



H.S.C. Annual Examinations 2021
(MODEL QUESTION PAPER)
BOTANY PAPER-I
(Science Pre-Medical Group)

Total Duration: 01 Hour 30 minutes

Total Marks: 45

Section “A” Multiple Choice Questions (M.C.Os)

Time Allowed: 30 Minutes

Max Marks: 22

Note: This Section consists of 22-part questions and all are to be answered.

Q1. Choose the correct answer for each from the given option:

- I. Site of dark reaction of photosynthesis within dark reaction
 - a. Stroma
 - b. Grana
 - c. Thylakoid
 - d. Fibers

- II. Protein synthesis takes place in .
 - a. Ribosomes
 - b. Mitochondria
 - c. Mesosomes
 - d. Golgi bod

- III. Cyanobacteria is the typical example of:
 - a. Chlorophyceae
 - b. Bryophytes
 - c. Blue Green algae
 - d. Fungi

- IV. Filament is a part of
 - a. Sepal
 - b. Petal
 - c. Stamen
 - d. Carpel

- V. Proteins float in membrane like ice burg in sea:
 - a. Lock and key model
 - b. Induce fit model
 - c. Fluid mosaic model
 - d. Lokta Volterra model

- VI. Another termed referred to _____ is dictyosome.
 - a. Mitochondria
 - b. Plasma membrane
 - c. Golgi apparatus

- d. Ribosomes
- VII. All viruses
- Carry DNA
 - Cannot reproduce outside cells
 - Lack protein
 - Carry RNA
- VIII. All of the following organisms belong to the kingdom Protista EXCEPT:
- Ulva
 - Euglena
 - Suctoria
 - Slime Mold
- IX. Mushrooms belongs to:
- Zygomycota
 - Ascomycota
 - Basidiomycota
 - Deuteromycota
- X. Sexual reproduction is absent in _____
- Zygomycota
 - Ascomycota
 - Basidiomycota
 - Deuteromycota
- XI. Plants that have true root, stems, and leaves, as well as flowers and seeds enclosed in fruit are classified as
- Bryophytes
 - Tracheophytes
 - Gymnosperms
 - Angiosperms
- XII. Conifers, such as pine trees, are classified as
- Angiosperm
 - Gymnosperm
 - Fern
 - Mosses
- XIII. Pyruvic acid is the end product of _____
- Kreb's cycle
 - Anaerobic respiration
 - Photosynthesis
 - Glycolysis
- XIV. Absorption of water and swelling up of hydrophilic substances is known as
- Diffusion
 - Osmosis
 - Imbibition
 - Active transport
- XV. The process in which C3 plants consume oxygen and produce Carbon dioxide during day time without producing energy.

- a. Photosynthesis
- b. Photorespiration
- c. Chemosynthesis
- d. Respiration

XVI. A viral reproductive cycle that culminates in death of host cell is known as:

- a. Lysogenic cycle
- b. Lytic cycle
- c. Krebs's cycle
- d. Glycolysis

XVII. The light reaction of photosynthesis occurs in the:

- a. Stroma
- b. Thylakoid membranes
- c. Mitochondria
- d. Nucleus

XVIII. Organism prepared their own food through raw material are termed as

- a. Autotrophic
- b. Heterotrophic
- c. Chemotrophic
- d. None of these

XIX. Upward movement of water from root to leaves against the gravity pull is known as:

- a. Ascent of sap
- b. Passive transport
- c. Diffusion
- d. Osmosis

XX. The following are involved with plant respiration

- a. Stomata
- b. Chloroplasts
- c. Auxins
- d. Geotropism

XXI. It is saprophytic plant.

- a. Monotropa
- b. Pitcher plant
- c. Sundew
- d. None of these

XXII. Which of the following is a bacterial disease?

- a. Leishmaniosis
- b. Tetanus
- c. Measles
- d. Polio



H.S.C. Annual Examinations 2021
(MODEL QUESTION PAPER)
BOTANY PAPER-I
(Science Pre-Medical Group)

Time: 01 hour

Total Marks: 23

SECTION 'B' (SHORT-ANSWER QUESTIONS) **Marks: 14**

2. This part consists of reasoning questions. Attempt any Four-part questions. Each question carries one mark. Give answer not more than two lines. 04 marks

- i. Why ribosomes are called protein factories? OR Why are lysosomes called suicidal sacs?
- ii. Why do Biologist consider kingdom Protocista as a polyphyletic group of organisms?
- iii. Why is Deuteromycetes called Fungi imperfect?
- iv. Why is ATP called the Currency of Energy? OR Write one difference between Lysogenic and Lytic cycle.
- v. Which compound receives CO₂ during dark reaction? OR What is Heterospory?
- vi. Discuss why transpiration is a necessary evil?
- vii. Why is air considered better respiratory medium then water?

3. Attempt any Five-part questions. Each question carries two marks. Answer should not exceed 3 to 4 lines. 10 marks

- i. State the postulates of Cell theory. OR Write differences between Prokaryotic and eukaryotic cell.
- ii. Write note on any one of the following:
(a) Mitochondria (b) Peroxisomes (c) Endoplasmic reticulum.
- iii. Define 5 Kingdoms of living organism. OR Define Ascent of Sap.
- iv. Write the salient features of Cyanobacteria (blue green algae)
- v. Discuss diversity of Kingdom Protocista. OR Describe the reproduction in Ulva.
- vi. What are fungi? Name four groups of Fungi.
- vii. Give the outline of the classification of Kingdom Plantae. OR Write the names of reactants and products of Photosynthesis.
- viii. State four important events take place during light dependent reaction of photosynthesis.
- ix. Distinguish between aerobic and an-aerobic respiration. OR Define Transpiration. Describe its various types in Plants.

SECTION "C" (DETAILED-ANSWER QUESTIONS) Max Marks: 09

Note: Attempt any two question from this section all question carries equal marks.

4. Describe the structure and reproduction in Ulva with reference to Isomorphic alteration of generation. OR Describe Transpiration and its types. Describe the structure and mechanism of opening and closing of Stomata?
5. Draw and describe the life cycle of Zygomycota or Ascomycota fungi.
6. Describe the life cycle of fern. Illustrate your answer with reference to alternation of generations.
7. Define Photosynthesis. Describe light reaction. OR Describe the process of Glycolysis. Also draw flowchart.