

Seat No. : _____

MI-109

March-2021

B.Sc., Sem.-I

101 : Biotechnology

(The Living Being)

Time : 2 Hours]

[Max. Marks : 50

- Instructions :** (1) Draw figures wherever necessary.
(2) Write question number against each answer.
(3) Answer any **three** out of initial **eight** main questions. Question **9** is **compulsory**.

Section – I

1. (A) Write about theory of panspermia. 7
(B) Distinguish between prokaryotic and eukaryotic cell with example. 7
2. (A) Discuss about endosymbiotic theory in evolution of mitochondria and chloroplast. 7
(B) Explain Whittaker's five kingdom classification. 7
3. (A) Give a brief account of phytohormones. 7
(B) Explain about plant vascular tissue. 7
4. (A) Define fertilization. Explain double fertilization with diagram. 7
(B) Write about characteristics of bryophytes with examples. 7
5. (A) Discuss different types of animal tissue. 7
(B) Describe about animal evolution. 7
6. (A) Explain in brief about animal adaptation to land. 7
(B) Write about the features of phylum Annelida. 7
7. (A) Write about the classification, and economic importance of fungi. 7
(B) Discuss general characteristics of bacteria. Give examples. 7
8. (A) Write about the structure and chemical composition of virus. 7
(B) Discuss economical importance of algae. 7

Section – II

9. Answer any **eight** of the following :

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1. Who proposed cell theory ?
 2. Define cell differentiation.
 3. Name the sugars present in DNA and RNA.
 4. What is Darwin's theory ?
 5. Why is water molecule considered as polar ?
 6. Write two features of collenchyma.
 7. What is endosperm ?
 8. What is chlorosis ?
 9. Distinguish between gymnosperms and angiosperms.
 10. Give examples of organisms exhibiting radial symmetry.
 11. What is angiosamy ?
 12. Name the organs that are unique to molluscs.
 13. Name the phylum in which 80% of animals are included.
 14. Write the characters of enidaria. Give example.
 15. What is bacteriophage ?
 16. What is prion ?
 17. What is viroid ? Write it's use.
 18. Write difference between lytic and lysogenic cycle.
 19. Name two protozoan pathogens.
 20. What is hyphae ?
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