

2021

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.*

1. Answer **any five** questions : 2×5
- (a) How lactic acid is produced with the help of microorganism?
 - (b) What do you understand by chemotrophic organism?
 - (c) Define prions.
 - (d) What is pilus?
 - (e) What is meant by obligate parasite?
 - (f) What is eyespot food reserve?
 - (g) What are extremophiles?
2. Answer **any two** questions :
- (a) (i) What are viroids?
(ii) How do they replicate? 2+3
 - (b) (i) Differentiate between psychrophilic and psychrotolerant organism.
(ii) What are cocci? 4+1
 - (c) (i) Discuss asexual reproduction in algae.
(ii) What are the different pigments present in algae? 4+1
 - (d) (i) Write any two differences between prokaryotic and eukaryotic organism.
(ii) What is the function of flagella in bacteria? 4+1
3. Answer **any three** questions :
- (a) (i) Discuss the thallus organization of algae.
(ii) Discuss any two aspects of industrial importance in bacteria.
(iii) What is meant by archaebacteria? 5+4+1

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- (b) (i) Name four antibiotics produced by fungi.
(ii) How penicillin is produced in industry with the help of microorganism?
(iii) Describe the morphology of amoeba. 4+3+3
- (c) (i) Write any four characteristics of mycoplasma.
(ii) Describe the structure of polio virus.
(iii) What are aplanospores? 4+4+2
- (d) (i) Discuss the role of fungi in food industry.
(ii) Differentiate between lytic and lysogenic cycle of viruses. 5+5
- (e) Write down the contribution of the following scientists in the field of Microbiology. 2×5
- (i) Edward Jenner
 - (ii) Alexander Fleming
 - (iii) Louis Pasteur
 - (iv) Robert Koch
 - (v) Joseph Lister.
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