

GOVERNMENT OF JAMMU AND KASHMIR  
JAMMU AND KASHMIR SERVICES SELECTION BOARD (JKSSB)  
Hema Complex, Sector -3, Channi Himmat, Jammu/ Zamzam Complex Rambagh  
Srinagar.  
[www.jkssb.nic.in](http://www.jkssb.nic.in)  
NOTICE

Subject: Advance Notice regarding conduct of Written Examinations for various posts advertised under different Advertisement Notifications.

It is hereby notified for the information of aspirants/ candidates that the Jammu and Kashmir Services Selection Board (JKSSB) is going to conduct Written Examinations for various posts advertised under different Advertisement Notifications as per the details mentioned in Annexure "A" to this Notice . Further, the syllabi for the posts mentioned at Annexure "A" are also hereby re-notified for the convenience of candidates as per the Annexures "AA" to "AK" annexed herewith.

All such candidates who have applied for the posts shown in the Annexure "A", are accordingly informed to participate in the Written Examinations. This is the advance notice for information of concerned candidates and is subject to change/modification. Final dates shall be notified in due course. Further, the schedule for downloading of Admit Cards shall also be notified separately.

(Ashok Kumar) JKAS  
Controller of Examinations  
Dated:30 .03.2022

No. SSB/CoE/2022/3499-3508

Copy to the:

- 1- Principal Secretary to Government, General Administration Department, Jammu.
- 2- Divisional Commissioner Kashmir / Jammu for information.
- 3- Director Information, J&K Government, Jammu with the request to get the said notification published in at least three leading local newspaper of Jammu/Srinagar for three consecutive dates
- 4- Member (All), Jammu and Kashmir Services Selection Board.
- 5- Secretary, Jammu and Kashmir Services Selection Board.
- 6- Administrative Officer, JKSSB Kashmir / Jammu for information.
- 7- Pvt. Secretary to Chief Secretary for the information of the Chief Secretary.
- 8- Pvt. Secretary to Chairman, JKSSB, for the information of Chairman.
- 9- In-charge website.
- 10- Stock File

## Annexure "A"

Advertisement No.	Item No.	Department	Name of the post	Cadre of the post	Total	Date of Exam	Syllabi annexed as
01 of 2021	025	Horticulture	Senior Horticulture Technician	Div.Jammu	12	18 May 2022	AA
01 of 2021	063	Horticulture	Senior Horticulture Technician	Div. Kashmir	16		
04 of 2021	655	Animal /Sheep husbandary and Fisheries Department	Inspector Fisheries/Farm Manager/Equivalent	UT	6	18 May 2022	AC
04 of 2021	637	Animal /Sheep husbandary and Fisheries Department	Junior Librarian	Div.Kashmir	1	19 May 2022	AD
05 of 2020	128	Science & Technology	Research Assistant	UT	5	19 May 2022	AE
05 of 2021	690	Horticulture	Horticulture Technician Grade-IV	Jammu	11	19 May 2022	AF
05 of 2021	691	Horticulture	Horticulture Technician Grade-IV	Samba	7		
05 of 2021	692	Horticulture	Horticulture Technician Grade-IV	Kathua	20		
05 of 2021	693	Horticulture	Horticulture Technician Grade-IV	Udhampur	12		
05 of 2021	694	Horticulture	Horticulture Technician Grade-IV	Reasi	7		
05 of 2021	695	Horticulture	Horticulture Technician Grade-IV	Doda	5		
05 of 2021	696	Horticulture	Horticulture Technician Grade-IV	Kishtwar	9		
05 of 2021	697	Horticulture	Horticulture Technician Grade-IV	Ramban	4		
05 of 2021	698	Horticulture	Horticulture Technician Grade-IV	Rajouri	10		
05 of 2021	699	Horticulture	Horticulture Technician Grade-IV	Poonch	6		

05 of 2021	700	Horticulture	Horticulture Technician Grade-IV	Srinagar	11		
05 of 2021	701	Horticulture	Horticulture Technician Grade-IV	Ganderbal	4		
05 of 2021	702	Horticulture	Horticulture Technician Grade-IV	Budgam	5		
05 of 2021	703	Horticulture	Horticulture Technician Grade-IV	Anantnag	15		
05 of 2021	704	Horticulture	Horticulture Technician Grade-IV	Pulwama	8		
05 of 2021	705	Horticulture	Horticulture Technician Grade-IV	Kulgam	12		
05 of 2021	706	Horticulture	Horticulture Technician Grade-IV	Baramulla	29		
05 of 2021	707	Horticulture	Horticulture Technician Grade-IV	Kupwara	17		
05 of 2021	708	Horticulture	Horticulture Technician Grade-IV	Bandipora	5		
05 of 2021	709	Horticulture	Horticulture Technician Grade-IV	Shopian	1		
04 of 2021	657	Animal /Sheep husbandary and Fisheries Department	Deputy Inspector Fisheries/ Equivalent	Div.Kashmir	32	25 May 2022	AB
04 of 2021	656	Animal /Sheep husbandary and Fisheries Department	Deputy Inspector Fisheries/Equivalent	Div.Jammu	10		
01 of 2021	113	Horticulture	Katib	Div. Kashmir	1	29 May 2022	AI
01 of 2021	030	Horticulture	Assistant Seaman	Div.Jammu	1		
04 of 2021	642	Animal /Sheep husbandary and Fisheries Department	PBX Operator	Div.Kashmir	1		
01 of 2021	111	Hospitality & Protocol Department	Table Boy	Div. Kashmir	1		

01 of 2021	070	Horticulture	Cameraman	Div. Kashmir	1
02 of 2021	309	Health & Medical Education	Screen Technician	Div. Jammu	1
01 of 2021	024	Horticulture	Cleaner	Div. Jammu	1
04 of 2021	639	Animal /Sheep husbandary and Fisheries Department	Rakhoverseer	Div. Kashmir	2
04 of 2021	638	Animal /Sheep husbandary and Fisheries Department	Junior Grader	Div. Kashmir	1
03 of 2021	592	Forest ,Ecology and Environment Department	Social Forestry Worker	Div. Jammu	11
04 of 2021	630	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Anantnag	7
03 of 2021	605	Forest ,Ecology and Environment Department	Wild Life Guard	Div. Jammu	71
01 of 2021	071	Horticulture	Cleaner	Div. Kashmir	1
01 of 2021	101	Horticulture	Cleaner	Baramulla	1
03 of 2021	593	Forest ,Ecology and Environment Department	Social Forestry Worker	Div. Kashmir	10
03 of 2021	606	Forest ,Ecology and Environment Department	Wild Life Guard	Div. Kashmir	37
04 of 2021	634	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Bandipora	4
04 of 2021	635	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Baramulla	6
04 of 2021	627	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Budgam	4

04 of 2021	616	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Doda	8
04 of 2021	628	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Ganderbal	7
04 of 2021	612	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Kathua	9
04 of 2021	617	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Kishtwar	1
04 of 2021	631	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Kulgam	3
04 of 2021	632	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Kupwara	5
04 of 2021	622	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Poonch	11
04 of 2021	629	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Pulwama	4
04 of 2021	620	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Rajouri	7
04 of 2021	618	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Ramban	3
04 of 2021	615	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Reasi	2
04 of 2021	611	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Samba	4
04 of 2021	633	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Shopian	3

04 of 2021	626	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Srinagar	4
04 of 2021	614	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Udhampur	6
04 of 2021	610	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Div.Jammu	13
04 of 2021	624	Animal /Sheep husbandary and Fisheries Department	Veterinary Pharmacist	Div.Kashmir	5
04 of 2021	648	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Anantnag	4
04 of 2021	683	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Anantnag	7
04 of 2021	687	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Bandipora	5
04 of 2021	654	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Baramulla	3
04 of 2021	681	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Baramulla	6
04 of 2021	679	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Budgam	7
04 of 2021	641	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Div.Kashmir	2
04 of 2021	676	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Doda	5
04 of 2021	644	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Ganderbal	2

04 of 2021	680	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Ganderbal	5
04 of 2021	668	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Jammu	2
04 of 2021	670	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Kathua	6
04 of 2021	677	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Kishtwar	5
04 of 2021	684	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Kulgam	5
04 of 2021	650	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Kupwara	4
04 of 2021	682	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Kupwara	6
04 of 2021	671	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Poonch	5
04 of 2021	646	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Pulwama	3
04 of 2021	685	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Pulwama	4
04 of 2021	672	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Rajouri	8
04 of 2021	675	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Ramban	4
04 of 2021	673	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Reasi	6

04 of 2021	669	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Samba	2
04 of 2021	652	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Shopian	2
04 of 2021	686	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Shopian	4
04 of 2021	678	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Srinagar	6
04 of 2021	674	Animal /Sheep husbandary and Fisheries Department	Stock Assistant	Udhampur	5
04 of 2020	053	Culture	Binder	Div.Jammu	1
06 of 2020	211	Hospitality and Protocol Department	Room Bearer (For Dehli)	UT	1
06 of 2020	205	Hospitality and Protocol Department	Telephone Operator	Div.Kashmir	1
06 of 2020	210	Hospitality and Protocol Department	Waiter(For Dehli)	UT	1
06 of 2020	206	Hospitality and Protocol Department	Table Boy	Div.Kashmir	2
06 of 2020	236	Home	Chowkidar	UT	1
06 of 2020	235	Home	Orderly	UT	4
05 of 2020	145	Public Works(R&B) Department	Work Shop Attendant	Div.Jammu	7
04 of 2020	073	Labour & Employment	Supervisor	UT	7
06 of 2020	208	Hospitality and Protocol Department	Telephone Operator	Div.Jammu	1
06 of 2020	207	Hospitality and Protocol Department	Table Boy	Div.Jammu	1



04 of 2020	117	Finance	Inspector	UT	18	12 June 2022	AH
04 of 2020	118	Finance	Sub Inspector	UT	2	26 June 2022	AG
04 of 2020	121	Finance	Sub Inspector	Div. Jammu	48		
04 of 2020	123	Finance	Sub Inspector	Div. Kashmir	12		
03 of 2021	604	Forest ,Ecology and Environment Department	Mistry	UT	1	03 July 2022	AJ
04 of 2021	625	Animal /Sheep husbandary and Fisheries Department	Electrician	Div.Kashmir	1		
06 of 2020	204	Hospitality and Protocol Department	Upholester	Div.Kashmir	1		
05 of 2020	143	Public Works(R&B) Department	Junior Mechanic	Div.Jammu	3		
05 of 2020	166	ARI and Training	Lathe Runner	Div.Jammu	1		
05 of 2020	173	ARI and Training	Etcher Artist	Div.Kashmir	1		
05 of 2020	165	ARI and Training	Machineman	Div.Jammu	1		
07 of 2020	313	Skill Development	Motor Driver Mechanic	Div Kashmir	1		
05 of 2020	144	Public Works(R&B) Department	Servicing Operator	Div.Jammu	1		
07 of 2020	315	Skill Development	Electronic Mechanic	Div Kashmir	1		
05 of 2020	168	ARI and Training	Assistant Mechanic	Div.Jammu	1		
06 of 2020	201	Higher Education	Workshop Assistant	Div.Kashmir	2		
01 of 2021	029	Horticulture	Welder	Div.Jammu	1		

07 of 2020	239	Agriculture Production & Farmer's Welfare	Carpenter	Div.Jammu	1
01 of 2021	011	Jal Shakti	Mechanic	Jammu	1
06 of 2020	197	Higher Education	Carpenter-II	Div.Kashmir	1
01 of 2021	121	Information	Screenman	Div. Jammu	2
05 of 2020	147	Public Works(R&B) Department	Fitter	Div.Jammu	2
07 of 2020	321	Skill Development	Electricain	Div Jammu	1
01 of 2021	112	Hospitality & Protocol Department	Tailor	Div. Kashmir	1
06 of 2020	196	Higher Education	Workshop Instructor	Div.Kashmir	2
02 of 2021	308	Health & Medical Education	Telephone operator	Div.Jammu	1
07 of 2020	311	Skill Development	Workshop Assistant	Div Kashmir	5
06 of 2020	200	Higher Education	Maintenance Assistant	Div.Kashmir	1
05 of 2020	167	ARI and Training	Junior Electrician	Div.Jammu	1
04 of 2020	082	Transport	Fitter	UT	4
06 of 2020	190	Higher Education	Plumber-II	Div.Jammu	1
01 of 2021	061	Horticulture	Assistant Mechanic	Poonch	1
07 of 2020	305	Agriculture Production & Farmer's Welfare	Plumber	Div.Kashmir	1
04 of 2020	083	Transport	Greaser Washer	UT	12
01 of 2021	013	Jal Shakti	Electrician	Jammu	1

04 of 2020	084	Transport	Welder	UT	6
04 of 2020	085	Transport	Electrician	UT	4
01 of 2021	012	Jal Shakti	Mechanic	Kathua	1
01 of 2021	014	Jal Shakti	Electrician	Samba	1
01 of 2021	015	Jal Shakti	Electrician	Kathua	1
01 of 2021	016	Jal Shakti	Electrician	Poonch	1
01 of 2021	074	Horticulture	Assistant Mechanic	Srinagar	1
01 of 2021	079	Horticulture	Assistant Mechanic	Budgam	1
01 of 2021	083	Horticulture	Assistant Mechanic	Anantnag	1
01 of 2021	087	Horticulture	Assistant Mechanic	Pulwama	1
01 of 2021	099	Horticulture	Assistant Mechanic	Baramulla	1
01 of 2021	103	Horticulture	Assistant Mechanic	Kupwara	1
01 of 2021	106	Horticulture	Assistant Mechanic	Bandipora	1
04 of 2020	081	Transport	Mechanic	UT	12
01 of 2021	126	Information	Screenman	Div. Kashmir	2
01 of 2021	132	Information	Screenman	Kathua	1
01 of 2021	136	Information	Screenman	Udhampur	1
01 of 2021	141	Information	Screenman	Doda	1

01 of 2021	154	Information	Screenman	Anantnag	1		
01 of 2021	155	Information	Screenman	Pulwama	1		
01 of 2021	157	Information	Screenman	Shopian	1		
05 of 2020	172	ARI and Training	Machineman	Div.Kashmir	3		
05 of 2020	146	Public Works(R&B) Department	Assistant Mechanic	Div.Jammu	1		
07 of 2020	323	Skill Development	Plumber	Div Jammu	1		
07 of 2020	320	Skill Development	Workshop Assistant	Div Jammu	5		
07 of 2020	325	Skill Development	Electronic Mechanic	Div Jammu	1		
04 of 2020	099	Election	Election Assistant (Junior Scale)	UT	110		
02 of 2021	455	Revenue	Patwari	Pulwama	11		
02 of 2021	458	Revenue	Patwari	Anantnag	15		
02 of 2021	464	Revenue	Patwari	Kupwara	36		
02 of 2021	468	Revenue	Patwari	Shopian	17		
02 of 2021	471	Revenue	Patwari	Bandipora	16		
02 of 2021	475	Revenue	Patwari	Baramulla	47		

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## Annexure "AA"

### Syllabus for Written test (Objective Type)

Marks: -120  
Time: - 2.00 Hours

#### Section – I

Marks: 30

#### 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), Liliun, 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: 10

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:

10

### 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:

10

### Post Harvest Technology

Maturity indices, harvesting, handling, grading of fruits, vegetables and cut flowers. Factors responsible for deterioration of horticultural produce, physiological and biochemical 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 "AB"

## Syllabus for the post of Deputy Inspector Fisheries and Fisheries Development Assistant.

### **I. Principles of taxonomy**

Nomenclature, types Classification and interrelationships. Criteria for generic and specific identification. Morphological, morphometric and meristic characteristics of taxonomic significance. Major taxa of inland and marine fishes up to family level. Commercially important freshwater and marine fishes of India and their morphological characteristics. Introduction to modern taxonomic tools: karyotaxonomy, DNA barcoding, protein analysis and DNA polymorphism. Study of external morphology and meristic characteristics of crustacea and mollusca. Classification of crustacea and mollusca up to the level of species with examples of commercially important species.

### **II. Anatomy and Physiology of vertebrates with special reference to finfish**

Integumentary System; Derivatives of integument; Skeletal System, Evolution of visceral arches; Digestive System; Respiratory System; Circulatory System; Excretory system.

### **III. Classical and Molecular Genetics**

Mendelian genetics, Linkage, Linkage maps and crossing over ; Nature of heterochromatin; Organisation of genetic material in prokaryotes and eukaryotes. Multiple alleles, Lethality, Epistasis, Sex linked inheritance, Extra chromosomal Inheritance; Mutations: Structural and numerical changes in chromosomes; Gene mutations; Replication: Replication in prokaryotes and eukaryotes; Transcription and translation: Transcription and post transcriptional modifications, Translation; Sex Determination, Chromosomal mechanisms, Dosage compensation; Principles of genetics and breeding, Gene and chromosome as basis of inheritance, Mendel's law of inheritance - complete and incomplete dominance, monohybrid and dihybrid ratios. Gene interactions - dominant and recessive epistasis. Pleiotropism. Lethal genes.

### **IV. Fresh water Aquaculture**

Major species cultured, production trends and prospect in different parts of the world. Freshwater aquaculture resources-ponds, tanks, lakes, reservoirs etc. Nursery, rearing and grow-out ponds preparation and management-control of aquatic weeds and algal blooms, predatory and weed fishes, liming, fertilization/manuring, use of biofertilizers, supplementary feeding. Water quality management. Selection, transportation and acclimatization of seed. Traits of important cultivable fish and shellfish and their culture methods-Indian major carp, exotic carp, air breathing fish, cold water fish, freshwater prawns.

### **V. Limnology**

Introduction to limnology: inland water types, their characteristics and distribution; ponds and lakes; streams and rivers; dynamics of lentic and lotic environments. Lakes - their origin and diversity. Famous lakes of India with special reference to J&K; nature of lake environment; morphometry, physical and chemical conditions and related phenomena; biological relations: influence of physical and chemical conditions on living organisms in inland waters. Plankton: planktonic organisms; classification of plankton; distribution of plankton: geographic, vertical, horizontal and seasonal distribution of phytoplankton and zooplankton; seasonal changes of body form in planktonic organisms; food of planktonic organisms; primary productivity.

### **VI. Aquatic ecology and Biodiversity**

Aquatic environment, Flora and fauna: Components of aquatic systems, Aquatic productivity, nutrient cycles, energy flow, food chain. Animal associations:

parasite relationship Aquatic biodiversity-its importance, species diversity, genetic diversity, habitat diversity, diversity indices. Ecological and evolutionary processes. Ecological niches - lagoons, estuaries, mangroves, coral reefs, flood plains, coastal wet lands, beels, oxbow lakes. Threats to biodiversity- habitat destruction, introduction of exotic species, Conservation of habitats, marine parks and sanctuaries. Conservation programmes for endangered species, *ex situ* and *in situ* conservation, captive breeding and management of endangered species. Various national and international conventions and regulations concerning biodiversity, including use of selective gears and exclusion devices.

#### **VII. Fish Nutrition and Biochemistry**

Fundamentals of fish nutrition and growth in fish. Principal nutrients and nutritional requirements of cultivable fish and shellfish. Nutritional energetics: definition and forms of energy partitioning. Methods of feed formulation and manufacturing. Forms of feeds: wet feeds, moist feeds, dry feeds, mashes, pelleted feeds, floating and sinking pellets. Feed additives: binders, antioxidants, enzymes, pigments, growth promoters, feed stimulants. Feed storage: use of preservatives and antioxidants. Feed evaluation: feed conversion ratio, feed efficiency ratio, protein efficiency ratio, net protein utilization and biological value. Feeding devices and methods. Non-conventional feed ingredients and antinutritional factors. Digestive enzymes, feed digestibility. Factors affecting digestibility. Nutritional deficiency diseases. Carbohydrate metabolism: Glycolysis, Krebs-cycle, Pentose phosphate pathway, Gluconeogenesis, Glycogen metabolism, Electron transport chain; Lipid metabolism: Biosynthesis and  $\beta$  oxidation of palmitic acid. Protein metabolism: Transamination, deamination and urea cycle Enzymes: Introduction, Mechanism of action, Enzyme Kinetics, Inhibition and Regulation

#### **VIII. Hill stream Fisheries**

Introduction, Ecology and classification of hill streams. Geographical features, Drainage pattern, Climate and seasons with special reference to Himalayan Hill streams. Check list of some important hill streams. Biodiversity of hill stream fishes of Jammu, Kashmir and Ladakh. Grouping of hill stream fishes as per Menon (1954). Modifications in the hill stream fish fauna (External shape and form of the body, Scales, position of the mouth and lips, barbels, paired fins, caudal fin and caudal peduncle, eyes, gill apertures, and branchiostegal rays, skeleton, air bladder), adhesive apparatus, histological structure and mechanism of adhesion. Food of hill stream fishes. Primary and secondary productivity in hill streams. Evolution, distribution and origin of hill stream fishes. Fish culture in hill streams.

#### **IX. Hatchery Management**

Freshwater and marine fish seed resources. Natural breeding of finfishes. Selection of riverine spawn collection sites, gears used and methods of collection. Spawn quality and quantity indices. Advantages and disadvantages of riverine seed collection. Sexual maturity and breeding season of various cultivable species. Development of gametes in male and female. Fish egg and embryonic development. Methods of breeding; bundh breeding - wet and dry bundhs, collection and hatching of eggs, factors involved in bundh breeding, advantages and disadvantages of bundh breeding. Induced breeding of warmwater finfishes, environmental factors affecting spawning, sympathetic breeding. Hypophysation of fishes. Fish pituitary gland - its structure, collection, preservation and preparation of extract for injection, dosages and methods of injection. Brood-stock management and transportation of brood fish. Synthetic hormones used for induced breeding of carps. Different types of fish hatcheries-traditional, Chinese, glass jar and modern controlled hatcheries. Causes of mortalities of eggs and spawn and remedies. Spawn rearing techniques. Use of anaesthetics in fish breeding and transport. Breeding techniques for Indian major carp, exotic carp. mahaseer, trout, tilapia, catfish.

## **X. Sport Fisheries**

Present status and future prospects of cold-water sport fishing. Different species of cold-water sport fishes and their natural breeding habit, ecology and behaviour. Different sport fishing techniques of fly fishing, spinner fishing and bait fishing. Casting/flipping/pitching, rigging, fish handling, live baits, rod and reel maintenance and repair, seasonal fish patterns, water and sun safety. State regulations governing sport fishing and management practices that maintain healthy fish populations.

## **XI. Fish Preservation, Processing and Value addition**

Principle of fish preservation and processing. Processing of fish by traditional methods- salting, sun drying, smoking, marinating and fermentation. Theory of salting, methods of salting-wet salting and dry salting. Drying and dehydration-theory, importance of water activity in relation to microbial growth. Sun drying and artificial drying- solar dryer. Packaging and storage of salted and dried fish. Different types of spoilage in salt cured fish. Quality standard for salted and dry fish. Fish preservation by smoking-chemical composition of wood smoke and their role in preservation. Methods of smoking and equipments used for smoking. Carcinogenic compound in wood and methods to remove them. Hurdle technology in fish preservation and processing. Marinated and fermented fish products-role of acids in marinades, Fish and prawn pickles, fish sauce and Fish paste, traditional Indian fermented products.

## **XII. Fish Diseases, Diagnosis and Treatment**

Introduction fish diseases. Common diseases of cold-water fish spp. Haemato-biochemical profile in fish disease. Immune system of fish; cell mediated, humoral immunity, non-specific immune system. Effect of environment on fish immune system. Important bacterial and Fungal diseases of cold-water fishes. Parasitic diseases of cold-water fishes; ecto and endo parasites, monogenetic and digenetic trematodes, black spot disease. Cestodiasis; Nematodiasis; Acanthocephalosis; Protozoon infections. Argulosis and other crustacean mediated diseases. Diseases due to environmental stress. Host-pathogen interaction in fish. Disease surveillance, diagnosis, and treatment.

# ANNEXURE "AC"

## Syllabus for the post of Inspector Fisheries

### I. Animal taxonomy

Systematics: terms & definitions, strategies of research in systematics, future of systematics; taxonomic characters: definition and kinds - morphological, physiological, molecular, ecological, behavioural and geographical; curating of collections: preparation of material, housing, cataloguing, arrangement of collection, curating of types, exchange of material and loans; taxonomic keys: definition and kinds- bracket key, indented key and pictorial key.

### II. Trends in taxonomy

Cytotaxonomy: back ground, chromosome evolution with specific reference to primates and grasshoppers; molecular taxonomy: concept of phylogenetic systematics; phylogenetic tree reconstruction; DNA bar coding concept and significance; tools for sequence annotation: NCBI (Gene bank), Nucleotide BLAST, Alignment & sequence analysis, MEGA & Phylogenetic tree.

### III. Invertebrates

- Protozoa and Porifera

Classification of protozoa up to order level; nutrition, locomotion, reproduction and economic importance of protozoa; classification of porifera up to order level; canal system, skeleton in porifera, reproduction and development; economic importance of porifera.

- Annelida and Arthropoda

Classification of Annelida up to order level; adaptive radiation in polychaetes; nervous system in annelids; economic importance of annelids; classification of Arthropoda up to order level; respiration in arthropods (aquatic & terrestrial); crustacean larvae & their evolutionary significance; economic importance of Arthropoda.

### IV. Fish Farming/ Aquaculture

- Culture of air breathing fishes; brackish water fish culture; prawn culture; pearl culture; Carp culture; trout culture; composite fish culture; integrated fish farming;
- Hatchery management of economically important fish; Operation, management and hatchery technology for seed production; Seed packaging and transportation methods; Synthetic hormones and analogues for induced spawning

### V. Resource management in Cold water fisheries

History of cold-water fisheries in India; Cold water fisheries resources of India; Important cold water fish species; Status of cold-water fisheries; River systems: origin and ecology; Effect of human intervention in rivers; Ecology of lakes and lake fisheries; Types of Lakes; Wetlands; Definition, types, structure and management of wetland ecosystem; Conservation and management of wetland; Impact of climate change on cold water fisheries.



## **VI. Fish anatomy, physiology and biology**

Taxonomy of cold-water fishes- meristic and morphometric; General characteristics of fish; Fish diversity and adaptation; Methods of fish identification (Morphometric and meristic); Skin and coloration; Types of fins; Types of scales; Classification and identification of important cold-water fishes; Anatomy & Physiology of cold-water fishes; Biology of cold-water fishes including their habitat, food and feeding habits, growth, maturity, fecundity; Reproductive and endocrine system; Male and female reproductive system of fishes; Sexual maturity and maturity stages of gonads; Migration of fishes; Spawning; Fecundity of fishes and methods of estimation of fecundity; Types of fish eggs; Embryonic development of fish; Hatching and development of fish larvae

## **VII. Diseases in fish and their control**

Introduction to various fish diseases; Viral diseases; Bacterial diseases; Fungal diseases; Parasitic diseases; Causative agents, symptoms, prophylaxis; Non infectious diseases; Identification and collection of samples for disease investigation; Disease control & Management; Management of culture system and environmental stress; Principles of disease diagnosis; Epidemiological and clinical diagnosis; Microbiological and post mortem examination of fin fishes in freshwater.

## **VIII. Sport fisheries**

Fishing tackle and fishing techniques; Scope of sport fisheries in Jammu & Kashmir; Sport fishing and the tourism industry; Management, development and conservation.

## **IX. Fish Nutrition/ Biochemistry**

Nutritional requirements; Role of Protein and amino acids, lipids, carbohydrates, amino acids, vitamins and minerals, additives, practical diets; Classification and metabolism of proteins, lipids and carbohydrates; Role of nutrients like amino acids, fatty acids, proteins, lipids, carbohydrates, vitamins and minerals. Energy requirement of fishes; Feed resources; Contribution from natural food to nutrient requirements of fish, Feed additives (attractants, growth stimulants and probiotics and binders), and Feed resources assessment; Classification of feed ingredients. General principle of feed formulation; Methods of feed formulation: Pearson's method, quadratic equation linear programming, limitations. Types of feed; Feeding practices.

## Annexure "AD"

### Syllabus for Written

Total Marks= 120

Time=02 Hours

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UNIT I 20 Marks

- (i) Types of Libraries and their Features
- (ii) Role of Libraries in contemporary Society
- (iii) Five Laws of Library Sciences
- (iv) Library legislations in India
- (v) Digital Library
- (vi) Intellectual Property Rights (IPR)
- (vii) National and International Library Associations: ILA, IASLIC, IATLIS, IFLA, FID ALA, ASLIB etc
- (viii) National and intercalation Agencies: UNESCO, OCLC, PRRLF, UGC, INFLIBNET, DELNET etc
- (ix) Information Centres, DRTC, ISI, INSDOC (NISCAIR), NASSDOC, DESIDOC, SENDOC, etc

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Unit-II Marks 20

- (i) Basic Terminology: call Number, Class Number, Book Number, Isolates
- (ii) Classification; concept & purpose.
- (iii) Types and characteristics of classification scheme.
- (iv) ISBD, ISBN, ISSN; classification schemes.
- (v) Features of DDC, UDC, and CC
- (vi) Five Fundamental Categories
- (vii) Notation: Definition and Purpose
- (viii) Library Catalogue; Definition and purpose
- (ix) Cannons of Classification and Cataloguing

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Unit-III Marks 20

- (i) Principles of Book Selection
- (ii) Selection Tool; Print and Non-Print Materials
- (iii) Processing of Documents; Accessioning, Classification, Cataloguing, labelling and shelving
- (iv) Difference between catalogue, Accession Register, bibliography and Shelf list.
- (v) Serials/ Journals; Selection and procurement
- (vi) Book Transaction System: Traditional and Modern
- (vii) Stock verification of Books; Methods and Tools
- (viii) Weeding Process

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Unit-IV Marks 20

- (i) Information sources: Definition, types and importance;

- (ii) Information sources- Primary, Secondary and Tertiary.
- (iii) Information Services: Definition and need of reference, documentation and information services.
- (iv) Types of Dictionaries, Encyclopaedias
- (v) Geographical and Biographical Sources
- (vi) Indexing and Abstracting Sources
- (vii) Types of Bibliographies
- (viii) Bibliographies Sources

Unit-V

Marks 20

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

Unit-VI

Marks 20

- (i) Study of Computer including concept of Hardware.
- (ii) Library Automation Need and Purpose.
- (iii) Need for computer applications, Areas of computer applications. Automation in library Management. Software Packages for Library Management-Essential features
- (iv) Computer and its Units, Computer and its classification.
- (v) Study of Various operating systems.
- (vi) General-purpose application software: Word Processing such as MS-office, lotus.
- (vii) Special Purpose application software: CDS/ISIS.
- (viii) Library Networking: Needs & Purpose.
- (ix) OPAC AND Web-OPAC.

(Ashok Kumar) JKAS,  
Controller of Examination,  
J&K Services Selection Board,  
Jammu

## **Annexure “AE”**

### **COMPUTER SCIENCE=====10 MARKS**

Functioning of Computer, Classification of Computer, Components of Computer, Computer Hardware, CPU, Memory Unit, Storage Devices, Input Devices, Output Devices, MODEM and its working, Number System, Decimal Number System, Binary Number System, Octal Number System and Hexadecimal Number System, Digital Codes, Code Conversion, Logic Gate Symbol Identification, Network Media- Guided (Twisted pair, Co-axial Fibre Optics), Un-Guided (Infrared, Radio, Microwave) Network Device HUB, MODEM, Repeater, Gateway, Switch and their functions Network Technologies- Ethernet Bluetooth, Wi-Fi.

### **MATHEMATICS=====10 MARKS**

Mixture Problems, Simplification, Average, Percentage, Ratio and Proportion, Number System, Algebra, Profit and Loss, Interest, Speed Time and Distance, Time and Work, Mensuration, Geometry, Trigonometry, Number Series, Permutation and Combination, Tabulation, Bar Graph, Line Graph, Pie Chart, Venn Diagrams, Probability, Number Series, Clock and Calendar, Mathematical Puzzles, Syllogism, Direction and Distance, Analytical Geometry, Equation of Line, Slopes, Matrices and Determinants, Matrices and determinants, Definition of a matrix, various types of matrices, Addition and multiplications of matrices. Transpose of a matrix and its properties.

### **PHYSICS=====10 MARKS**

System of Units, SI Units, SI System, Fundamental and Derived Units, Practical Units, Wave Motion, Types of Wave Motion, Musical Sound and Noise, Pitch, Loudness, Quality of Sound, Beats, Lasers, Types of lasers and application of lasers, Coulomb’s Law, Electric Field, Intensity of electric Field, capacitors and capacitance, combination of capacitors in series and in parallel capacitance, Kirchhoff’s Laws, Kirchhoff’s Current Law, Kirchhoff’s Voltage Law, Direct Current, Alternating Current, Magnetism, Molecular Theory of Magnetism, Right Hand Rule, Left Hand Rule, Helix Rule, Cells, Primary cells, Secondary Cells, Battery, Parallel Group of Batteries, Mixed Group of Batteries, Capacity of a Battery, Efficiency of Battery, Charging of Battery, Electrical resistivity and conductivity, carbon resistors, color code for carbon resistors, thermistors, piezo discs.

### **CHEMISTRY=====10 MARKS**

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous solids and crystalline solids (elementary idea only). unit cell in two dimensional & three dimensional lattices, packing efficiency, calculation of density of unit cell. packing in solids, voids, number of atoms per unit cell in a cubic unit cell point defects. Properties of solids (electrical, magnetic & dielectric), Band theory of metals, conductors, semi-conductors and insulators and n & p type semiconductors, Types of solutions, expression of concentration of solution of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties relative lowering of vapor pressure of a solution, Raoult's law, elevation of boiling point, depression in freezing point temperature and osmotic pressure), determination of molecular masses using colligative properties Abnormal molecular mass, van't Hoff factor and calculations involving it, Redox reactions, conductance in electrolytic solutions, specific conductivity. Molar conductivity, variation of conductivity with concentration

### **BOTANY =====10 MARKS**

Heredity and variation, Mendelian inheritance, Deviations from Mendelism: incomplete dominance, co-dominance, Multiple alleles. Pleiotropy Chromosomal theory of inheritance, Elementary idea of polygenic inheritance, Chromosomes & genes, Search for genetic material DNA genetic material Structure of DNA & RNA. DNA packaging. DNA Replication (Semiconservative), Central dogma, Protein Biosynthesis Transcription, translation, genetic code Gene expression and regulation (lac-operon), Plant breeding: introduction, steps in plant breeding and application of plant breeding and single cell protein, Biofortification, Tissue culture: Cellular totipotency, technique and application of tissue culture, Microbes in Human Welfare: in household food processing, industrial production, sewage treatment Production of energy (Biogas), biocontrol agent (Biopesticides) & Biofertilizers, Genetically Modified organism- Bt crops, Biopiracy and patents, Meaning of ecology, environment, habitat and niche: Organism and environment

### **ZOOLOGY=====10 MARKS**

Asexual Reproduction: Uniparental, modes: binary fission, sporulation, budding, gemmule, fragmentation, regeneration. Human Reproduction- Male and female reproductive systems. Microscopic anatomy of testis & ovary Gametogenesis (spermatogenesis & oogenesis Menstrual cycle), Fertilization, embryo development upto blastocyst formation, implantation, Pregnancy and placenta formation (elementary idea). Parturition (elementary idea) and Lactation (elementary idea). Reproductive Health: Need for reproductive health & prevention of Sexually Transmitted Diseases (STD), Birth control- need & methods, Contraception and

Medical Termination of Pregnancy (MTP), Amniocentesis, Infertility & assisted reproductive technologies: IVE.GIFT (Elementary idea for general awareness), Sex determination in human hits and honeybee, Inheritance pattern of Hemophilia and Color blindness in human beings, Mendelin Disorders in humans: Chromosomal disorders in humans, Down's syndrome, Turner's & Klinefelter's syndromes, Genome and Human Genome project, DNA fingerprinting, Origin of life Theories & evidences with special reference to Darwin & Modern Synthetic theory of evolution, Hardy - Weinberg's principal Adaptive radiation. Origin and evolution of Man.

### **PROFESSIONAL COMMUNICATION=====10 MARKS**

Error Spotting- Grammar, Active and passive Voice, Direct and Indirect Speech, Fillers, Common Errors, fill in the blanks (Vocabulary), vocabulary, spellings, grammar, sentence jumbles, para jumbles, synonyms, antonyms, one word substitution, sentence completion, phrase replacement, Phrase or Idiom Meaning.

### **ENGINEERING TOPICS=====10 MARKS**

Introduction to electrical and electronic measurements, errors in measurement, galvanometer, voltmeter, ammeter, accuracy, precision, permanent magnet moving coil, electrodynamicometer type instrument, measurement of resistance, measurement of self-inductance, measurement of capacitance, sensors and transducers, Digital electronic voltmeter, CRO, measurement of high AC voltages, Materials and Components, Atoms and Solids, Dielectric Properties of Insulating Materials, Magnetic Properties of Materials, Conductivity of Metals, Conduction in Semiconductors, Insulators, Optical Materials, Communication systems, modulation, analog modulation, Frequency Modulation, Frequency Division Multiplexing, Digital Communication Systems, Sampling, Time Division Multiplexing, Delta Modulation, Demodulation, Satellite Communication, Analog Circuits, DC Biasing BJT's, Fixed Bias Circuit, Transistor Saturation , Power Amplifiers, Feedback and Oscillator Circuits, Operational Amplifiers, Applications of Op-AMP, JFET, MOSFET, Power Systems, Electric Power Generation, Transmission Line Parameters, Performance of Overhead Transmission Lines, Cables, Grading of Cables, Corona Losses, Faults, Types of Faults, Circuit Breakers, Relays, Types of Relays, Earthing, , Insulation Material.

### **DESIGN AND INNOVATION =20 MARKS**

CAD designing, CAD Designing software, Features of CAD software, File types in CAD, Menu features in CAD software, Autodesk Inventor Software, File Types in Inventor, 2D Sketching, 3D Sketching, 3D Printing, Additive Printing, Types of Additive Printing, Subtractive Printing, Metal Fusion Techniques for 3D Printing, Fused Deposition Modeling (FDM), Types of Materials in FDM, Properties of PLA, Properties of ABS, Properties of PET, Properties of PETG, Properties of TPU, Properties of PC, Properties of Nylon, Properties of ASA, Properties of ULTEM, Slicer Software, Files types in Slicer Software, Arduino, Arduino UNO, Arduino Mega, Arduino Nano, Arduino UNO PIN layout, Arduino Mega PIN layout, Arduino Nano PIN layout, Arduino Programming, Laser Engraving Techniques, Laser Engravers, Types of Lasers, Printed Circuit Board (PCB) Designing, Types of PCB materials, Multi-Layer PCB's, PCB Component Footprints, Footprint codes of Basic through hole Components, Footprint codes of SMA/SMD components, Capacitors, Inductors, Resistors, Color Coding of Carbon resistors, Coding of Capacitors, Electronic Sensors and Transducers, Servo Motors, Stepper Motors, Sensor IC's, Innovation in Mobile Phone Technology, Innovation in Led TV's, Latest Innovation in Consumer Products, Innovation in Medical Technology, SSD's, NVME Storage Devices, Relays, Switches , Types of Switches, Connectors, types of Connectors, Oscillators, Types of Oscillators Using Transistor, Crystal Oscillator, Application of Oscillators, Optoelectronic devices, 555 Timer, regulated Power supply, Power Supply IC's, Identification of Electronic and Electrical Symbols, Identification of IC's by Visualization, Identification of Electronic Active & Passive Components by Visualization, Types and Kinds of Electronic Measurement Tools, Digital Electrical Watt Meter Design, Regulated Power Supply Design, Design of Voltage Stabilizers, Voltage Regulation, Design using IC Voltage Regulators, Designing Circuit using Circuit Simulation Tools, Multisim Simulation, Diptrace PCB designer, Product Designing, Concept Generation, Concept Selection, Concept Testing, Development Process, Product Planning, Identifying Customer/ Consumer Needs, Product Specifications, Product Architecture, Industrial Design, Design For Manufacturing, Prototyping, General Knowledge Questions Related to Latest Innovations in the World.

(Ashok Kumar) JKAS,  
Controller of Examination,  
J&K Services Selection Board,  
Jammu

Annexure "AF"

Syllabus for Written test (Objective Type)

Marks:-120

Time: - 2.00 Hours

Soil-General Concept and importance, soil texture (Soil Particles): (20 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.
  - Graminace (Paddy and Maize)
  - Rosaceae (Apple)



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

Plant protection fundamentals: \_\_\_\_\_ (20 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

20 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

20 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)

20

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

20 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.

## Annexure "AG"

### Syllabus for written test

Marks: 120

Time: 02.00 Hrs.

#### 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
  - i. Phrases
  - ii. Pronouns
  - iii. 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.
- (xii) Active & Passive Voice

#### GENERAL KNOWLEDGE AND CURRENT AFFAIRS

20 Marks

- (i) Indian History with special reference to Freedom struggle
- (ii) First in world (Adventure, Sports, Discoveries)
- (iii) First in India (Adventure, Sports, Discoveries)
- (iv) Popular Personalities (Politics, Scientific discoveries, Geographical, Sports, History)
- (v) The Newspaper world – (Current Dailies & Weeklies of India)
- (vi) Languages & Culture
- (vii) International Organisations- UNO, WHO, WTO, IMF, UNESCO, UNCTAD etc.
- (viii) Important Regional Organizations and Blocs- BRICS, OPEC, ASEAN, SAARC, BIMSTEC, G-20, G-7 etc.
- (ix) Sustainable Development Goals
- (x) Communicable Diseases- cure and prevention
- (xi) NCDC- COVID-19 - SOPs, Advisories, Guidelines etc
- (xii) World famous Awards
- (xiii) The world of Sports
- (xiv) Climate & Crops in India
- (xv) Political & Physical divisions of world & India
- (xvi) Important Rivers & Lakes in India

- (xvii) Current Events of National and International importance
- (xviii) Agriculture in economic development; Industrialization and economic development.
- (xix) Foreign Trade & Balance of payments
- (xx) New economic reforms
- (xxi) Inflation, Monetary Policy, Fiscal Policy, Capital Markets, Role of RBI, Taxation in India- Direct & Indirect Tax - CBDT, GST etc.
- (xxii) India's Atomic Research Programme,
- (xxiii) Thermal / Nuclear/ Hydro Power Plants in India.

GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO UT of J&K 20 Marks

- (i) Popular names of personalities and their achievements/ Contribution (National and International).
- (ii) Weather, Climate, Crops, Means of Transport.
- (iii) J&K History, Economy and Culture
- (iv) Flora and Fauna of J&K
- (v) Rivers and Lakes.
- (vi) Important Tourist Destinations.
- (vii) J&K Panchayati Raj Act, 1989 (as amended upto December, 2020), 73rd & 74th Constitutional amendments.
- (viii) J&K Reorganisation Act, 2019

GENERAL SCIENCE 20  
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

MENTAL ABILITY TEST

20 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.

COMPUTER APPLICATIONS

20 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

*Annexure "AH"*

Syllabus for written test

Marks: 100

Time: 02.00 Hrs.

S. No.	Subjects/ Topic	Marks assigned
1	GENERAL AWARENESS with special reference of J&K UT	30
2	FINANCE & ACCOUNTS	30
3	GENERAL ENGLISH & COMPREHENSION	10
4	CONSTITUTION/ GOVERNANCE/POLITY	10
5	GENERAL INTELLIGENCE & REASONING	10
6	COMPUTER APPLICATIONS	10
TOTAL		100

GENERAL KNOWLEDGE AND CURRENT AFFAIRS

30 Marks

- (i) Current Events of National and International Importance
- (ii) Political & Physical divisions of India
- (iii) Climate & Crops in India
- (iv) Transport & Communication.
- (v) Demography & Vital Statistics.
- (vi) Important Rivers & Lakes in India.
- (vii) Indian Economy.
- (viii) Indian Culture & Heritage.
- (ix) Indian History with special reference to Freedom Movement.
- (x) Science & Technology.
- (xi) Environment, Ecology & Bio-diversity.
- (xii) Books & Authors
- (xiii) Persons & Places
- (xiv) Sports
- (xv) Taxation in India- Direct & Indirect Tax, GST, Income Tax, Central Excise & Customs, CBDT, CBIC etc.
- (xvi) J&K UT
  - a) History
  - b) Economy
  - c) Geography- (Weather, Climate, Crops, Rivers, Lakes, Flora, Fauna etc.)
  - d) Heritage & Culture
  - e) Important Tourist Destinations
  - f) J&K Reorganisation Act, 2019.

FINANCE AND ACCOUNTS

30 Marks

- (i) Financial Accounting: Nature and scope, Limitations of Financial Accounting, Basic concepts and Conventions.

- (ii) Basic concepts of Accounting: Single and double entry, Books of original Entry, Bank Reconciliation, Journal, ledgers, Trial Balance, Rectification of Errors, Manufacturing, Trading, Balance Sheet
- (iii) Distinction between Capital and Revenue Expenditure, Depreciation Accounting, Valuation of Inventories, Non-profit organisations Accounts, Receipts and Payments and Income & Expenditure Accounts, Bills of Exchange.
- (iv) Money and Banking: Monetary/ Fiscal policy- Role and functions of Reserve Bank of India; functions of commercial Banks/ RRB/ Payment Banks.
- (v) Budget and Fiscal deficits and Balance of payments.
- (vi) Fiscal Responsibility and Budget Management Act, 2003.

GENERAL ENGLISH & COMPREHENSION

10 Marks

- (i) Tenses
- (ii) Narration
- (iii) Modals
- (iv) Articles
- (v) Reading Comprehension
- (vi) Fill in the blanks with Phrases, Pronouns, homonyms/ homophones etc
- (vii) Clauses
- (viii) Synonyms and antonyms
- (ix) Pairs of words and their use in meaningful sentences.
- (x) Rearranging of jumbled sentences.
- (xi) Idioms and phrases.
- (xii) Uses of Prepositions.
- (xiii) Active & Passive Voice
- (xiv) Error Spotting
- (xv) Sentence Correction
- (xvi) Spellings Correction

CONSTITUTION/ GOVERNANCE/POLITY

10 Marks

- (i) Indian Constitution – Overview, nature & Philosophy of the Indian Constitution
- (ii) Features of the Constitution- Preamble, Fundamental Rights, Fundamental Duties, Directive Principles of State Policy
- (iii) Parliamentary System & Amendment Procedures
- (iv) Federal structure, devolution of powers and finances.
- (v) Important aspects of governance, transparency, accountability, e-governance etc.

REASONING & MENTAL ABILITY

10 Marks

Number series, Letter series, Semantic Series, Speed, Distance and Time, Statements and conclusions, Logical Reasoning, Mental Reasoning, Word Building, Numerical Operations, Semantic Analogy, Symbolic/ Number Analogy, Figural Analogy, Semantic Classification, Symbolic/ Number Classification, Figural Classification, Problem Solving.



- (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
- (vii) Role of Information Technology in Governance.

## Annexure "AI"

Total Marks=120  
Time=02 Hours

### 1) Basis Mathematics

=20 Marks

- Percentage
- Average
- Time, Work and Distance
- Ration and Proportions
- Problem of Age
- Probability
- LCM, HCF
- Mensuration

### 2) Basis Reasoning

=20 Marks

- Analogies
- Relationship concepts
- Figure odd one out
- Direct Sense
- Figure Series completion
- Venn Diagram
- Number series
- Coding/Decoding

### 3) Basis English

=30 Marks

- Articles
- Synonyms
- Antonyms
- Preposition
- Verbs
- Reading comprehension
- Determiners
- Spellings
- Sentences

### 4) General Awareness and Science

=50 Marks

- General current events (National Level)

- Sports
- India culture
- India history
- Indian geography
- Capital/State
- General Science
- Health, Hygiene and Sanitation
- Geography of Jammu and Kashmir
- Culture of Jammu and Kashmir
- History of Jammu and Kashmir

ANNEXURE "AJ"

Syllabus for Written Test

Total Marks= 120  
Hours

Time=02

UNIT I 15 Marks

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- (i) Articles
- (ii) Tenses
- (iii) Modals
- (iv) Clauses
- (v) Determiners
- (vi) Preposition
- (vii) Idioms and Phrases.
- (viii) Synonyms / Antonyms
- (ix) Spellings
- (x) Sentences
- (xi) Phrases
- (xii) Homonyms/ Homophones

UNIT II 15 Marks

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- (i) Current events of National importance
- (ii) Honours and Awards
- (iii) The World of Sports
- (iv) Geographical Discoveries
- (v) Principal Languages of India
- (vi) Capitals and Currencies of Countries
- (i) History, Geography, Culture and Economy of UT of Jammu and Kashmir
- (ii) Flora and Fauna of J&K
- (iii) Rivers and Lakes.
- (iv) Important Tourist Destinations of UT of Jammu and Kashmir

Unit III 20 Marks

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- (i) Percentage
- (ii) Average
- (iii) Time, Work and Distance
- (iv) Ratio and Proportions
- (v) Problem of Age
- (vi) Probability
- (vii) LCM, HCF
- (viii) Mensuration
- (ix) Trigonometry

- (x) Polynomials and Quadratic equation

UNIT IV

20 Marks

- (i) Sources of energy; Conventional & Non-Conventional
- (ii) Reflection & refraction of light, Mirror formula.
- (iii) Refractive index, Lens formula, image formation, sign conventions.
- (iv) Defects of vision & their correctness.
- (v) Electric current; Electric potential and Potential difference
- (vi) Ohms Law, Heating effects of Current
- (vii) Environmental pollution
- (viii) Nutrition, Respiration, Excretion etc
- (ix) Communicable & Non-Communicable Diseases.
- (x) Ecosystem – Its components, Food chains and Food webs.
- (xi) Ozone layer, its depletion, Green House Effect.
- (xii) Chemical Equation, types of chemical reactions.
- (xiii) Oxidation & reduction reactions
- (xiv) Bonding in Carbon, Allotropes of Carbon
- (xv) Physical & Chemical properties of metals and non-metals.

Unit-V

20

Marks

- (i) Partition of Bengal.
- (ii) Boycott and Swadeshi Movement.
- (iii) Muslim League/ Khilafat Movement/Non-Cooperation Movement
- (iv) Quit India Movement.
- (v) Independence and Partition of India.
- (vi) Change of Seasons/ Planets/ Solar System
- (vii) Longitude - Latitude.
- (viii) Types of Forests
- (ix) Classification of Soils
- (x) Types of farming
- (xi) Major Crops
- (xii) Resources- Types, Conservation etc.
- (xiii) Federalism
- (xiv) Democracy – Direct & Indirect.
- (xv) Fundamental Rights, Fundamental Duties.
- (xvi) Representation, Franchise, Secret Ballot.
- (xvii) Political Parties- National, State, Regional etc.
- (xviii) Economy-Primary, Secondary and Tertiary Sectors

UNIT V

10 Marks

- (i) Analogies
- (ii) Relationship concepts

- (iii) Figure odd one out
- (iv) Direct Sense
- (v) Figure Series completion
- (vi) Venn Diagram
- (vii) Number series
- (viii) Coding/Decoding

Unit VI

20 Marks

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- (i) Communication and its importance.
- (ii) Types of communication – verbal, non-verbal, written, email etc.
- (iii) Safety and Health- Importance of safety and health at workplace.
- (iv) Occupational Hazards- Basic Hazards, Chemical Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards.
- (v) First Aid, Care of injured & Sick at the workplaces.
- (vi) Pollution and pollutants including liquid, gaseous, solid and hazardous waste
- (vii) Skills, Working Aids, Automation, Environment, Motivation.
- (viii) Idea of ISO 9000 and BIS systems and its importance in maintaining qualities
- (ix) Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's Compensation Act.
- (x) Metric System: Measurement of length, breadth & height in metric units Measurement of weight in metric system. Unit conversion. Reading of plain scales. Reading of tapes & foot rules.

ANNEXURE "AK"

Syllabus for Written test

Marks: 150

Time: 02:30 Hours

Note:

- (i) Part "I" will comprise of Multiple Choice Objective Type Questions.
- (ii) Part "II" (Urdu portion) will be of descriptive nature.
- (iii) Both the parts viz Part "I" and part "II" will be compulsory
- (iv) The candidates competing for Open Merit posts will be required to score at least 40% marks and candidates belonging to other categories (except OM) are required to score at least 35% marks with at least 33% in each part.
- (v) There will be negative marking (0.25 per question per wrong answer) in Part 'I'.

PART I (100 marks)

General Knowledge & Current Affairs

30 Marks

- (i) Current Events of National and International importance
- (ii) Science & Technology.
- (iii) Environment, Ecology & Bio-diversity
- (iv) Indian National Movement.
- (v) Political & Physical divisions of world & India
- (vi) Indian Economy.
- (vii) Indian Culture & Heritage.
- (viii) Climate & Crops in India
- (ix) Transport & Communication.
- (x) Demography
- (xi) Important Rivers & Lakes in India.

UNIT-II GENERAL KNOWLEDGE with special reference to J&K UT

20 Marks

- (i) History, Economy, and Culture of J&K UT.
- (ii) Geography -Weather, Climate, Crops, Soils
- (iii) Means of Transport.
- (iv) Flora and Fauna of J&K
- (v) Rivers and Lakes.
- (vi) Important Tourist Destinations
- (vii) J&K Reorganisation Act, 2019

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
  - i. Phrases
  - ii. Pronouns
  - iii. 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.
- (xii) Active & Passive Voice

Knowledge of Computers

15 Marks

- (i) Introduction and Objectives.
- (ii) Basic Applications of Computer and its component.
- (iii) Fundamentals of computer sciences.
- (iv) Hardware & Software, Concept of Open Source Technologies.
- (v) Input & output Devices.
- (vi) Knowledge of MS Word, MS Excel, MS Access, MS Powerpoint, PDF Internet and E-mail.
- (vii) Concept of Computer Virus and Anti-Virus.

Mental Ability & Reasoning

15 Marks

- (i) Number series.
- (ii) Letter series.
- (iii) Coding decoding.
- (iv) Direction sense.
- (v) Blood relations.
- (vi) Statements and conclusions.
- (vii) Logical Reasoning.
- (viii) Mental Reasoning.

PART II (50 marks)

Guidelines for checking working knowledge of Urdu

The exam intends to check the "*working knowledge of Urdu*" of the candidates. The same will be tested through a Reading and a Writing test (total comprising of 50 marks in a duration of 60 Minutes), to be conducted on the same day.



The candidates belonging to 'OM' Category will be required to score at least 40% marks(overall) in the said exam with at least 33% marks in both Reading and Writing sections to be considered as having '*working knowledge of Urdu*' for the purpose of this exam/qualified. The candidates belonging to other categories (except OM) are required to score at least 35% marks (overall) with at least 33% in each Section.

Reading Section -20 Marks

Candidates would be required to answer questions each carrying one mark each out of given passages.

Writing Section – 30 Marks

Letter writing of minimum 100 words on a particular situation.	10 marks
One English passage to be translated into Urdu or Vice Versa.	10 marks
One Essay of about 100 words on any topic of social relevance.	10 marks

