



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2021

(Under CBCS Pattern)

Semester - III

Subject : BIOTECHNOLOGY

Paper : C 5 T & P

(General Microbiology)

Full Marks : 60 (Theory : 40 + Practical : 20)

Time : 3 Hours

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

The figures in the margin indicate full marks.

(Theory : Marks - 40)

Group - A

A. Answer any **three** of the following questions :

12×3=36

1. State the Whittaker's classification of living world. In which aspects Gram positive and Gram negative bacterial cell walls are differed. What is virion? 5+5+2
2. Write short note on : 4×3
 - (a) Bacterial plasmid
 - (b) Bacterial flagella

- (c) Prions
- (d) Pure culture
3. Write in details about any one process of molecular identification of bacteria. What is Microbial phylogeny? 10+2
4. Classify microorganisms on the basis of their oxygen requirement. Write the process of isolation of an anaerobic bacteria. 6+6
5. Write the mode of action of steam under pressure sterilization. What is phenol-coefficient? State its significance. What is food intoxication? State the advantages of fermented food consumption. 4+2+1+5
6. Differentiate between transformation and conjugation. Explain the mechanism of generalized tranuction. Colifrom are consider as bioindicator of water pollution-justify? 3+6+3

Group - B

B. Answer any *two* of the following questions : 2×2=4

7. Define competence
8. Mention the principle of food preservation by salt.
9. What is endospore
10. Write example of two food borne illnesses.

Paper - C 5 P

(General Microbiology)

(Practical : Marks - 20)

Group - A

A. Answer any *one* of the followng question : 15×1=15

1. Write the process of enumeration of bacteria in a soil sample through spread plate technique.

2. State the principle of Gram staining. How the staining process is performed? write the possible interpretation of the staining process. 5+5+5
3. Write about all the precautionary measures should be adopted in the laboratory during microbial media preparation and inoculation to avoid microbial contamination.

Group - B

B. Answer any *one* of the following question :

5×1=5

4. Write the principle of autoclave.
 5. State the principle of catalase and oxidase test.
 6. State the process of endospore staining of bacteria.
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