

Roll No :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

SP-671

M.Sc. (Final) Examination, 2021

ZOOLOGY

Paper - VIII (a)

(Cell Biology)

Time : 1½ Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

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

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी **दस** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा **50** शब्द)। प्रत्येक प्रश्न **2** अंक का है।

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.

(खण्ड-ब)

(अंक : 5 × 5 = 25)

नोट :- सभी **पाँच** प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा **200** शब्द)। प्रत्येक प्रश्न **5** अंक का है।

Section-C

(Marks : 10 × 3 = 30)

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

(खण्ड-स)

(अंक : 10 × 3 = 30)

नोट :- पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए। (उत्तर-सीमा **500** शब्द)। प्रत्येक प्रश्न **10** अंक का है।

BI-312

(1)

SP-671 P.T.O.

Section–A

2 each

1. What media is used for animal cell culture ?
2. What are the limitations of organ culture ?
3. What causes the shift in color change in metachromasia ?
4. What is used to stain lipids ?
5. How is magnification of a microscope measured ?
6. What is the difference between Scanning Electron Microscope (SEM) and a Transmission Electron Microscope (TEM) ?
7. Define Inflammation.
8. What is Autoimmunity ?
9. What is free radical reaction theory of aging ?
10. Why genome mapping is important ?

Section–B

5 each

1. What are the advantages of tissue culture ?

Or

Write a note on kinetics of cell growth.

2. Describe the mechanism of action of acid and alkaline phosphatase at the culture level.

Or

Explain freeze drying technique.

3. Write a brief description of ultraviolet microscopy.

Or

Write a note on polarising Microscopy.

4. Write a short note on congenital and acquired immuno deficiencies.

Or

Explain humoral and cell mediated immune response.

5. Write a brief note on sequencing of genomes.

Or

Write a note on AIDS.

Section–C

10 each

1. Write a detailed account on methods and utility of cloning.
2. Explain column chromatography in detail.
3. Explain principle, working and uses of interference microscopy.
4. Explain the following :
 - (i) Monoclonal antibodies
 - (ii) B & T cell receptors
 - (iii) Toll like receptors
 - (iv) Structure of antibody molecule
5. Give a detailed account on the effect of ionizing radiations at the cellular level.