

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Second Semester)

Branch - **BIOCHEMISTRY**

MICROBIOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry EQUAL marks (10x1 = 10)

- 1 The kind of electron microscope which is used to study internal structure of cell is _____ .
(i) Scanning electron microscope (ii) Transmission electron microscope
(iii) Light microscope (iv) Compound microscope
- 2 Which of the following is used to visualize live cells?
(i) SEM (ii) TEM
(iii) Phase contrast microscope (iv) Compound microscope
- 3 The cell wall of gram positive bacteria can be easily destroyed by the enzyme known as _____ .
(i) Lipase (ii) Lysozyme
(iii) Pectinase (iv) Peroxidase
- 4 Which of the following group of bacteria is considered as a link between bacteria and virus?
(i) Mycoplasmas (ii) Spirochaetes
(iii) Actinomycetes (iv) Vibrios
- 5 Which of the following is an intestinal disease caused by E.coli?
(i) Cholera (ii) Dysentery
(iii) Jaundice (iv) Hepatitis
- 6 The first step in infection of a host bacterial cell by a phage is _____ .
(i) Adsorption (ii) Absorption
(iii) Penetration (iv) Replication
- 7 A change from lysogeny to lysis is generally induced by _____ .
(i) Ultraviolet light (ii) Chemicals
(iii) Irradiation (iv) Pollutants
- 8 'Retroviruses' are also called as _____ .
(i) DNA tumor virus (ii) RNA turnover virus
(iii) Naked viruses (iv) Enveloped viruses
- 9 The transformation of nitrates to gaseous nitrogen is accomplished by microorganisms in a series of biochemical reactions. The process is known as
(i) Nitrification (ii) Denitrification
(iii) Nitrogen fixation (iv) Ammonification
- 10 Secondary treatment uses _____ to consume wastes.
(i) Micro-organisms (ii) Chemicals
(iii) Filtration (iv) Light

Cont...

SECTION - B (35 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5x7 = 35)

11 a Bring out the differences between light microscope and phase contrast microscope.

OR

b Explain the procedures involved in simple and acid fast staining.

12 a Describe the morphology of cyanobacteria and add a note on it.

OR

b Narrate the economic importance of Algae.

13 a Outline the aetiology, pathogenesis and symptoms of cholera.

OR

b How will you analyze the aetiology and the symptoms of rabies?

14 a Explain the techniques involved in serial dilution and replica plating.

OR

b Bring out the different stages of T₄ life cycle.

15 a Describe the role of COD in waste water treatment.

OR

b Explain the significance of mycorrhizae.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3x10 = 30)

16 Discuss the different types of microbial media and summarize the nutritional types of organisms.

17 Outline the morphology and different components parts of bacteria.

18 Describe the causes, symptoms and prevention of influenza.

19 Summarize the structure and classification of viruses.

20 Highlight the different parts of fermenter with a neat sketch and add a note on it

Z-Z-Z

END