

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017

Sixth Semester

Choice Based Course—DISEASE AND DIAGNOSTIC BIOTECHNOLOGY

(For B.Sc. Biotechnology)

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 80

Part A

Answer all the following questions.

1 mark each.

1. What is cystic fibrosis ?
2. Name the x-linked disorder which affect muscular degeneration.
3. What is cooley's anaemia ?
4. Expand SNP.
5. What do you mean by haemoglobinopathies ?
6. What is karyotype ?
7. Name the scientist who developed PCR.
8. What is DNA microarray ?
9. Which are the biomarkers for the breast cancer gene ?
10. What is the pathogen of Chikungunya ?

(10 × 1 = 10)

Part B

Answer any eight of the following.

2 marks each :

11. What are the functions of haemoglobin ?
12. What is autoradiography ?
13. Name two triplet disorders with autosomal dominant inheritance.
14. What is G banding ?
15. Describe the symptoms of Swine fever.
16. What is Alzheimers disease ?

Turn over

17. Write down the principle of PCR.
18. Describe the cause of Klinefelters syndrome.
19. What do you mean by CGH ?
20. What is β thalassemia minor ?
21. Give the significance of STR testing.
22. What is the genetics of Down syndrome ?

(8 × 2 = 16)

Part C

*Answer any six of the following.
4 marks each.*

23. Describe ligation chain reaction.
24. What is the molecular basis of Huntington's disease ?
25. Write a note on Fragile X syndrome.
26. Describe the independent strategies to identify disease genes.
27. Write down the procedure of Southern blot technique.
28. How does mitochondrial sequencing help to identify paternity.
29. What is ELISA ? Describe its role in disease diagnosis ?
30. Write short note on swine fever.
31. Describe the use of electron microscopy in disease diagnosis.

(6 × 4 = 24)

Part D

*Answer any two of the following.
15 marks each.*

32. Write an account on various methods used for cancer diagnostics ?
33. Explain the different types of chromosomal disorders
34. Describe the principle and the strategies adopted for DNA typing
35. Explain the significance of karyotype analysis, banding and FISH for the diagnosis of genetic disorders with example.

(2 × 15 = 30)