First Term Examination (23 September 2017)

Class XI (Medical)
Subject - Biology
(Set - A)

Time: 3hrs **M.M.70**

General Instructions:

- **i) All questions are compulsory.**
- **ii) Q1 to 5 carry 1 mark each.**
- **iii) Q 6 to 10 carry 2 marks each.**
- **iv) Q 11 to 22 carry 3 marks each.**
- **v) Q 23 carries 4 marks.**
- **vi) Q 24 to 26 carry 5 marks each.**
- **vii) Draw diagrams wherever necessary. Diagrams should be neat and properly labelled.**

Q1. Why are the members of Deutromycetes called imperfect fungi?

Q2. What do you mean by mosaic vision?

Q3. What is a staminode?

Q4. Name one enzyme of nitrogen metabolism of which Mo (Molybdenum) is a component.

Q5. Write full form of IAA.

Q6. What do you understand by phycobiont and mycobiont? Which type of association they show? Write briefly.

Q7. Mention the type of stem modification & function performed by following:
a) Ginger b) Euphorbia

Q8. How are radial and conjoint vascular bundles different anatomically? Show in diagram.

Q9. What is vernalisation? Write its significance.

Q10. What is meant by imbibition? Write two factors on which it depends.

Q11. i) Name the cellular components of the embryo sac of angiospermic plant.
ii) What do you mean by double fertilization?

Q12. i) Differentiate between poikilothermic and homeothermic animals.
ii) Write two functions of water vascular system present in phylum Echinodermata.

Q13. Draw a well labelled diagram of monocot seed.

Q14. 'Cork cambium forms tissues that form the cork'. Do you agree with this statement? Explain.

Q15. i) What do you mean by pulvinus & petiole?
ii) How thin flexible petioles are helpful?

Q16. Which cell junctions are found in epithelium? Write one function of each?

Q17. i) Draw diagram of female reproductive system of cockroach & label the following parts: (a) ovary (b) collateral glands
ii) How many ovarian tubules form each ovary?
iii) Name the part of brood pouch into which median oviduct opens.

Q18. What are the components needed for symbiotic nitrogen fixation? Explain their role.

Q19. RuBISCo is an enzyme that acts both as a carboxylase and oxygenase. Why do you RuBISCo carries out more carboxylation in C_4 plants.

Q20. Show diagrammatic presentation of ATP synthesis in mitochondria. What is the importance of F_0-F_1 particles in ATP production during aerobic respiration.

OR

Explain 'Glycolysis' using the help of flow diagram.

Q21. What would be expected to happen if:

a) Dividing cells stop differentiating
b) A rotten fruit get mixed with unripe fruits.
c) You forget to add cytokinin to culture medium.

Q22. Write differences between cyclic and non-cyclic photophosphorylation.

Q23. Mother used to keep dough in the warm weather for making some dishes. Raman asked his mother the purpose of this. She replied that it makes the dough soft and spongy but she did not know the reason. Raman discussed the issue with Biology teacher who told that it happens due to fermentation process.
Read the above passage and answer the following questions:

a) What is fermentation?
b) Name one commonly used organism employed for fermentation.
c) How is fermentation different from aerobic respiration?
d) What are the commercial products produced by fermentation?

Q24. Describe the arrangement of floral members in relation to their insertion on thalamus.

OR

Explain the process of secondary growth in the stem of woody angiosperms with the help of schematic diagram.

Q25. Explain the Kreb's cycle with the help of a flow diagram. Where does this process occur in cell?

OR

a) Explain pressure flow hypothesis of translocation of sugar in plants.
b) How is mycorrhizal association helpful in absorption of water and minerals in a plant?

Q26.

a) Write scientific names of (a) tortoise (b) earthworm
b) To which phylum earthworm belongs?
c) Write any two peculiar features of the above phylum.
d) What do you mean by bioluminescence?

OR

a) Explain haplontic life cycle in plants.
b) Explain briefly the following terms: (i) antheridium (ii) sporophyll