

Roll No.

Total Pages : 2

GSE/M-21

1503

BIOTECHNOLOGY
(General Microbiology)
Paper-III

Time : Three Hours]

[Maximum Marks : 40

Note : Attempt *five* questions in all, selecting *two* questions from each unit and Q. No. 1 is compulsory question.

Compulsory Question

1. Define/Explain/Comments on the following :

- (a) Chemoheterotrophs.
- (b) HEPA filters.
- (c) Oxidative phosphorylation.
- (d) Resolution and Magnification.
- (e) Antony van Leeuwenhock.
- (f) Labelled diagram of growth curve in bacteria.
- (g) Photosynthetic apparatus in bacteria.
- (h) SEITZ Filters. (1×8=8)

UNIT-I

2. Write note on :

- (a) Working principle of fluorescence microscope.
- (b) Membrane filter for sterilization.

- (c) Differential staining.
- (d) Contribution of Robert Koch. (2×4=8)
3. Write a note on principle and applications of different chemical and radiation methods used for sterilization. 8
4. Write a clearcut difference in the working principle and utility potential of SEM, TEM, phase contrast and dark field Microscope.

UNIT-II

5. Write note on :
- (a) Classification of bacteria on the basis of extreme environment.
- (b) Cell wall of gram +ve bacteria.
- (c) Structure of lambda phase.
- (d) Synchronous growth. (2×4=8)
6. Write down in detail the causing agent, symptoms, transmission and control measures of AIDS and pneumonia in humans. 8
7. Write note on :
- (a) Flow chart of HMP pathway. 5
- (b) Structure of Hepatitis B virus. 3
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