

**FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2024**










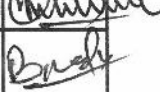

**FINALIZED SCHEME OF VALUATION -BOTANY**

**Subject - Biology - Part A Botany**

**Code No. FY 426**

Q.Part No	Qn.No	Sub Qn No	Scoring Indicators	Split Score	Total Score											
I	1		Stroma	1	1											
	2		Scutellum	1	1											
	3		Phaeophyceae	1	1											
	4		Ribosome	1	1											
II	5	a)	Pachytene	1	2											
		b)	Exchange of DNA between homologous chromosome pair/Exchange of DNA/Exchange of genetic material/Crossing over leads to recombination of genetic material on the two chromosomes	1												
	6	a)	Phycomycetes - iii. /Rhizopus	1/2	2											
		b)	Ascomycetes - iv. /Penicillium	1/2												
		c)	Basidiomycetes - i. /Agaricus	1/2												
		d)	Deuteromycetes -ii. /Alternaria	1/2												
	7	a)	Splitting of glucose/Splitting of sugar/First phase of aerobic and anaerobic respiration/Full or shortened correct drawing of scheme/Conversion of Glucose into Pyruvic acid to release energy as ATP and NADH/Conversion of Glucose into Pyruvic acid	1	2											
		b)	Cytoplasm/Cytosol	1												
8	a)	Regulating abscission/dormancy/general plant growth inhibitor/an inhibitor of plant metabolism /ABA inhibits seed germination/ABA stimulates the closure of stomata/ increases the tolerance of plants to various kinds of stresses/important role in seed development/maturation / dormancy/withstand desiccation and other factors unfavourable for growth/acts as an antagonist to GAs. <b>(Any one point 1 score)</b>	1	2												
	b)	ABA stimulates the closure of stomata and increases the tolerance of plants to various kinds of stresses/ABA stimulates the closure of stomata at high wind velocity.														
9		<table border="0"> <tr> <td><b>Stem</b></td> <td><b>Root</b></td> </tr> <tr> <td>Endarch</td> <td>Exarch</td> </tr> <tr> <td>Conjoint</td> <td>Radial</td> </tr> <tr> <td>With cuticle</td> <td>Without cuticle</td> </tr> <tr> <td>Trichome</td> <td>Root hair</td> </tr> <tr> <td>Casparian strip absent</td> <td>Casparian strip present</td> </tr> </table> <b>(Any two correct anatomical differences between stem and root 2 scores)</b>	<b>Stem</b>	<b>Root</b>	Endarch	Exarch	Conjoint	Radial	With cuticle	Without cuticle	Trichome	Root hair	Casparian strip absent	Casparian strip present	1/2 x 4	2
<b>Stem</b>	<b>Root</b>															
Endarch	Exarch															
Conjoint	Radial															
With cuticle	Without cuticle															
Trichome	Root hair															
Casparian strip absent	Casparian strip present															
10	a)	A. Lactic acid B. Ethanol/ Ethyl alcohol	1/2 1/2	2												
	b)	Muscle cells respire anaerobically and produce lactic acid/Lactic acid fermentation takes place/Pyruvic acid is reduced to Lactic acid.	1													
11	a)	Respiration/Transpiration/Photosynthesis/Gaseous exchange	1	2												
	b)	Dicot guard cell- Bean or kidney shaped Monocot guard cell- Dumb-bell shaped	1/2 1/2													
12		<table border="0"> <tr> <td><b>Auxin</b></td> <td><b>Ethylene</b></td> </tr> <tr> <td>b) Initiate rooting</td> <td>a) Ripening of Fruits</td> </tr> <tr> <td>c) Induce parthenocarpy</td> <td>d) Breaks seed and bud dormancy</td> </tr> </table>	<b>Auxin</b>	<b>Ethylene</b>	b) Initiate rooting	a) Ripening of Fruits	c) Induce parthenocarpy	d) Breaks seed and bud dormancy	1/2 x 4	2						
<b>Auxin</b>	<b>Ethylene</b>															
b) Initiate rooting	a) Ripening of Fruits															
c) Induce parthenocarpy	d) Breaks seed and bud dormancy															

	13	a) Thermoacidophiles - Archaeobacteria they live in hot springs / temperature/ acidity b) Halophiles - Archaeobacteria they live in extreme salty areas	1 1	2
	14	a) Gymnosperms b) Ovules are not in ovary/ Fruits absent/Seed exposed/ Ovules or seeds not enclosed by any ovary wall.	1 1	2
	15	G1- cell growth / active metabolism. S - DNA replication/ DNA synthesis/ Centriole replication G2 - cell growth / protein synthesis. M - Cell division/ Meiotic phase/ Mitotic phase/ Division phase/ Karyokinesis/ Cytokinesis/Prophase/Metaphase/Anaphase/Telophase.	1/2 1/2 1/2 1/2	2
III	16	a) Amyloplast Aleuroplast Elaioplast b) Amyloplast- Starch/Carbohydrate Aleuroplast- Protein Elaioplast- Oil/ Fat	1/2 1/2 1/2 1/2 1/2 1/2	3
	17	a) The mode of arrangement of sepals or petals in floral bud / Arrangement of sepals or petals in a flower bud. b) A- Valvate B- Twisted C- Imbricate D- Vexillary/Papilionaceous	1 1/2 1/2 1/2 1/2	3
	18	a) Bundle sheath cell and Mesophyll cell/Bundle sheath Chloroplast and Mesophyll Chloroplast b) OAA/Oxalo acetic acid c) Maize/Sorghum/ Any C4 plant.	1/2+1/2 1 1	3
	19	a) Mitochondrial matrix/Mitochondria b) A- Citric acid/Citrate B- Succinic acid/Succinate C- Malic acid/Malate D- Oxalo acetic acid/OAA	1 1/2 1/2 1/2 1/2	3
		<b>TOTAL SCORE</b>	<b>38</b>	<b>38</b>

PARTICIPANTS OF SCHEME FINALIZATION- BOTANY 2024			
1	GOPAKUMAR S (156068) 1054 - M.V HSS, THUNDATHIL, TRIVANDRUM, Pin-695581		
2	ANILKUMAR V B (733846) 2 2108 - GOVT. HSS, OACHIRA, KOLLAM, Pin-690526		
3	SISI MINI ALEX (157192) 3017 - BALIKAMADOM GHSS, THIRUVALLA, PATHANAMTHITTA, Pin-689115		
4	REJI J (157780) 4 4053 - PADANILAM HSS, NOORANAD, ALAPPUZHA, Pin-690529		
5	DR. RESHMI G (631819) 7151 - GOVT. HSS, EDAPPALLY NORTH, ERNAKULAM, Pin-682024 27-03-2024		
6	SETHUMADHAVAN T (411825) 9029 - GOVT AP HSS, ELAPPULLY, PALAKKAD, Pin-678622		
7	MANOJ JOSE (233222) 11039 - MSM HSS, KALLINGALPARAMBA, MALAPPURAM, Pin-676551		
8	ROSHNI BALAKRISHNAN (691417) 11213 - Chekkutty Haji Memorial HSS, Pookolothur, Malappuram., Pin-676123		
9	MUHAMED RAFEEQUE KODIVALAPPIL (233926) 13048 - D I SABHA HSS, KANNUR, KANNUR, Pin-670003		
10	SAJAN VATTAMATTATHIL (234122) 13051 - SANTHOME HSS, KOLAKKAD, KANNUR, Pin-670673		
11	REGI T THOMAS (210394) 5062 - ST. DOMINIC'S HSS, KANJIRAPPALLY, KOTTAYAM, Pin-686507		
12	BINDU G 413892 SALEM VHSS WEST VENGOLA PERUMBAVOOR		