



GAE-412

Seat No. _____

B. Sc. (Sem. III) (Program) Examination

November/December - 2015

MI-301 : Microbial Physiology

Time : 3 Hours]

[Total Marks : 70

PART - A

Answer the following:

10

- 1 Facultative anaerobes can grow in:
 - (a) Presence of oxygen
 - (b) Absence of oxygen
 - (c) Both (a) & (b)
 - (d) None

- 2 Hydrostatic pressure is the requirement of:
 - (a) Halophiles
 - (b) Anaerobes
 - (c) Psychrophiles
 - (d) Barophiles

- 3 The part of an enzyme that contains metal ions is
 - (a) Holoenzyme
 - (b) Cofactor
 - (c) Receptor site
 - (d) Allosteric site

- 4 The autotrophs use _____ as their carbon source
 - (a) CO_2
 - (b) O_2
 - (c) NO_2
 - (d) H_2O

- 5 Who is the father of Chemotherapy?
- (a) Joseph Lister
 - (b) Louis Pasteur
 - (c) Paul Ehrlich
- 6 Bacteria reproduce commonly by:
- (a) Fragmentation
 - (b) Conidiospore formation
 - (c) Budding
 - (d) Binary fission
- 7 E.M.B. Agar is a:
- (a) Assay media
 - (b) Maintenance media
 - (c) Selective media
- 8 Which of the following is a reducing power:
- (a) ATP
 - (b) NADPH
 - (c) Enzyme
- 9 Which of the following is a Polysaccharide:
- (a) Xylose
 - (b) Starch
 - (c) Glucose
 - (d) Lactose
- 10 The phase of bacterial growth follows the Lag phase
- (a) Death phase
 - (b) Stationary phase
 - (c) Log phase

PART - B

Define/Explain any seven : 14

- 11 Halophiles.
- 12 Chemotherapy
- 13 Energy rich compounds
- 14 Diffusion
- 15 Apoenzymes.
- 16 Generation time.
- 17 Optimum pH
- 18 Glycolipids
- 19 Name two Nucleic acids.

PART - C

Answer any three : 12

- 20 Name the different types of media and their uses.
- 21 Discuss the classification of bacteria on the basis of its temperature requirement.
- 22 Differentiate between Glycolipids and Phospholipids
- 23 Enlist the classes of enzymes.
- 24 Write a note on Precursor metabolites with example.

PART - D

Answer any four :

16

- 25 Discuss the methods of measurement of growth using cell mass.
- 26 Differentiate between DNA and RNA.
- 27 Write a note on Allosteric site v/s Active site
- 28 Discuss the Synchronous growth of bacteria.
- 29 Write a short note on Assay media.

PART - E

Answer any two :

18

- 30 Write a short note on Glycolysis.
- 31 Discuss Facilitated Diffusion.
- 32 Discuss the factors affecting enzyme activity.
- 33 Discuss structure and classification of Proteins.