

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018  
(First Semester)

Branch - MICROBIOLOGY

**FUNDAMENTALS OF MICROBIOLOGY**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

- 1 Mention the event that triggered the development and establishment of Microbiology as a science is the .  
(i) Development of Microscope (ii) Germ theory of disease  
(iii) Spontaneous generation (iv) Vaccination
  - 2 Which of the following pioneer of microbiology is credited with the discovery of microorganisms using high quality magnifying lenses.  
(i) Anton von Leeuwen hock (ii) Louis Pasteur  
(iii) Robert hook (iv) Robert koch
  - 3 State Flagella of prokaryotic and eukaryotic cells differ in .  
(i) types of movement and placement in cell  
(ii) Microtubular organisation and type of movement  
(iii) Microtubular organisation and function  
(iv) All the above
  - 4 Find the LPS is a characteristic of the wall of \_\_\_\_\_.  
(i) Archaeal cells (ii) Gram negative bacteria  
(iii) Eukaryotic cells (iv) Plant cells
  - 5 Which are the most primitive group of algae?  
(i) Blue green algae (ii) Red algae  
(iii) Brown algae (iv) Green algae
  - 6 In which of the following algae isogamy, anisogamy and oogamy all are found?  
(i) Chlamydomonas (ii) Spirogyra  
(iii) Oscillatoria (iv) Anabaena
- Mention the usual storage reserve food material of fungi .
- (i) Starch (ii) Lipid
  - (iii) Glycogen (iv) Protein
- 8 What is the perfect stage of fungus?  
(i) When the fungus is perfectly healthy  
(ii) When it reproduces asexually  
(iii) When it forms perfect sexual spores  
(iv) None of these
  - 9 Contractile vacuole in protozoans serves which of these functions.  
(i) Osmoregulation (ii) Excretion  
(iii) Water absorption (iv) Circulation

**SECTION - B (35 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks ( 5 x 7 = 35)

- 11 a State out the contributions of Robert Koch in the field of Microbiology.  
OR  
b Explain about the experimental model proposal by Selman A.Waksman.
- 12 a Narrate in brief about fluid mosaic model of plasma membrane.  
OR  
b Summarize your views about bacterial inclusion bodies.
- 13 a Briefly bring about various modes of algal nutrition.  
OR  
b Analyze about importance of commercial products derived from algae.
- 14 a Bring about general characters of Deuteromycetes.  
OR  
b Describe in brief about Fungal all structures with neat diagram.
- 15 a Explain in detailed about morphology of protozoa with neat sketch.  
OR  
b How conjugation observed in paramecium?

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

**ALL** Questions Carry **EQUAL** Marks ( 3 x 10 = 30)

- 16 Point out suitable experiments disproved spontaneous generation.
- 17 Differentiate gram positive and gram negative cell wall with suitable justification.
- 18 Discuss in detail about structure of algal thallus.
- 19 Highlight the economic importance of fungi.
- 20 Enumerate the basic characters involved in protozoan classification.

Z-Z-Z

END