

2020

BIOCHEMISTRY — GENERAL

Paper : DSE-A-2

(Basic Microbiology)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Day 3

1. Answer **any five** questions : 2×5
- (a) What is the role of flagella?
 - (b) Differentiate between asexual and sexual reproduction.
 - (c) Write down two major characteristics of Amoeba.
 - (d) Give two examples of obligate intracellular parasites.
 - (e) Write down two applications of bacteria in food industry.
 - (f) Write down two basic differences between prokaryotic and eukaryotic microorganisms.
2. Answer **any two** questions : 5×2
- (a) Draw the basic structure of bacteriophage T4 and label it.
 - (b) Describe the lytic and lysogenic cycles of a virus.
 - (c) Write down the economic importance of fungi in agriculture. Write two main characteristics of archaeobacteria.
3. Answer **any three** questions :
- (a) Write down the major contributions of the following Microbiologists—
 - (i) Leeuwenhoek
 - (ii) Robert Koch
 - (iii) Louis Pasteur.
 - (iv) Draw the basic structure of an algae cell and label it. (2×3)+4
 - (b) What is the significance of five kingdom classification? What are prions? How do they cause disease? What is vegetative reproduction in algae? 4+1+2+3

Please Turn Over

- (c) What did the following Microbiologists contribute in the field of Microbiology—
- (i) Paul Ehrlich
 - (ii) Elie Metchnikoff
 - (iii) Edward Jenner.
 - (iv) How do viruses replicate inside the host cell? (2×3)+4
- (d) What do you mean by thallus organism? What is heterokaryosis? What is meant by parasexuality in fungi? Write down the life cycle of a λ -phage. 2+2+2+4
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