

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2015**Sixth Semester**

Choice Based Course—DISEASES AND DIAGNOSTIC BIOTECHNOLOGY

(For B.Sc. Biotechnology)

Time : Three Hours

Maximum Weig

Part A*Answer all questions.**Weight for each bunch of four 1.*

Choose the correct answer :

- I. 1. Enzyme used in PCR :
- (a) Lactase. (b) Taq DNA polymerase.
(c) DNA isomerase. (d) Dismutase.
2. Blotting of RNA :
- (a) Southern blotting. (b) Western blotting.
(c) Northern Blotting. (d) None of these.
3. c DNA has :
- (a) Introns. (b) No introns.
(c) No extons. (d) Junk DNA.
4. Mutation in different sites along APP genes leads to :
- (a) Haemophilia. (b) Cancer.
(c) Alzheimer's disease. (d) Muscular dystrophy.
- II. 5. BRCA 1 gene can be used for identification of :
- (a) Cystic fibrosis. (b) Thalassemia.
(c) Alzheimer's disease. (d) Cancer.
6. PCR was invented by :
- (a) James Watson. (b) Watson and Crick.
(c) H.G.Khorana. (d) Kary Mullis.
7. In electron microscope, electron gun consists of :
- (a) Cathode. (b) Anode.
(c) Cathode shield. (d) All of these.

8. Hepatitis virus can be detected by :

- (a) Chromatography. (b) Microscopy.
(c) Ligase chain reaction. (d) Electrophoresis.

Fill the blanks :

III. 9. Expansion of ELISA is _____.

10. PCR technique can be used for diagnosis of genetic disorder like _____.

11. TEM means _____.

12. Single nucleotide polymorphism can be identified by _____ technique.

IV. 13. Array of nucleotides of known overlapping sequences, which differ at specific solitary nucleotide can be used for detection of _____.

14. _____ is an example of autosomal disorder.

15. _____ is a inherited blood disorder.

16. _____ is used to investigated composition of marker chromosome and chromosome rearrangements.

(4 × 1 = 4)

Part B

*Answer any five out of eight.
Weight for each answer 1.*

Write short notes on :

17. Positional cloning.
18. SNP testing.
19. Cystic fibrosis.
20. Immunoassay.
21. STR testing.
22. Southern blot diagnostics.
23. Beta thalassemia.
24. G Banding.

(5 × 1 = 5)

Part C

*Answer any four out of six.
Weight for each answer 2.*

25. Explain FISH and on FISH.
26. Give an account of Triplet disorder.

27. Give a note on viral disease diagnostics.
28. Explain how can we identify disease genes.
29. Write a note on chromosomal disorders.
30. Mention the significance of mitochondrial sequencing.

(4 × 2 = 8)

Part D

*Answer any two out of three.
Weight for each answer 4.*

31. Write a note on DNA diagnostics of genetic disorder.
32. Explain techniques for cancer diagnostics.
33. Explain DNA typing and its significance in Forensic science.

(2 × 4 = 8)