E 2919

Reg. No..................................

Name..................................

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2022

Fifth Semester

Core Course—CELL MOLECULAR BIOLOGY AND EVOLUTION

(Common for B.Sc. Botany Model I, Model II Programmes)

[2013 to 2016 Admissions]

Time : Three Hours

Maximum Marks : 60

Part A

Answer all questions.
Each question carries 1 mark.

1. What is cell signalling ?

2. What is aneuploidy ?

3. What are chromoplasts ?

4. What is a karyotype ?

5. What are dictyosomes ?

6. What is blastulation ?

7. What is an epoch ?

8. What is convergent evolution ?

$(8 \times 1 = 8)$

Part B

Answer any six questions.
Each question carries 2 marks.

9. Differentiate between Deletion and Duplication.

10. Explain the structure of golgibodies.

11. Write down any four functions of lysosomes.

12. List any four salient features of a salivary gland chromosome.

13. Mention any four examples for chemical mutagens.

14. Differentiate between transition and transversion.

15. What is oogenesis ?

16. Differentiate between Induction and Competence.

17. What is genetic drift ?

18. What is a geological time scale ? Mention its significance.

$(6 \times 2 = 12)$

Turn over

Part C

*Answer any **four** questions.*
Each question carries 4 marks.

19. What is a nucleosome model ? Explain.

20. Explain the structure and function of endoplasmic reticulum.

21. Explain the applications of stem cells.

22. Explain seed formation and development of seedling.

23. Comment on Neodarwinism.

24. Explain Oparin-Haldane theory.

$(4 \times 4 = 16)$

Part D

*Answer any **two** questions.*
Each question carries 12 marks.

25. Explain in detail microsporogenesis.

26. Write down the steps and control of cell cycle.

27. With an illustration explain meiotic behaviour of inversion and translocation.

28. Give a brief account of mutation theory in evolution.

$(2 \times 12 = 24)$