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SUBJECT CODE NO: - SS-6624 / SS-6625
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Zoology) (Sem-IV)
Examination May / June – 2023
Elective Paper Animal Tissue Culture ZOO-404 (A) /
Virology and Epidemiology ZOO-404 (B)

[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 neat & well Labelled diagrams wherever necessary.

PART-A

Q1 Attempt the following multiple choice questions. 20

1. The growth of animal cells in vitro in a suitable culture medium is called _____
 - a) Gene expression
 - b) Transgenesis
 - c) Plant tissue culture
 - d) Animal cell culture
2. Name the type of culture which is prepared by inoculating directly from the tissue of an organism to culture media?
 - a) Primary cell culture
 - b) Secondary cell culture
 - c) Cell lines
 - d) Transformed cell culture
3. What is a cell line?
 - a) Multilayer culture
 - b) Transformed cells
 - c) Multiple growth of cells
 - d) Sub culturing of primary culture
4. Name the organism on which first cell line was observed?
 - a) E.coli
 - b) Sheep
 - c) Mouse
 - d) Drosophila
5. Which of the following is the characteristics of a normal cell?
 - a) Anchorage independent
 - b) Continuous cell lines
 - c) Dependent on external growth factor
 - d) No contact inhibition
6. Name the cell line of the human embryonic lung?
 - a) HeLa
 - b) WISH
 - c) L
 - d) MRC-5
7. Which of the following is NOT the part of growth medium for animal culture?
 - a) Starch
 - b) Serum
 - c) Carbon source
 - d) Inorganic salts

8. Which of the following is NOT the major function of the serum?
- | | |
|--|-------------------------------|
| a) Promotion of tuber and bulb formation | b) Stimulate cell growth |
| c) Enhance cell attachment | d) Provide transport proteins |
9. Who is the father of Virology?
- | | |
|------------------------|---------------------|
| a) Martinus Beijerinck | b) Dmitri Ivanovsky |
| c) John Ellerman | d) Frederick Twort |
10. Which of the following phase determines the specificity of the virus?
- | | | | |
|--------------|------------|---------------|----------------|
| a) Uncoating | b) Release | c) Attachment | d) Penetration |
|--------------|------------|---------------|----------------|

PART B

- | | |
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| Q2 Explain advantages of tissue culture, limitations and biology of cultured cells. | 12 |
| Q3 What is primary cell culture? Describe the different types of primary cell culture. | 12 |
| Q4 Describe microbiological safety methods cabinets and human biopsy method. | 12 |
| Q5 Write in detail lytic and lysogenic and chronic life cycles. | 12 |
| Q6 Give an account of general properties of Viruses, structure of Viruses. | 12 |
| Q7 Describe recognition of infectious diseases in population and mode of transmission. | 12 |
| Q8 Describe taxonomy of vertebrates viruses-HIV & SARS. | 12 |