *Role and responsibility of a Nurse.*
  - *Components of Basic Nursing.*
  - *Health Agencies.*
- Admission and discharge of patient.
- Signs and symptoms of approaching death.
- Nurses role in maintaining good personal hygiene.
- Bed making, various types of beds, nurses procedure for bed making.
  - *Vitals -Temperature, pulse, respiration, B.P (def, type) equipments procedure*
  - *Mouth care - purposes, equipment, procedure complication sol used,*
  - *Bed sore - Def signs and symptoms, causes pressure points prevention,*
  - *Back care. Def. purposes, equipment, procedure.*
  - *Bed bath. Def. types purpose, equipment, procedure different patients uses for different procedure.*
  - *Ryles tube feeding - Indication equipments procedure suction,*

- **Stomach wash or gastric lavage Def. indication procedure purpose, equipments.**
  - **Catherization - Indication purpose, procedure articles, types of catheter,**
  - **Enema-Def types, indication, procedure, equipments,**
  - **Flatus tube - Def. purpose, procedure, equipments,**
  - **Gaginal douche - Def. purposes, Sol, used, procedure equipments. Local hot application - Def purpose, types, equipments procedure precautions,**
  - **Local cold application - Def. purposes types equipment procedure.**
  - **Inhalations - Def. types purpose equipment precautions procedure post of care for surgery.**
  - **Care of patient fever (Unconscious patient) Dyspnoea.**
  - **Barrier Nursing - Isolation, technique, Control of infection diseases, immunization.**
  - **First Aid of**
    - Burns,**
    - Accident,**
    - Haemorrhage,**
    - Fractions.**
- **Various Bandages.**
- **Blood Transfusions - Grouping Crossmating**
  - **RH factor, Precautions - Blood Transmission.**
- **Recording and Reporting**
- **Collection of Specimen.**
- **Drugs route of Administration of drugs.**

## **NUTRITION**

**10 Marks**

- **Constituents of food and its function**
- **Protene, EHO, fats, minerals, vitamins, waterthen sources, function daily requirement, deficiencies.**
  - **Applied nutrition programmes.**
  - **Community nutrition programmes.**
  - **Diet - types of diet, balanced diet.**
  - **Diet for different diseases.**
  - **Planning and preparation of menui.**
  - **Factors effecting coming.**
  - **Presentation of mal nutrition.**
  - **Health problems in India (Nutritional problems)**

- *Communicable disease prob.*
- *Population Prob.*
- *Environmental suction Prob.*
- *Medical care Prob.*

➤ **Community Health Nursing:**

- *Definition and concept of health ad elements.*
- *Principles Primary Health care.*
- *Qualities and functions of a Community Health Nurse.*
- *National Health Problems and Programmes.*

➤ **Hygiene-Personal and Environmental-Safe Water, Sanitation.**

- *Building of good health, habits, Immunization.*
- *Physical health including menstrual hugience.*
- *Mental health.*

➤ **First Aid in Emergency.**

- *Importance of First Aid and its rules:*
- *First Aid Emergency. Fire, Burns, Fractures, Accidents, Poisoning, Bullet injuries, Drawing, Hoemarrhages, Dog Bites.*
- *Bandaging and splinking.*

## **Medical Surgical Nursing**

**25 Marks**

➤ **Disorders of Respiratory system:-**

➤ **Definitions, causes, types, factors, indications, investigations, treatment, NSG, Management, Prevention, Health Education, Complications of:-**

- *Asthma/Bronchial.*
- *Pnemonia.*
- *Lung Abscess.*
- *Plaursy.*
- *Emphyma.*
- *Emphysema.*
- *Pulmonary Tuberculosis.*
- *Lobactomy.*
- *Pneumonectomy.*
- *Diet Therapy*

- **Drug Therapy.**

➤ **Cardio Vascular System:**

- **Cardia Arrhythmias.**
- **Pericarditis.**
- **Myocarditis.**
- **Congestive Heart Failure.**
- **Myocardial infection.**
- **Fallots of Tetralogy.**
- **Hypertension.**
- **Angina Pectoris.**
- **Mitral Stenosis.**
- **Anaemia.**
- **Lenkaemia.**
- **Haemophilia.**

➤ **Gastro Intestinal System:**

- **Gastritis.**
- **Peptic Uleer.**
- **Appendicitis.**
- **Ca Stomach**
- **Colostomy, Intestinal Obstruction**
- **Haemorrhoids.**
- **Gastrectomy.**
- **Gastrastomy.**
- **Hernia.**
- **Leprotomy.**

➤ **Disease of Liver, Spleen, Gall Bladder, Pancreas:**

- **Hepatitis.**
- **Cirrhosis of Liver.**
- **Caliver, Pancreas.**
- **Pancreatitis.**
- **Tumours.**
- **Cholieystities/Cholieysteetomy.**



- **Spleneectomy.**

➤ **Genito - Urinary System and Male Reproductive System:**

- **Nephritis.**
- **Uremia.**
- **Dialysis.**
- **Prostate/Prostectomy.**
- **Nephrectomy.**
- **Hydrocoel.**

➤ **Nervious System-Spinal Cord, Nervious:**

- **Epilepsy.**
- **Meningitis.**
- **Parkinsonism.**
- **Encephalitis.**
- **Head Injury.**
- **Cerebro - Vascular Accident.**
- **Paraplegia.**
- **Haemoplegia.**
- **Quadriplegia.**
- **Sciatica.**

➤ **Endocrine System, Metabolic Disorder:**

- **Hypothyroidism.**
- **Hyperthyroidism.**
- **Thyroidectomy.**
- **Diabetes Mellitus.**
- **Gouts.**
- **Obesity.**

➤ **Skin:**

- **Burn including radiation burns.**
- **Allergy.**
- **Infections EC Zema.**

- **Operation and Theatre:**
  - Care of unconscious patients/coma.
  - Pre and post operative care > adult, infant.
  - Intensive Care Nursing.
  - Commo.....
  
- **Common Investigation and Advanced Nursing Procedures:**
  - USG, OGC, CT, Lithotripsy, LP, MRI, Radiotherapy, Chemotherapy, Catheterization, Bone Marrow, Paracentesis, Thoracocentesis, LFT, Endoscopy, Sigmoidoscopy, Bronchoscopy, Intercostal Drainage, H2O Drainage, Review of Vitals.
  
- **Communicable Diseases:**
  - Measles, Chickenpox, Smallpox, Mumps, Poliomyelitis, Diphtheria, Whooping Cough, Tetanus, Leprosy, Typhoid, Dysentery, Cholera, Plague, Malaria, Dengue, Fever, AIDs, Pulse Polio, National Health Programme/ Problems.

## **ORTHOPAEDIC**

**20 Marks**

- **Disorders and Diseases of Bone and Joints.**

*(Def. causes, types, preparation, investigations, indications, management).*

  - Arthritis.
  - Osteomyelitis.
  - Rheumatoid Arthritis.
  - Fractures, Dislocations, Sprains.
  - Amputation.
  - Traction.
  - Casts.
  
- **Special senses (Eye, ENT, Ear)**
  - Conjunctivitis.
  - Dacryocystitis.
  - Glaucoma.
  - Trachoma.
  - Myopia.
  - Hypermetropia.
  - Cataract.

- Corneal Ulcer.
- Otitis Media.
- Mastoiclitis.
- Clift Lip.
- Clift Palate.
- DNS. S
- Sinasitis.
- Adenoids.
- Laiyngitis.
- *Tonsilitis/Tonsilectomy.*
- *Phyryngitis.*
- *Tracheostomy.*
- *Epistais.*
- Phychaitric Nursing
- *Depression.*
- *Hallucination.*
- *Delusion.*
- *Scheziophslia.*
- *Psychosis.*
- *Nerosis.*
- *Hyteria.*
- *Epilopsy.*
- *ECT.*
- *Drugs used in Psychiatric diseases.*

➤ **Paediatric Nursing:**

- *Growth and development from Birth to adolescence. Factors responsible for growth and development. Assessment of growth and development.*
- *Immunity/ Immunization schedule.*
- *Disorders of infections - Vomitting, Dirrhaea, Convulsions, Distensions.*
- *Recognition, causes, prevention and management of congenital anomalies.*
- *Breast feedin:*
  - Importance and principals.
  - Preparation of mother.
  - Difficulties in breast feeding.
  - Factors inhibiting/ promotion lactation.

- Introduction of solids.
- Artificial feeding:
  - Maintenance of bottle hygiene.
  - Feeding techniques.

➤ **Disease of Childrens:**

➤ **Def. causes s/s investigations, factors indications; prevention, management complications of :-**

- *Gastro - entoritis.*
- *Oeasophogal Atresia.*
- *Mega Colon.*
- *Imperferated Anus.*
- *Jaundice.*
- *Phototherapy.*

➤ **Benito - Urinary System:**

- *Hypospodiasis.*
- *Undesecondel Tests.*

➤ **Cardio Vascular System:**

- *Patient Duetus Arteriosus.*
- *Atrial Septal Defect.*
- *Ventricular spetal Defect.*
- *Fallots Telrology.*
- *Rheumatic Fever.*

➤ **Nervous System:**

- *Cerebral Pulsy.*
- *Mental Retardation.*
- *Meningocele.*
- *Mangolism.*
- *Hydrocephalus.*

➤ **Eye, Ear:**

- *Squint.*
- *Deafness.*

➤ **Components of nutrition and Disorders:**

- *Marasmas.*
  - *Kwashiorkar.*
  - *Vitamin Dificiencies.*
  - *Nutritional Programme.*
- **Community Health Nursing:**
- **Primary Health Centre.**
- *Set Up.*
  - *Function.*
  - *Services.*
  - *Sub Centre.*
- **Health services Organisation at different levels:**
- *National.*
  - *State.*
  - *Local.*
- **Special community Health Services and Nurses Role:**
- *Industrial Nursing.*
  - *Tuberculosis Nursing.*
  - *Geriatric Nursing.*
  - *Leprosy Nursing.*
  - *Oncology Nursing.*
- **Function of District Public Health Nurse:**
- Health Assessment.*
- *Antenatal/Care.*
  - *Postnatal/Care.*
  - *Brest Palpation.*
  - *Introduction of RCH.*
- **Human Sexuality:**
- *Puberity in male and female.*
  - *Importance of sex education and sex hygiene.*
  - *Different nethods of family planning.*
  - *Planning, Organishing Family Planning Programmes in our area.*

- **Sex Life:**
  - ***Sterilization.***
- **Female Reproductive System and Breast:**
  - ***Cysts, Tumours and Fibroid of Ut. Hystrectomy.***
  - ***Abortions, MTP.***
  - ***Venereal Disease.***
  - ***Abnormalities of Mensturation.***
  - ***Breast Cancer/ Mastectomy***

## **Midwifery**

**30 Marks**

- **Introduction of Histiral Review.**
  - ***Morbidity and Mortality Rates their Significance.***
- **Review of reproductive System and embiyology.**
  - ***The female pelvis and generative organs,***
  - ***Menstrual Cycle.***
  - ***Maturation, fertilization and implantation of Ovum,***
  - ***Formation of foetal membrances and placenta,***
  - ***Foetal bones, skull sutures and fontanel,***
  - ***Foetal development of foetal circulation,***
  - ***Measurement.***
- **Normal Pregnancy:**
  - ***Physiological changes due to pregnancy,***
  - ***Sings and symptoms diagnosis of pregnancy.***
  - ***Pre - Natal Care.***
    - Objectives.
    - History raking .
    - Calculation of expected date of delivery .
    - Rotec examination .
  - ***care and advice regarding diet in pregnancy and ante excise.***
  - ***Minor disorders or pregnancy and alleviation of discomfort.***
- **Diseases Associated with pregnancy:**
  - ***Cardio Vascular.***
  - ***Urinary.***
  - ***Respiratory.***
  - ***Metabolic.***

- **Nutritional deficiencies.**
- **Normal Delivery (Preparation):**
  - **Requirements for mother and Baby.**
  - **Preparation of patient and Delivery Room - hospital and Home.**
  - **Psychological preparation of mother and Family.**
- **Normal Labour:**
  - **Onset of Labour,**
  - **Physiological changes,**
  - **Mechanisms,**
  - **Stages of Labour,**
  - **Technique of vaginal examination.**
  - **Management of labour and Nursing Care of mother in labour.**
- **Puerperium:**
  - **Physiology,**
  - **Management of puerperium.**
  - **Postnatal examination and care,**
  - **Care of episiotomy.**
  - **Establishment of breast feeding,**
  - **Postnatal exercises,**
  - **Minor ailments and management,**
  - **Family welfare.**
- **Care of New Born:**
  - **Establishment of respiration,**
  - **Care of card eyes and skin,**
  - **Examination of the new born,**
  - **Examination of defeats,**
  - **Care of premature,**
  - **Minor ailments.**
- **Abnormal Midwifery:**
  - **Pregnancy its complications Medical and gynaecological.**
    - **Contracted pelvis**

**Ante Partum.**

  - **Harmon ages ➤**

**Post Partum.**

- **Abortions.**
- **Ectopic gestation.**
- **Hydrated form Mole.**
- **Toxaemia of pregnancy.**
- **Polyhydromnias.**

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# Annexure “A8”

## Syllabus

### GRADUATION LEVEL POSTS

Time: 02.30Hrs.

Marks: 150

#### Unit-I GENERAL ENGLISH

20 Marks

- (I) Tenses
- (II) Rearranging of jumbled sentences.
- (III) Narration
- (IV) Models
- (V) Articles
- (VI) Comprehension with blanks to be filled in with Phrases, Pronouns, Homonyms / homophones.
- (VII) Clauses
- (VIII) Synonyms and antonyms
- (IX) Pairs of words and their use in meaningful sentences.
- (X) Idioms and phrases.
- (XI) Uses of Prepositions.

#### Unit-II GENERAL KNOWLEDGE AND CURRENT AFFAIRS

30 Marks

- Important dates in Indian History / Freedom struggle, different dates and events.
- First in world (Adventure, Sports, Discoveries).  
First in India (Adventure, Sports, Discoveries).
- Popular names of Personalities (Religion, Politics, Scientific discoveries, Geographical, Sports, History)
- The Newspaper world – (Current Dailies & Weeklies of India).
- Books & Authors – General
- Languages.
- Capitals & Currencies.
- United Nations Organisations – Veto Powers  
No. of Countries as its Members.  
Principal organs and their functions.
- SAARC, ASEAN.
- Everyday Science
- World famous Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- National Awards - (1. in Science)  
(2. in Literature)  
(3. in Sports)
- The world of Sports
- Climate & Crops in India.
- Democratic institutions
- Forms of Government

- Political & Physical divisions of world & India
- Important rivers & Lakes in India.
- Current Events of National and International Level.
- Role of Mathematics in Economics.
- Agriculture in economic development; Industrialization and economic development.
- Indian Foreign Trade
- New economic reforms and growth of foreign trade.
- Inflation – Concept and types; Causes and consequences

**UNIT-III GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K**

25 Marks

- (I) Abbreviations, Important dates, popular names of personalities and their achievements/  
Contribution (National and International).
- (II) Constitution of J&K – Formation, Fundamental rights, Directive Principles.
- (III) Weather, Climate, Crops, Means of Transport.
- (IV) Important power projects and their impact on State Economy.
- (V) Rivers and Lakes.
- (VI) Important Tourist Destinations.
- (VII) History of J&K State.
- (VIII) Historical places of the State and their importance.
- (IX) RTI Act.
- (X) Indus Water Treaty and its impact on State economy.

**Unit-VI GENERAL SCIENCE**

25 Marks

- (i) Various sources of energy; conventional sources of energy; improvement in technology for using conventional source of energy (Biomass and wind energy)
- (ii) Non-conventional sources of energy (Solar energy, Tidal energy).
- (iii) Mechanics, Rest, motion, Velocities, acceleration, Newton Laws of motion,
- (iv) Voltage, Current, Resistance, Power, D.C Batteries
- (v) Waves, light as a wave, Sound waves, Transverse and longitudinal waves.
- (vi) Structure of Atom
- (vii) Solids, Liquids and Gases (Basics)
- (viii) Life processes: Nutrition and its types, Respiration, Transportation of water, food and minerals in plants.
- (ix) Vitamins- Diseases related to vitamin deficiency.
- (x) Environmental pollution.
- (xi) Ecosystem – Its components, Food chains and Food webs.
- (xii) Ozone layer, its depletion, Green House Effect.
- (xiii) Importance of water in life

**Unit-V MENTAL ABILITY TEST**

25 Marks

- (I) Number series.
- (II) Letter series.
- (III) Coding decoding.
- (IV) Direction sense.
- (V) Blood relations.
- (VI) Mathematical reasoning.
- (VII) Speed, Distance and Time.
- (VIII) Statements and conclusions.

- (IX) Logical Reasoning.
- (X) Mental Reasoning.

Unit-VII      Computer Applications

25 Marks

- (I) Fundamentals of computer sciences
- (II) Hardware & Software
- (III) Input and output devices
- (IV) Operating system
- (V) M.S Word, M.S Excel, M.S Access and Powerpoint Presentation
- (VI) E\_mail & Internet

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# **Annexure “A9”**

## **“ASSISTANT PHYSICAL TRAINING INSTRUCTOR (APTI)”**

**M. Marks:-150**  
**Time: - 2.30 Hours**

### **Foundation of Physical Education: 20 marks**

- Concept of Physical Education.
- Aims and objectives of Physical Education. Scope of Physical Education in modern Era.
- Explain Cognitive domain, psychomotor domain, Affective domain.
- Relationship between Physical Education and General Education.
- Nature, meaning and scope of Philosophy in Physical Education.
- Major components of Philosophy.
- Philosophies of Physical Education (Idealism, Naturalism, Pragmatism, Realism & Existentialism).

### **Historical Perspective: 15 marks**

- Physical education in Ancient and Modern India
- Physical Education in Greece, USA, Germany, British and Rome.
- Ancient and Modern Olympic Games
- Asian and Common Wealth Games.
- South Asian Federation (S.A.F) Games
- National sports awards (Arjuna award, Dronacharya award, Rajiv Ghandi khel Ratna Award, Maulana Abul Kalam Azad (MAKA ) Trophy.
- Famous sports Personalities in India.

### **Officiating and Coaching: 15 marks**

- Concept of Officiating and Coaching
- Moderns Trends in Coaching
- Duties of Officials
- Layout of standard track.
- Dimension and marking for track and field events.
- Rules and their interpretation of track and field events.
- Rules and regulations of different games (Football, Volley Ball, Hockey, Basket Ball, Cricket, Kho Kho, Kabaddi and Badminton.

### **Psychological Foundations: 15 marks**

- Sports Psychology and factors effecting sports performance.
- Elements of learning, individual differences in learning, Learning Curve
- Theories of learning, Nature of motor skill learning.
- Transfer of training.
- Personality, Dimensions of personality.
- Growth and Development at different stages.
- Heredity and Environment.

### **Sociological Foundation: 10 marks**

- Socialization bases of Physical Education,
- Sports as cultural Heritage of Man Kind
- Cooperation and competition, social recognition.
- Social Institutions, Social Development.
- Group Dynamics, Leadership and its importance.
- Media in Sports, Politics in Sports
- National / International integration through Sports

### **Kinesiology: 10 marks**

- Historical Development of kinesiology, its need and scope in Physical Education & Sports.
- Axes and planes of movements, line of pull.
- Structure, Classification of the muscles and Joints.
- Origin Insertion and action of major muscles.
- Meaning of Biomechanics, role of biomechanics in Physical Education.
- Motion, types of motion, Newton's laws of motion.
- Equilibrium, Stability and its principles. Lever and its types. Spin, Projectile and Impulse,

### **Training Methods: 15 marks**

- Characteristics and principle of sports training
- Different methods of sports training.(Interval training, Weight Training Circuit training, Fartlek training and Plyometric Training).
- Development of Different Motor Abilities.
- Vital capacity, Second wind, Fatigue, Oxygen debt.
- Effect of training on muscular system, Respiratory system and Circulatory System.
- Technical and tactical preparation of Sports
- Warm-up, its types and values.

### **Management: 20 marks**

- Introduction, Meaning and Definition of management.
- Management techniques and financial management.
- Meaning of Organization and Administration.
- Organization of Physical Education and sports at different levels.
- Supervision and Evaluation in physical education and sports.
- Concept of teaching and Learning and Methods of Teaching.
- Lesson plan, Importance and need of lesson plan.

### **Planning: 20 marks**

- Meaning, Importance and Principles of Planning.
- Short term & Long Term Planning.
- Intra-mural and Extra mural tournaments.
- Talent Identification & Classification of students
- Sports meet and Sports day.
- Education technology and Teaching aids.
- Criteria for the selection of Players.

**First aid: 10 marks**

- Concept, Meaning of first aid and its types.
- Principles of First Aid.
- Sports injuries, types of injuries, causes of injuries and their Treatment in various cases (Sprain, Strain, Dislocation, Fracture, Burns, abrasions, & Cuts).
- Definition and concept of Rehabilitation.
- Goals and principles of Rehabilitation.
- Massage Manipulation & therapeutic Exercises.
- Doping in Sports.

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## **Annexure “A10”**

### Junior Assistant/ Typist cum Clerk/ Store Assistant / Steno-typist/ Junior Scale Stenographer and Other Similar Posts

#### A) English (upto 20 Marks)

- 1) Types of communication – verbal & non-verbal, formal, non-formal.
- 2) Articles – a, an, the
- 3) Rearranging of words/ sentences to form a meaningful sentence/paragraph.
- 4) Verb
- 5) Active, passive sentences/voices
- 6) Answer the given questions from a given paragraph (Comprehension).
- 7) Synonym & antonym
- 8) Noun & Pronoun
- 9) Tenses

#### B) General ability (upto 10 Marks)

- 1) Reasoning
  - i) Number series – one line series
  - ii) Letter series
  - iii) Coding – Decoding:
    - a) Letter coding.
    - b) Letter & Numerical coding.
    - c) Coding using position, number of alphabet.

#### C) Computer (upto 10 Marks)

- 1) Components of computer; Hardware & Software
- 2) Operating systems
- 3) Types of storage units – Primary & Secondary memory
- 4) Memory size (bits, bytes, KB, MB, GB, TB)
- 5) Basic Shortcut commands
- 6) Email & Internet
- 7) Virus & anti-viruses

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# Annexure “A11”

## Syllabus for Written test (Objective Type) for the of posts Vocational Instructor Mechanic Industrial Electronics

### ELECTRONIC DEVICES AND CIRCUITS

(40 Marks)

Semi conductor physics: energy levels, semi conductors, intrinsic and extrinsic semi conductor, minority and majority charge carriers, P and N type semiconductors.

Semiconductor diode: PN junction diode, potential barrier, drift and diffusion currents, depletion layer, V-I characteristics, static and dynamic resistance, half-wave, full wave and bridge rectifiers, rectification efficiencies and ripple factor, shunt capacitor filter, series inductor filter, LC and RC filters. Types of diodes, Zener and avalanche breakdown.

Bipolar transistors:

PNP and NPN transistors, Current relations in a transistor; concept of leakage current, CB, CE, CC configurations of a transistor. Transistor as an amplifier in CE Configuration, dc load line, current gain and voltage gain. Biasing Circuits. Single stage transistor amplifier, ac load line, current and voltage gain of a single stage amplifier circuit, H-parameters, Field effect Transistors: Construction, operation and characteristics of FETs. MOSFETs: Construction, operation and characteristics of a MOSFET.

Multistage Amplifiers: RC coupled, transformer coupled, direct coupled. Large Signal Amplifier, impedance matching in amplifiers, Class A, Class B, Class AB, and Class C amplifiers, collector efficiency and Distortion in class A,B,C, Push-pull amplifier, Feedback in Amplifiers, Sinusoidal Oscillators positive feedback, Barkhausen criterion for oscillations, oscillator circuits-tuned collector, Hartley, Colpitts, phase shift, Wien's bridge, and crystal oscillator. Tuned Voltage Amplifiers, Wave Shaping Circuits, Multivibrator Circuits: astable, monostable, and bistable, IC555, Operational Amplifiers: voltage gain, CMRR, PSRR, slew rate and input offset current, Operational amplifier as an inverter, scale changer, adder, subtractor, differentiator, and integrator. Schmitt trigger circuit and sample/hold circuit using operational amplifier.

### BASIC ELECTRICAL ENGINEERING

(10Marks)

DC Circuits: series and parallel combination of resistors, Kirchhoff's current law and Kirchhoff's voltage law, Star – Delta connections and their conversion. DC Circuit Theorems: Thevenin's theorem,

Norton's theorem, superposition and maximum power transfer theorems. Voltage and Current Sources, Electro Magnetic Induction: Faraday's laws of electro-magnetic induction, principles of self and mutual induction, self and mutually induced e.m.f, current growth, decay and time constant in an inductive (RL) circuit, Energy stored in an inductor, series and parallel combination of inductors.

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Batteries: primary and secondary cells, Construction, working principle of Lead-Acid, Nickel-Cadmium and Silver-Oxide batteries.

AC circuits: alternating quantities, cycle, frequency, time period, amplitude, instantaneous value, average value, r.m.s value, maximum value, form factor and peak factor, phasor diagrams. Different types of ac circuits: R, L, C, RL, RC & RLC. Inductive and capacitive reactance, series resonance and parallel resonance, Power factor, active and reactive power.



## **ELECTRONIC INSTRUMENTS AND MEASUREMENTS (10 Marks)**

Measurements: Measurement, method of measurement, types of instruments. Specifications of instruments: Accuracy, precision, sensitivity, resolution, range, errors in measurement, sources of errors, limiting errors, loading effect. Voltage, Current and Resistance Measurement: permanent magnet moving coil (PMMC) instruments, moving iron type instruments, measurement of d.c voltage and current, multimeter. Cathode Ray Oscilloscope: Construction and working of Cathode Ray Tube (CRT), Block diagram, description of a basic CRO and triggered sweep oscilloscope, front panel controls. Measurement of voltage, current, frequency, time period and phase using CRO. CRO probes, Digital storage oscilloscope (DSO). Signal Generators and Analytical Instruments: low frequency and RF generators, pulse generator, function generator, Wave analyzer, distortion measurement and spectrum analyser.

Impedance Bridges and Q Meters: Wheat stone bridge, AC bridges: Maxwell's induction bridge, Hay's bridge, De-Sauty's bridge, Schering bridge and Anderson bridge, RLC bridge & Q meter. Digital

Instruments: ramp, dual slope and integration type digital voltmeter, digital multimeter, universal counter/frequency counter logic probe, logic pulser, logic analyzer, logic comparator and signature analyzer.

## **DIGITAL ELECTRONICS AND MICROPROCESSORS (30 Marks)**

Digital signal, Number System: Binary, octal and hexadecimal number system, Binary addition, subtraction, multiplication and division. Codes and Parity: code, weighted and non-weighted codes, 8421, BCD, excess-3 and Gray code. Parity, single and double parity and error detection. Alpha numeric codes: ASCII and EBCDIC. Logic Gates and Families: NOT, AND, OR, NAND, NOR, EXOR Gates, NAND and NOR as universal gates. Logic family classification: SSI, MSI, LSI, VLSI. TTL and CMOS

families. Logic Simplification: Boolean algebra, De Morgan's Theorems. Implementation of Boolean (logic) equation with gates, Karnaugh map. Arithmetic circuits:

Half adder, Full adder circuit, Half and Full subtracter circuit and 4 bit adder/subtracter. Encoders, Decoders, Multiplexers and De-Multiplexers, Latches and flip flops, Counters, Shift Registers, A/D and D/A Converters

MICROPROCESSORS: Architecture of a Microprocessor (With reference to 8085 microprocessor) : bus organization of 8085, Functional block diagram of 8085 and function of each block, Pin details of 8085. Programming: Instruction format and addressing mode. Data transfer group, Arithmetic Group, Logic Group, Stack, I/O and Machine Control Group. Memories and I/O interfacing: memory mapping, I/O mapped I/O and memory mapped I/O. Instruction Timing and Cycles, Interrupts, Data transfer techniques: sync data transfer, async data transfer (hand shaking), Polling, Interrupt driven data transfer, DMA, Serial output data, Serial input data.

## **COMMUNICATION ENGINEERING (40 Marks)**

Modulation: Amplitude modulation & Demodulation, Frequency Modulation & Demodulation. Pulse Modulation, sampling theorem, time division multiplexing (TDM) and frequency division

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multiplexing (FDM), PAM, PWM, PCM. Quantization, quantization error, companding, Delta Modulation.

AM/FM Transmitters & Receivers, Antennas, Electromagnetic spectrum : VLF, LF, MF, HF, VHF, UHF, Microwave.

Propagation: Ground wave propagation, Space wave communication, Fibre Optic Communications & Satellite

Communications. Digital Modulation Techniques: Amplitude shift keying (ASK), Frequency Shift keying (FSK), Phase

shift keying (PSK), Quadrature Phase Shift Keying(QPSK), Spread Spectrum Techniques, Frequency Hopping Technique.

UART, USART

Wireless Communication: Electromagnetic waves, Paging system, Cordless Telephone System, Cellular Telephone

System. Propagation considerations, Multiple Access Techniques: Frequency Division Multiple Access (FDMA), Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA), Spread Spectrum Multiple Access (SSMA), Frequency Hopping spread Spectrum (FHSS). Mobile Communication Systems: Advanced Mobile Phone System (AMPS), Global Systems for Mobile Communication (GSM) and its architecture, CDMA System, DTH, Blue tooth, Wi-Fi.

### **POWER ELECTRONICS**

**(10Marks)**

Thyristors: Construction, Working principles of SCR, two transistor analogy of SCR, V-I characteristics of SCR, Different methods of SCR triggering, commutation circuits for SCR. Series & parallel operation of SCR. DIAC, TRIAC, UJT & their V-I characteristics. Gate Turn off thyristor (GTO), Programmable unijunction transistor (PUT). Controlled Rectifiers, Inverters, Choppers, Dual Converters and Cyclo converters.

### **NETWORK FILTERS AND TRANSMISSION LINES**

**(10 Marks)**

Networks: Two port (four terminals) network: Symmetrical and asymmetrical networks: Balanced and unbalanced network, -network, network, Ladder network; Lattice network; L-network and Bridge T-network. Symmetrical Network: characteristic impedance, propagation constant, attenuation constant, phase shift constant and insertion loss. T-network and Network. Asymmetrical Network: iterative impedance, image impedance, image transfer constant and insertion loss. The half section (L-section); symmetrical T and sections into half sections. Attenuators: Symmetrical T and type, L type. Filters: low pass, high pass, band pass and band stop filters. Prototype Filter Section, M-Derived Filter Sections, Crystal Filters & Active Filters. Transmission Line: characteristic impedance, propagation constant, attenuation constant and phase shift constant, infinite line, reflection and standing waves, reflection coefficient, SWR & VSWR.

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**“10+2”  
Syllabus  
10+2 Level Posts**

*Time: 02.30 Hrs.  
Marks: 150*

Unit-I GENERAL ENGLISH

20 Marks

- (i) Paragraph writing / Comprehension
- (ii) Editing / Proof Reading.
- (iii) Rearranging of jumbled sentences
- (iv) Dialogue
- (v) Narration
- (vi) Models
- (vii) Articles
- (viii) Paragraph writing with blanks to be filled in with the following Phrases, Pronouns, Homonyms / homophones, Tenses.
- (ix) Clauses
- (x) Punctuation
- (xi) Synonyms and antonyms
- (xii) Pairs of words and their use in meaningful sentences.
- (xiii) Idioms and phrases.
- (xiv) Uses of Prepositions

Unit-II MATHEMATICS

20 Marks

- (i) Problems on finding Surface areas and volumes of combinations of any two of the following cubes, cuboids, spheres, hemispheres and right circular cylinders / cones. Frustum of a cone.
- (ii) Problems involving converting one type of metallic solid into another and other mixed problems.
- (iii) Profit and loss
- (iv) Simple / Compound interest.
- (v) Linear equations with two variables.
- (vi) Progression / BODMAS
- (vii) Probability: Simple problems on Single event.

Unit-III HISTORY

15 Marks

- (i) Revolt of 1857 - Causes and Effects.
- (ii) Rise of National Movement - Factors.
- (iii) Formation of the Indian National Congress in 1885 and Role of Moderates.
- (iv) Factors leading to the rise of Extremism in the Congress with special reference to the Partition of Bengal.
- (v) Important dates and historical events with reference to India
- (vi) Boycott and Swadeshi Movement.
- (vii) Rise of Muslim League in 1906 : Cause.

- (viii) Khilafat Movement and the Non-Cooperation Movement.
- (ix) Quit India Movement.
- (x) Independence and Partition of India.

Unit-IV CIVICS

15 Marks

- (i) Fundamental Rights
- (ii) Fundamental duties.
- (iii) Directive Principles.
- (iv) Origin of democracy and its types. Direct and Indirect Democracy, Hindrance to Democracy.
- (v) Public opinion.
- (vi) Representaion.
- (vii) Franchise.
- (viii) Secret Ballot.
- (ix) Nomination.
- (x) Symbol.
- (xi) The Campaign
- (xii) Presidential elections.
- (xiii) Languages
- (xiv) Cities and Villages.
- (xv) The United Nations.

Unit-V GEOGRAPHY

15 Marks

- (i) Change of Seasons/ Planets/ Solar System/ Longitude - Latitude. Types of forests (with special reference of J&K State)
- (ii) Conservation and protection of forests.
- (iii) National / Zoological Parks and wildlife sanctuaries (Reference of J&K Sanctuaries and National Parks).
- (iv) Water resources. Sources of Water (with special reference of J&K State), Uses of water Resources. Conservation and management of water resources.
- (v) Rainwater Harvesting.
- (vi) Transport.
- (vii) Roads (Different routes of J&K State)

Unit-VI GENERAL SCIENCE

20 Marks

- (i) Gravitation / Heat / Light / Matter / Acids / Salts / Elements / Cells.
- (ii) Various sources of energy; conventional sources of energy; improvement in technology for using conventional source of energy (Biomass and wind energy)
- (iii) Non-conventional sources of energy (Solar energy, Energy from sea).
- (iv) Physical properties of metals and non-metals.
- (v) Chemical properties of metals like action of water, air, acids, salts; Reactivity series of metals.
- (vi) Occurance of metals; their extraction, enrichment of ores. Extraction of metals in accordance with activity series; refining of metals.
- (vii) Life processes: Nutrition and its types, Respiration, Transportation of water, food and minerals in plants, Excretion with reference to plants and animals.
- (viii) Environmental pollution.
- (ix) Ecosystem – Its components, Food chains and Food webs.
- (x) Ozone layer, its depletion, Green House Effect.

- (xi) Mendal's contribution and experiments on pea plant.
- (xii) Types of reproduction in Plants and Animals.
- (xiii) Classification of Plants and Animals.

Unit-VII (A) GENERAL KNOWLEDGE AND CURRENT AFFAIRS

15 Marks

Abbreviations, Important Dates, Popular Personalities, Geographical Discoveries, Books and Authors, Principal Languages of India, Capitals and Currencies of Countries, United Nations Organisation, Members of United Nations Organisation (UNO), Other International Organisations and Groups, Members of SSARC, ASEAN, BRICS AND G-7, Space Programme of India, India's Atomic Research Programme, Awards, Honours and Prizes, Seven Wonders. The World of Sports, Exports and Imports, India GDP, Per capita Income, Thermal / Nuclear/ Hydro Power Plants in India.

(B) GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K 15 Marks

- (i) Important dates, Popular names of personalities and their achievements / contribution.
- (ii) Constitution of J&K with reference to constituent Assembly.
- (iii) Centre-State relationship.
- (iv) Weather, Climate, Crops, Means of Transport.
- (v) Important projects and their impact on State Economy.
- (vi) Rivers and Lakes.
- (vii) Important Tourist Destinations.
- (viii) History of J&K State.
- (ix) Historical places and their importance.
- (x) Flora and Fauna of J&K State.

Unit-VIII MENTAL ABILITY TEST

15 Marks

- (i) Number series
- (ii) Letter series
- (iii) Coding decoding
- (iv) Direction sense
- (v) Blood relations
- (vi) Mathematical reasoning
- (vii) Speed, Distance and Time
- (viii) Statements and conclusions.

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# "Matric"

10<sup>th</sup> Level Syllabus

Marks:-150

Time:-2:30 Hours

## Syllabus for Written test (Objective Type) for the post of MATRIC LEVEL

### Section I

English. (20 Marks)

Unseen Passage, Phrases, Pronouns, Homonyms/ homophones, Tenses, Clauses, Punctuation, Articles. Basic understanding of English Language, Essay and letter writing  
(20 Marks)

### Section-II

Mathematics (30 Marks)

#### Unit 1

#### Algebra

Pair of Linear Equation in two variables, Algebraic conditions for number of solutions. Simple situational problems may be included, simple problems on equations reducible to linear equation may be included. (03 Marks)

#### Unit II

#### Polynomials and Quadratic equation

Zeroes of a Polynomial, Relationship between Zeroes and coefficients of polynomial with particular reference to quadratic polynomials. Statement and simple problems on division algorithm for polynomials with real coefficients. Standard form of Quadratic equation  $ax^2+bx+c=0$ , ( $a \neq 0$ ), problems related to day to day activities to be incorporated. (05Marks)

#### Unit III

#### Trigonometry

Trigonometric ratios of an acute angle of a right angled. Relationship between the ratios. Trigonometric identities. Applications of the identity  $\sin^2 A + \cos^2 A = 1$ , Trigonometric ratios of complementary angles. Simple and believable problems on heights and distances. Angle of elevation/depression should be only 30, 45, 60. (04 Marks)

Unit IV Mensuration

Problems on finding surface areas and volumes of combination of any two of the following cubes, cuboids, spheres, hemispheres and right circular Cylinders/ cones. Frustum of a cone. Problems involving converting one type of metallic solid into another and other mixed problems. (08 Marks)

Unit V Probability

Repeated experiments and observed frequency approach to probability. Focus is on empirical probability. Classical definition of probability. Simple problems on single even, not using set rotation. (10 Marks)

Section III Physics (20 Marks)

Unit I Light-Reflection and Refraction

Reflection of light, spherical mirrors; Image formation; uses of spherical mirrors. Sign, conventions for spherical mirrors. Refraction of light, refraction through a glass, refractive index, conditions for no refraction. Spherical lenses, image formation, sign conventions, lens formula (only relation). (05 Marks)

Unit II The Human Eye and the Colorful World

Human eye; power of accommodation; defects of vision and their correction. Glass prism (refraction and dispersion). Atmospheric refraction-twinkling of stars and color of sun at sunrise and sunset. (05 Marks)

Unit III Electricity

Concept of electric charge. Electric current; electric potential and potential difference; Ohm's Law and experimental verification; resistance and its dependence. Heating effect of current-Electric power and energy. (05 Marks)

Unit IV Source of Energy

Various sources of energy; Conventional sources of energy; improvement in technology for using conventional source of energy (Biomass and wind energy). Non-conventional sources of energy (Solar energy, Energy from Sea). Nuclear energy (Nuclear fusion and nuclear fission). Lasting of energy sources. (05 Marks)

Section-IV Chemistry (30 Marks)

Unit –I Chemical Reactions and Equation

Chemical equation, writing of chemical equation; balancing chemical equations. Types of chemical reactions; viz Combination reactions; Decomposition reactions; Displacement reactions; Double displacement reactions; Oxidation and reduction. Effects of oxidation and reduction reactions in everyday life, viz, corrosion and rancidity. (05 Marks)

#### Unit-II Carbon and its Compounds

Bonding in Carbon, Covalent bond, Allotropes of Carbon; Versatile nature of carbon; Saturated and unsaturated hydrocarbons; chains; branches and rings; homologous series and its characteristics. Chemical properties of carbon compounds viz. combustion; oxidation; addition and substitution reactions. Important Carbon compounds like Ethane and Ethanoic acid. Properties of Ethanoic acid. Soaps and Detergents. (10 Marks)

#### Unit-III Metals and Non-Metals

Physical properties of metals and non-metals. Chemical properties of metals like action of water, air, acids, salts. Cause of reactivity of metals and non-metals. Properties of Ionic compounds. Corrosion of metals and its prevention. (05 Marks)

#### Unit IV Acids, Bases and Salts

Idea about acids and bases; Chemical properties of acids and bases viz. Action of metals, metal carbonates, metal hydrogen carbonates (only in case of acids), metallic acids; non-metallic acids and bases. Similarities in acids and bases; reaction of acids and bases with water. Strength of acids and base solutions; pH and its importance. Idea of salts, their family and pH. Chemicals from common salts like Sodium hydroxide, Baking soda and Washing soda; Hydrated salts, plaster of paris. (10 Marks)

### Section -V Biology (50 Marks)

#### Unit-I Life Processes

What are life processes? Nutrition-Autotrophic Nutrition. Heterotrophic Nutrition. How do animals obtain their nutrition? Nutrition in Human beings. Respiration. Transportation: Transportation in plants. Excretion: Excretion in Human beings, Excretion in plants. (10 Marks)

#### Unit-II Control and Co-Ordination

Animals- Nervous System, What happens in Reflex Action? Human Brain. How are these tissues protected? How does Nervous tissue cause action? Coordination in



plants, immediate response to stimulus, movements due to growth. Hormones in Animals. (10 Marks)

#### Unit-III How do Organisms Reproduce?

The importance of variation. Modes of reproduction used by unicellular organisms. Fission, Fragmentation, Regeneration, Vegetative Propagation, Budding, Spore Formation, Sexual Reproduction: Why the sexual mode of reproduction? Reproduction in human Beings. Male Reproductive System, Female Reproductive System. What happens when the egg is not fertilized? Reproductive Health. (10 Marks)

#### Unit-IV Heredity and Genetics

Accumulation of variation reproduction, Heredity: Inherited traits, Rules for the inheritance of traits, Mendel's contribution. How do these traits get expressed? Sex determination. Acquired and inherited traits. Speciation. Classification, tracing evolutionary relationships, fossils, evolution by stages. (05 Marks)

#### Unit-V Our Environment

Environment and Ecosystem- What are its components? Food chains and webs. How do our activities effect the environment? Ozone layer and how it is getting depleted. Managing the garbage we produce. (05 Marks)

#### Unit-VI Management of Natural Resources

Why do we need to Manage our Resources? Forests and Wild life, Stake holders, Sustainable Management, Dama, Water harvesting. Coal and Petroleum. An overview of Natural Resources Management. (10 Marks)

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## “Middle”

### Syllabus for 8<sup>th</sup> Class Board Examination

*Time: 02.30 Hrs.*

*Marks: 150*

#### **1. English**

- a) Nouns and its kinds
  - b) Parts of Speech
  - c) Masculine/feminine (Gender)
  - d) Number
- (20 Marks)

#### **2. Science**

- a) Micro-organism (useful and harmful micro-organism)
  - b) Coal and Petroleum origin and uses.
  - c) Reproduction in Animals (Elementary Knowledge)
  - d) Matter and its States
  - e) Force and Pressure.
  - f) Motion- Elementary Knowledge.
  - g) Stars and Solar System.
  - h) Pollution of Air and Water.
  - i) Carbon and its allotropic forms.
  - j) Light
- (50 Marks)

#### **3. History**

- a) Indian Freedom Struggle after the revolt of 1857.
- b) Gandhiji era of Freedom Struggle.
- c) Moderater and Extremists.

d) Reform Moments.

(25 Marks)

**4. Geography**

a) Natural Resources

b) Demographic Profile of Jammu and Kashmir State.

c) Population of India as per 2011 Census.

d) Wildlife National Parks and Sanctuaries in Jammu and Kashmir.

e) Hydroelectric Potential of Hydroelectric Power Houses in Jammu and Kashmir. (25 Marks)

**5. Mathematics**

a) Rational Numbers

b) Linear Equation in one Variable

c) Squares and Square roots.

d) Cubes and cube roots.

e) Simple Algebraic Identities. (30 Marks)

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