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SUBJECT CODE NO: - F-6158
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem- II) (Zoology (Old))
Examination December/January-2022-23
Cell Biology -413

[Time: 3:00 Hours]

[Max. Marks:80]

Please check whether you have got the right question paper.

N. B

- 1) Part 'A' is compulsory
- 2) Attempt any Five question from Part 'B'.
- 3) Draw a neat labeled diagram wherever necessary.

Part - A

Q1 Attempt the following Multiple Choice Questions.

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- 1) Which is the thickest fiber of cytoskeleton?
 - a) Microfilament
 - b) Intermediate filament
 - c) Microtubule
 - d) None of above
- 2) Which substances are transported through facilitated diffusion?
 - a) Urea
 - b) Oxygen
 - c) Alcohol
 - d) Galactose
- 3) The tightly packed form of DNA is called as _____
 - a) Super coding
 - b) Compressed State
 - c) Euchromatin
 - d) Heterochromatin
- 4) The type of chromatin that participates in the active transcription of DNA to mRNA products is
 - a) Heterochromatin
 - b) Euchromatin
 - c) Centromere
 - d) Acrocentric chromosome

- 5) The binding of a hormone to its receptor leads to -----
- Formation of hormone receptor complex
 - leads to biochemical changes in the target tissue
 - Affects target tissue metabolism
 - All of Above
- 6) Endocrine messengers are also called as-----
- Hormones
 - Receptors
 - Antibody
 - Antigen
- 7) Oncogenes are the cancer causing genes in the cells but they do not express usually, this is because of the presence of
- Proto oncogenes
 - Tumour promoters
 - Tumor Suppressor genes
 - Transposons or Jumping gene
- 8) Cancer of -lymphocytes is called as
- sarcoma
 - Melanoma
 - Myeloma
 - Carcinoma
- 9) The stimulation of antigen specific T-cells by appropriately presented antigen alone results in
- Cytotoxicity
 - Allergy
 - Cell division
 - Production of IL-3
- 10) Innate immunity is also called as -----
- familial
 - genetic
 - in born
 - All of Above

Part – B

Q2 Attempt any Five Questions

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- Describe in detail the structure and functions of cell membrane.
- Explain in detail the role of heterochromatin in genome organization.
- Describe in detail the functions of Mitochondria and add a note on chemiosmotic theory.

- 4) What are the types of hormone receptors?
- 5) Explain in detail the steps in the cell cycle?
- 6) What is baric differences between the normal cell and cancer cell.
- 7) How does the Antigen recognize by B- and T-cell receptors
- 8) Describe in detail the innate immune system.