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S. No. of Question Paper : **7856**

Unique Paper Code : **2531101**

F-1

Name of the Paper : **History and Scope of Microbiology [DC-1.1]**

Name of the Course : **Bachelor with Honours in Microbiology**

Semester : **I**

Duration : **3 Hours**

Maximum Marks : **75**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any *Five* questions.

All questions carry equal marks.

Attempt all parts of a question together.

1. (a) Name the organism involved in the production of the following products : $5 \times 1 = 5$

(i) Cheese

(ii) Alcohol

(iii) Streptomycin

(iv) Amylase

(v) Acetic Acid.

P.T.O.

- (b) Describe the controversy over spontaneous generation and biogenesis. 5
- (c) Define the following terms (any *five*) : 1×5=5
- (i) Fermentation
 - (ii) Viroid
 - (iii) Antigen
 - (iv) Commensalism
 - (v) Biopesticides
 - (vi) Single cell protein.
2. Differentiate between the following : 3×5=15
- (a) Active and Passive Immunity
 - (b) Primary and Secondary metabolites
 - (c) Viruses and Prions
 - (d) Mycorrhiza and Actinorrhiza
 - (e) Mutualism and Parasitism.
3. Write short notes on any *three* of the following : 5×3=15
- (a) Whittaker's System of classification
 - (b) Probiotics
 - (c) Nutrition in Protozoa
 - (d) Germ Theory of disease.

4. (a) Name the scientist associated with the following contributions (any *eight*) : $8 \times 1 = 8$
- (i) Lysozyme
 - (ii) Neomycin
 - (iii) Chemolithotrophy
 - (iv) Chicken cholera vaccine
 - (v) Isolation of *Vibrio cholerae*
 - (vi) Different shapes of bacteria
 - (vii) *Contagium vivum fluidum*
 - (viii) Stereochemistry
 - (ix) Use of Agar as a solidifying agent.
- (b) Draw a well labelled diagram of *Amoeba*. 4
- (c) Explain the binomial system of nomenclature. 3
5. (a) Name the causative agent of the following diseases (any *five*) : $5 \times 1 = 5$
- (i) Syphilis
 - (ii) Diphtheria
 - (iii) Amoebic dysentery
 - (iv) Ringworm
 - (v) AIDS
 - (vi) Tetanus.

- (b) Differentiate between prokaryotes and eukaryotes. 5
- (c) Which period is known as the Golden Age of Microbiology and why? Give *three* important developments that took place during that period. 5
6. (a) Give an example (Genus) of any *five* of the following : 5×1=5
- (i) An edible fungus
 - (ii) Unicellular fungus
 - (iii) Filamentous alga
 - (iv) DNA virus
 - (v) Ciliated protozoan
 - (vi) Non-enveloped virus.
- (b) With the help of suitable diagrams explain the various types of antibodies. 5
- (c) Differentiate between batch and continuous fermentation. 3
- (d) What is Bioremediation? Explain with the help of a suitable example. 2