



V.M.G.R.R SRI SARADA SAKTHI MAT. HR. SEC. SCHOOL

STD: XI

BIOLOGY (BL-9-15,ZL7-12)

MARKS-70

BIO BOTANY**MARKS-35****I. CHOOSE THE CORRECT ANSWER :****8X1=8**

- In Gymnosperms, the activity of sieve cells are controlled by
 - Nearby sieve tube members.
 - Phloem parenchyma cells
 - Nucleus of companion cells.
 - Nucleus of albuminous cells.
- The common bottle cork is a product of
 - Phellem
 - Phellogen
 - Xylem
 - Vascular cambium
- What is the fate of primary xylem in a dicot stem showing extensive secondary growth?
 - It is retained in the centre of the axis
 - It gets crushed
 - May or may not get crushed
 - It gets surrounded by primary phloem
- In a fully turgid cell
 - DPD = 10 atm; OP = 5 atm; TP = 10 atm
 - DPD = 0 atm; OP = 10 atm; TP = 10 atm
 - DPD = 0 atm; OP = 5 atm; TP = 10 atm
 - DPD = 20 atm; OP = 20 atm; TP = 10 atm
- The element which is not remobilized?
 - Phosphorous
 - Potassium
 - Calcium
 - Nitrogen
- For every CO₂ molecule entering the C₃ cycle, the number of ATP & NADPH required
 - 2ATP 1 2NADPH
 - 2ATP 13NADPH
 - 3ATP 12NADPH
 - 3ATP 13NADPH
- _____ is the powerful growth inhibitor
 - Ethanol
 - Cytokinins
 - ABA
 - Auxin
- Select the correctly matched one
 - Human urine i) Auxin –B
 - Corn gram oil ii) GA₃
 - Fungus iii) Absciscic acid II
 - Herring fish iv) Kinitin sperm
 - Unripe maize v) Auxin A grains
 - Young cotton vi) Zeatin bolls
 - A-iii, B-iv, C-v, D-vi, E-i, F-ii,
 - A-v, B-i, C-ii, D-iv, E-vi, F-iii,
 - A-iii, B-v, C-vi, D-i, E-ii, F-iv,
 - A-ii, B-iii, C-v, D-vi, E-iv, F-i

II. Answer any four of the following :**4X2=8**

- Why the cells of sclerenchyma and tracheids become dead?
- Distinguish between hard wood and soft wood.
- Define : Imbibition .
- Differences between Cyclic Photophosphorylation and Non-Cyclic Photophosphorylation.
- Respiratory quotient is zero in succulent plants. Why?
- Define Richmond Lang effect.

III. Answer any three of the following :**3X3=9**

- What are sieve tubes ? Explain.
- Write the physiological effects of Cytokinins.
- A timber merchant bought 2 logs of wood from a forest & named them A & B, The log A was 50 year old & B was 20 years old. Which log of wood will last longer for the merchant? Why?
- What are the parameters which control water potential?

19. Why is that in certain plants deficiency symptoms appear first in younger parts of the plants while in others, they do so in mature organs?

IV. Answer all the questions :

2X5= 10

20.a. Explain sclereids with their types.

OR

b. Write the role of nitrogenase enzyme in nitrogen fixation?

21.a. In Botany class, teacher explains, Synthesis of one glucose requires 30 ATPs in C₄ plants and only 18 ATPs in C₃ plants. The same teacher explains C₄ plants are more advantageous than C₃ plants. Can you identify the reason for this contradiction?

OR


b. What is the name of alternate way of glucose breakdown? Explain the process involved in it?

BIO- ZOOLOGY

Marks -35

I. CHOOSE THE CORRECT ANSWER :

8X1=8

- Erythroblastosis foetalis is due to the destruction of
 - Foetal RBCs
 - Foetus suffers from atherosclerosis
 - Foetal WBCs
 - Foetus suffers from mianmata
- A patient's chart reveals that he has a cardiac output of 7500mL per minute and a stroke volume of 50 mL. What is his pulse rate (in beats / min)
 - 50
 - 100
 - 150
 - 400
- Malpighian tubules remove excretory products from
 - mouth
 - oesophagus
 - haemolymph
 - alimentary canal.
- The region between two successive Z-discs is called a
 - sarcomere
 - microtubule
 - myoglobin
 - actin
- During synaptic transmission of nerve impulse, neurotransmitter (P) is released from synaptic vesicles by the action of ions (Q). Choose the correct P and Q.
 - P = Acetylcholine, Q = Ca⁺⁺
 - P = Acetylcholine, Q = Na⁺
 - P = GABA, Q=Na⁺
 - P = Cholinesterase, Q = Ca⁺⁺
- Examine the diagram of the two cell types A and B given below and select the correct option.
 - Cell-A is the rod cell found evenly all over retina
 - Cell-A is the cone cell more concentrated in the fovea centralis
 - Cell-B is concerned with colour vision in bright light
 - Cell-A is sensitive to bright light intensities
- The maintenance of constant internal environment is referred as
 - Regulation
 - homeostasis
 - co-ordination
 - hormonal control
- Inland fisheries are
 - deep sea fishing
 - capturing fishes from sea coast
 - Raising and capturing fishes in fresh water
 - oil extraction from fish

II. Answer any four of the following :

4X2=8

- Distinguish between open and closed circulation.
- What are the components involved in coagulation of blood?
- What are Podocytes?
- Sam's optometrist tells him that his intraocular pressure is high. What is this condition called and which fluid does it involve?
- Comment on Acini of thyroid gland.
- Name the following:
 - The largest bee in the colony.
 - The kind of flight which the new virgin queen takes along with the drones out of the hive.

III. Answer any three of the following :

3X3=9

- Differentiate protonephridia from metanephridia.
- What are the benefits of regular exercise?

- 17. Differentiate between rod and cone cells.
- 18. Draw and label the parts of L.S. of the eye
- 19. Growth hormone is important for normal growth. Justify the statement.

IV. Answer all the questions :

2X5= 10

- 20. a. Describe the mechanism by which the human heart beat is initiated and controlled.

OR

- b. What is ANS? Explain the components of ANS.

- 21.a. Explain the life cycle of *bombyx mori*.

OR

- b. Briefly explain the structure of thyroid gland.

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