

HIGHER SECONDARY FIRST YEAR IMPROVEMENT EXAMINATION- 2019 JULY

FINALIZED SCHEME FOR VALUATION

PART III . BOTANY FY26

MAXIMUM SCORE:30

Q.No.		ANSWER KEY	SPLITTED SCORE	TOTAL SCORE
1		b) Trypanosoma	1	1
2		Ethylene	1	1
3		d) Pachytene	1	1
ANY 9 CARRIES 2scores				
4		Tolerate high temperature, Lack of photorespiration, Greater productivity of biomass, Response to high intensity of light, special type leaf anatomy (Kranz anatomy) Any two such responses	1 1	2
5		Oxygen binds with RuBisCO and breaks RuBP into one molecule of phosphoglycerate and phosphoglycolate Or Carbon dioxide fixation is decreased Neither synthesis of sugar nor ATP RuBisCO acts as oxygenase (Any one response give full score -2)	2	2
6	a	Hydroponics/soiless culture/Technique of growing plants in nutrient solution.	1	2
	b	Commercial production of vegetables, Identification of essential elements, Discovery of deficiency symptoms. (Any two such responses)	½ ½	
7		Each plant part takes care of its own gas exchange needs.	1	2

		<p>Plant do not present great demands for gas exchange.</p> <p>The distance that gases must diffuse even in large, bulky plants is not great.</p> <p>Presence of natural openings like stomata and lenticels on the surface of leaf and stem.</p> <p>(Any two such responses)</p>	1	
8	a	Plants follow different pathways in response to environment or phases of life to perform different kind of structures.	1	2
	b	Phenomenon of heterophylly in cotton/coriander/ larkspur/ buttercup (Any such plants showing heterophylly) / <i>heterophylly</i>	1	
9	a	Cytoplasm/Cytosol	1	2
	b	<p>Glucose undergoes partial oxidation to form two molecules of pyruvic acid.</p> <p>Or</p> <p>Anaerobic respiration / Less energy released</p> <p>Or</p> <p>Summarised equation showing glycolysis</p>	1	
10	a	Anaphase	1	2
	b	<p>Centromere split and chromatids separate.</p> <p>Chromatids move to opposite poles.</p> <p>(Any two such responses.)</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>	
11		<p><u>Synthetic auxin:-</u></p> <p>NAA(Naphthalene acetic acid)</p> <p>2,4-D(2,4-dichlorophenoxyacetic acid)</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>	2








		<u>Natural auxin:-</u>			
		IAA (Indole-3- acetic acid)		$\frac{1}{2}$	
		IBA (Indole butyric acid)		$\frac{1}{2}$	
		(Any one response from each group give full score 2 Or Two synthetic auxins give full score 2)			
12		Creates transpiration pull for absorption and transport of plants, Supplies water for photosynthesis, Transports minerals from the soil to all parts of the plant, Cools leaf surfaces, Maintains shape and structure of plants by keeping cells turgid.(Any four such responses)		$\frac{1}{2}$ x4	2
13		A	B	$\frac{1}{2}$ x4	2
		i)Prothallus	c)Gametophytes of Pteridophytes		
		ii)porophylls	d)Sporangia bearing leaves		
		iii)Corolloid roots	e)Nitrogen fixation		
		iv)Protonema	a)Mosses		
14		Endoplasmic reticulum(ER) ,Golgicomplex ,Vacuoles		$\frac{1}{2}$ x 3	2
		Lysosomes		$\frac{1}{2}$	
ANY THREE CARRIES 3 SCORES					
15		Cyclic photophosphorylation	Non-cyclic photophosphorylation	$1/2$ x 6	3
		Only PS I is functional	Both PSI and PSII are functional		
		Electrons travels in cyclic manner	Electrons travels in non-cyclic manner		
		Only ATP is formed	ATP and NADPH are formed		
		Oxygen is not evolved	Oxygen is evolved by splitting of water		
Any three such differences /schematic representation of both types of photophosphorylation/its explanation give full score 3					
16		STEM	ROOT	LEAF	$\frac{1}{2}$ x6
		Presence of hypodermis(ii)	Exarch xylem(i)	Palisade parenchyma cells(iii)	
		Conjoint and	Endodermis with	Large empty	



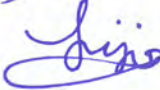
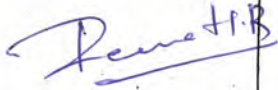

		open vascular bundles(iv)	casperian strips(v)	bulliform cells(vi)		
17	a	Liliaceae/lily family			1	3
	b	Tricarpellary, syncarpous, superior ovary, trilocular, many ovules, axile placentation (any two) / symbol for representing features of gynoecium give 1 Score			$\frac{1}{2} \times 2$	
	c	Any two plants or two economic importances like Ornamentals, source of medicine, vegetables, colchicines etc			$\frac{1}{2} \times 2$	
18	a	Fluid mosaic model			1	3
	b	Lipids/Phosphoglycerides			1	
	c	Integral proteins/Intrinsic/proteins partially or totally buried in the membrane. Peripheral proteins/extrinsic/proteins lie on the surface of membrane.			$\frac{1}{2}$ $\frac{1}{2}$	


FIRST YEAR HIGHER SECONDARY IMPROVEMENT EXAMINATION JULY 2019

SUBJECT: BOTANY

CODE. NO: FY 26 A

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		<p>Scheme finalised by:</p> <p>1. Bindu. K.C, HSS Botany SNHSS Irinjalakuda. 9446721871 </p> <p>2. Reji M.C., HSS Botany GASS Kallar 9961095423 </p> <p>3. SHALINI. V.V NVT In Biology (Sr) CVHS For Girls Tiruv B.P. Angadi - 9809039977 </p> <p>4. Sheena. P. Kumaran NVT in Biology KPMVHS Poothelli, Kinnakulam 9447991211 </p> <p>5. Anila Chusan HSS Botany MSHSS Ranny, pathanamthitta 9447207388. </p> <p>6. Elizabeth Joseph Cherukara HSS Botany AMHSS Kalaketty 9447541064 </p> <p>7. Febina. M.K. HSS (Sr) Botany VMHMHS Anayamkuru. mukkon Kozhikode - 9496879879 </p>		

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total
	8	Bernad. T.T, HSSI Botany UmmuHSS, Palakkad. 9747997424 		
	9.	Saján Vattampattinil HSSST Botany Santhome HSS Kolakkad Kannur 9048710675 		
	10.	SISO THOMAS HSSST BOTANY GHSS. MOOKKANNUR (7007) ERNAKULAM ph - 9946064372 		
	11.	Reena. H.R HSSST Botany Govt. Model Boys HSS Thrissur Alappuzha. ph. 9447957677 		
	12	Sahide Begun HSSST Botany GMBHSS, Thycaud, Tvm 8547248004 		

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total
13.		Kurian Jacob. A. NVT Biology S S MVHSS - Edakkayam - 9846677323 		
14.		Kumari Geem NVT in Botany St. George's VHSS Chovallase 9447032776 