

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BPF-2189

M.Sc. (Final) Examination, 2022

ZOOLOGY

Paper - VII(a)

(Cell Biology)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. (i) What is structural and functional unit of muscle ?
- (ii) What is ion channels ?

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- (iii) What is action potential of resting state ?
- (iv) What is apoptosis ?
- (v) What is cell cycle arrest check point ?
- (vi) Which phospholipid is present in nerve cell ?
- (vii) What is chromosomal aberration ?
- (viii) Define Metastasis.
- (ix) What is transposons ?
- (x) Write the name of virus which induced cancer.

Section-B

2. Describe in brief about various models of organization of plasma membrane.

Or

Write a brief note on Historical Development of Cell Biology.

3. Write a brief note on the structure and functions of Chloroplast.

Or

Write in brief the structure of lysosome and its functions.

4. Describe the role of spindle apparatus in chromosome separation.

Or

Draw a neat and labelled diagram to explain meiosis.

5. Write a note on Aneuploidy.

Or

Write a brief note on Gene Organization.

6. Write a brief note on pathogen induced disease in animals.

Or

Describe the mechanism of virus induced cell transformation.

Section-C

7. Write a note on mechanism of sorting and regulation of intracellular transport.
8. What is Cytoskeleton ? Give a brief account of its role in plasma membrane formation.
9. Write brief notes on the following :
 - (i) Operon.
 - (ii) Colchicine.
10. Explain therapeutic interventions of uncontrolled cell growth.
11. Write a note on Interrupted Gene and Repetitive DNA and its significance.