

(4)

6. (a) Describe isolation of important enzymes from hot water springs and their uses.
- (b) Describe genotoxicity assay for environmental impact assessment.
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Total Pages—4

M.Sc.—Biotech-IVS (4.2)

2018

Time : 2 hours

Full Marks : 40

Answer any four questions from any one Group as per your specialization

All questions carry equal marks

Candidates are required to answer in their own words as far as practicable

GROUP – A

(MEDICAL BIOTECHNOLOGY)

1. (a) Describe the molecular physiology of blood clotting.
- (b) Explain the molecular process of taste.
2. (a) Write short notes on :
 - (i) Oogenesis
 - (ii) Spermatogenesis.

(2)

- (b) Describe the molecular process of development in vertebrates.
3. (a) Describe Hardy Weinberg's principle and its applications.
(b) Explain molecular mechanism of cystic fibrosis.
4. (a) Describe karyotyping and its importance.
(b) Write about recombinant antigens and their applications.
5. (a) What is nanotechnology. Describe its applications in molecular medicine.
(b) Write about molecular basis of sex determination.
6. (a) Describe the mechanism of Parkinson's disease.
(b) Write about social and ethical aspect of biotechnology.

GROUP – B

(AQUATIC BIOTECHNOLOGY)

(3)

1. (a) Describe plankton and their role in biotechnology.
(b) Write a detailed account on scope and importance of aquatic biotechnology.
2. (a) Describe marine ecosystem in detail.
(b) Explain screening of oil degrading microorganisms.
3. (a) Write a detailed account of biological productivity of aquatic ecosystems.
(b) Write an essay on sea weed resources.
4. (a) Describe cryopreservation in fishes.
(b) What are transgenic fishes? Describe their development.
5. (a) What is chromosomal manipulation? Explain it in relation to fishes.
(b) Describe DNA fingerprinting in aquatic biotechnology.