

Model Test Paper (2026-27)

Class : 11th

Subject : Biology

Time : 3Hrs

M.M: 60

General Instructions :

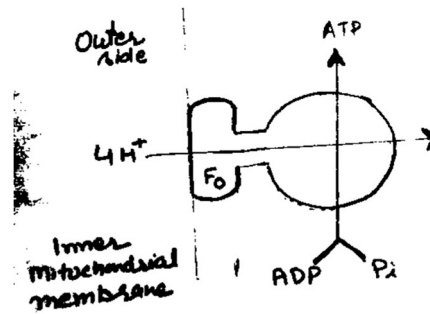
1. All questions are compulsory.
2. The question paper consists of four sections: A, B, C, and D.
3. Section A contains 12 multiple-choice questions of 1 mark each.
4. Section B contains 10 very short answer questions of 2 marks each.
5. Section C contains 6 short answer questions of 3 marks each.
6. Section D contains 2 long answer questions of 5 marks each.
7. Draw neat and labeled diagrams wherever necessary.

SECTION- A

1. Binomial nomenclature was proposed by :
(A) Bauhin (B) Linnaeus (C) Huxley (D) De Vries
2. Bacterial cell membrane is infolded to form:
(A) Episome (B) Mesosome (C) Acrosome (D) Sphaerosome
3. Find the correct option:
(A) Mammalia - Ornithorhynchus, Macropus, Corvus
(B) Aves - Neophron, Columba, Felis
(C) Amphibia - Ichthyophis, Hyla, Salamander
(D) Reptilia - Pristis, Crocodylus, Naja
4. In Hypogynous flower, the ovary is:
(A) Half Inferior (B) Inferior (C) Superior ((D) None of these
5. Match the following and choose the correct option from below:
(a) Cuticle (i) Guard Cells
(b) Bulliform Cell (ii) Single layer
(c) Stomata (iii) Waxy layer
(d) Epidermis (iv) Empty colourless cell

Options-
(A) a- (iii), b- (iv), c- (i), d- (ii)
(B) a- (i), b- (ii), c- (iii), d- (iv)
(C) a- (iii), b- (ii), c- (iv), d- (i)
(D) a- (iii), b- (ii), c- (i), d- (iv)
6. Correct sequence of different phases of cell cycle is:
(A) S-G₁-G₂-M (B) G₁-S-G₂-M (C) G₁-G₂-S-M (D) G₂-S-G₁-M
7. The first 'stable' product of CO₂ fixation in Sorghum is
(A) Phosphoglyceric Acid (PGA) (B) Pyruvic Acid
(C) Oxaloacetic Acid (OAA) (D) Succinic Acid

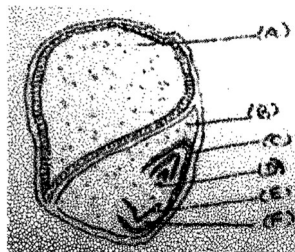
8. What is the function of F_0 ?
 (A) Attachment of ATP-ase to membrane
 (B) Passage way for hydrogen
 (C) Passage of ions to ionise oxygen
 (D) Activate ATP synthesis



9. A person suffers punctures in his chest cavity in an accident, without any damage to the lungs. Its effect could be
 (A) Reduced breathing rate
 (B) Rapid increase in breathing rate
 (C) No change in respiration
 (D) Cessation of breathing
10. All veins have deoxygenated blood except
 (A) Renal artery (B) Hepatic vein (C) Hepatic Portal vein (D) Pulmonary vein
11. Assertion (A) – The genetic material of tobacco mosaic virus is RNA
 Reason (R) - RNA is a type of Nucleic Acid
 (A) Both A and R are true and R is the correct explanation of A.
 (B) Both A and R are true and R is not the correct explanation of A.
 (C) A is true but R is false
 (D) A is false but R is true.
12. Assertion (A) - Cyton possesses short branched processes called dendrites.
 Reason (R) - It also bears an elongated process called axon.
 (A) Both A and R are true and R is the correct explanation of A.
 (B) Both A and R are true and R is not the correct explanation of A.
 (C) A is true but R is false
 (D) A is false but R is true.

SECTION – (B)

13. Differentiate between virus and viroids.
14. Identify A, B, C, D & E



OR

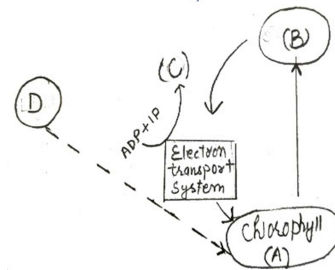
Define the following terms:

- a) Aestivation b) Actinomorphic

15. What is stomatal apparatus ? Explain the structure of stomata with a labelled diagram .
16. Draw a neat diagram of digestive system of frog.
17. Evaluate how a plant cell wall provides a survival advantage over an animal cell in a hypotonic environment.
18. What is meant by the tertiary structure of Proteins.
19. If a green plant is kept in dark with proper ventilation can this plant carry out photosynthesis ? Can any thing be given as a supplement to maintain its growth or survival.

OR

Complete the flow chart for cyclic photo-phosphorylation of PSI.
Identify 'A', 'B', 'C' & 'D'



20. An athlete experiences intense muscle cramps during a 100 metre sprint. Apply your knowledge of cellular respiration . Explain the biochemical cause of this cramp.
21. Give the Schematic representation of Glycolysis.
22. Match the following

<u>Column I</u>	<u>Column II</u>
T4	Hypothalamus
PTH	Thyroid
G _N RH	Pituitary
LH	Parathyroid

SECTION - C

23. Both gymnosperms and angiosperms bear seeds, then why are they classified separately?
24. Could the number of eggs or young ones produced by an oviparous and viviparous mother be equal? Why?

OR

“All vertebrates are chordates but all chordates are not vertebrates”. Justify the statement.

25. Describe the fluid mosaic model of plasma membrane with the help of a diagram.

OR

Differentiate between Prokaryotic and Eukaryotic Cell.

26. In which Phase of meiosis are the following formed?
- Synaptonemal complex
 - Recombination nodules
 - Appearance of Enzyme recombinase
 - Terminalisation of Chiasmata
 - Interkinesis
 - Formation of Dyad Cells

OR

Differentiate between Mitosis and Meiosis.

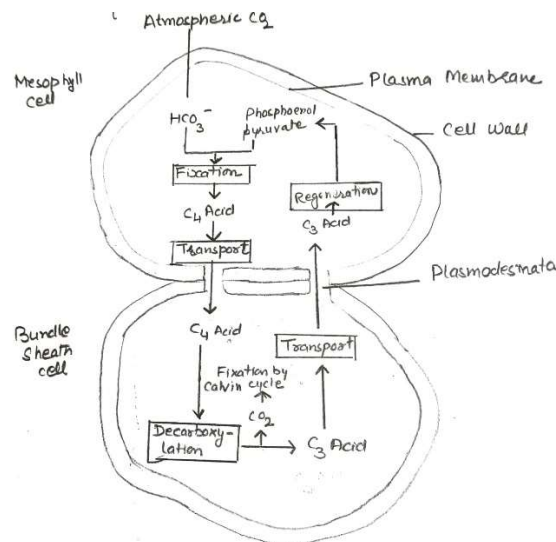
27. Which one of the plant growth regulators would you use if you are asked to
- Induce rooting in twig
 - Quickly ripen a fruit
 - Delay leaf senescence
 - Induction of growth in Axillary bud
 - Bolting of Rosette Plant
 - Induction of stomatal closure
28. An elderly woman slipped in the bathroom and had severe pain in her lower back. After x-ray examination, doctors told her it is due to a slipped disc. What does that mean? How does it affect her health?

OR

- (A) Differentiate between skeletal muscle and Cardiac muscle.
(B) How many pairs of ribs are present in Man.

SECTION – D

29. Observe the diagram and answer the following:
- Which group of plants exhibits these two types of cells.
 - What is the first stable compound formed
 - Which enzyme is there in bundle sheath cells and mesophyll cells?
 - Name the special leaf character of these plants.



OR

- A) Distinguish between Aerobic respiration and anaerobic respiration.
- B) Define R.Q. What is its value for fats and carbohydrates.

30. A 45 yr. Old man visited a hospital complaining of breathlessness and fatigue after mild physical activity. On examination, doctors found improper pumping of blood from the left ventricle. The physician explained that the human heart works as a pumping organ maintaining double circulation and supplying oxygen to all body tissues.

Questions-

- A) Draw a well labeled diagram of human heart
- B) Why is the wall of the left ventricle thicker than that of the right ventricle.
- C) Name the valves present between:
 - i) Left atrium and left ventricle.
 - ii) Right atrium and right ventricle

OR

- A) Define Glomerular filtration Rate.
- B) Name the following:
 - i) A chordate animal having flame cells as excretory structures
 - ii) Cortical portions projecting between medullary pyramids in the human kidney.
- C) Name a loop of capillary running parallel to Henle's loop.
- D) What is the excretory waste of human beings?

**Format of Design (Subject than language)
Question Paper/ Test**

Subject: Biology
Unit/Paper: Theory
Class: 11th
Time: 3 hrs
Marks: 60

Weightage to Objective

Objective	Knowledge	Understand	Application	Analyse	Evaluation	Creation	Total
Percentage of Marks	13%	30%	25%	15%	17%	-	100%
Marks	08	18	15	09	10	-	60

Weightage to form of question:

Forms of Questions	E/LA	SA	VSA	O(MCQ)	Total
No. of Questions	2	6	10	12	30
Marks allotted	10	18	20	12	60
Estimated time	40	72	50	18	180 minutes

Weightage to Major Content Areas:

S. No	Unit/ Sub-Units	Marks
1.	Diversity of Living Organisms	12
2.	St. Organisation in Plants & Animals	08
3.	Cell: Structure & Function	11
4.	Plant Physiology	14
5.	Human Physiology	15
	Total	60

Schemes of Sections	4 Sections (A, B, C, D)
Pattern of Option	Internal & External

Estimated difficulty level:	Difficult	32 % Marks
	Average	55 % marks
	Easy	13 % marks

Index of Abbreviations:

(E/LA : Essay/ Long Answer ; SA : Short Answer ; VSA : Very Short Answer ; O : Objective)

FORMAT OF BLUEPRINT(Subject other than language)

Subject : Biology

Unit/ Paper : Theory

Max Marks : 60

Class : 12th

Time : 3 Hrs

S. No	Objective	Knowledge				Understanding				Application				Analysis				Evaluation				Creation				Total Row Wise	
	Form of Questions																										
	Content unit Sub unit	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O		
	Diversity of Living Organisms				1				1				1		(1)3	(1)2	1		(1)3								12
	St. Organisation in Plants & Animals			(2)4					1			(1)2					1										08
	Cell-Structure & Function			(1)2			(2)6		1											(1)2							11
	Plant Physiology					(1)5		(1)2			(1)3		2			(1)2											14
	Animal Physiology				1			(1)2			(1)3	(1)2	2					(1)5									15
	Sub Total	-	-	3	2	1	2	2	3	-	2	2	5	-	1	2	2	1	1	1	-	-	-	-	-	-	Marks
	Marks	-	-	6	2	5	6	4	3	-	6	4	5	-	3	4	2	5	3	2							(QS)
	Total Column Wise	08 (Marks Total)				18 (Marks Total)				15 (Marks Total)				09 (Marks Total)				10 (Marks Total)				- (Marks Total)				60	

Notes: Figures within brackets to indicate the number of questions and figures outside the brackets to indicate marks.

Denotes that marks have been combined to from one question.

Summary:- Essay (E)/ CBQ No. 02 Marks 10
Short Answer (SA) No. 06 Marks 18
Very Short Answer (VSA) No. 10 Marks 20
Objective (O) No. 12 Marks 12

Pattern of Options : Internal & External

Scheme of Sections :- A, B, C, D (4 Sections)

Steps: - a, b, c, d, e, f, g, h, i, j