PBN-003-001111 Seat No. _____

B. Sc. (Sem. I) (CBCS) Examination

November / December - 2018

MB - 101 : Fundamentals of Microbiology

(Old Course)

Faculty Code : 003
Subject Code : 001111

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer the following questions : **20**

(1) Give the two features of prokaryotic organism.

(2) Who discovered electron microscope ?

(3) Give the mode of nutrition uptake by the fungi.

(4) _____ is a fluorescent dye.

(5) Which bacteria have no cell wall ?

(6) Cibgi red is example of _____ dye.

(7) Give the example of two antibiotic.

(8) Which component provides strength to the bacterial cell wall ?

(9) Spontaneous generation theory was given by _____.

(10) What is dark field microscopy ?

(11) Teichoic acid is found in the cell wall composition of _____.

(12) The nobel prize in 1969 in molecular biology was awarded to _____.

(13) Bacterial cell wall contains which antigen ?

(14) Which of the following condition influence antimicrobial action ?

(15) What is flagella ?

(16) What is Pilli ?

(17) What is numerical aperture ?

(18) What is tandalization ?

(19) Give the example of azo dye.

(20) Define leuco compounds.

2 (a) Answer in short : (any three) **6**

(1) Draw and label different morphological structure of bacteria.

(2) Define exomicrobiology.

(3) Define Magnification.

(4) Define sterilization.

(5) Define Chromophore.

(6) Explain bacterial nuclear material.

(b) Answer specifically : (any three) **9**

(1) Give contribution of Louies Pasteur.

(2) Explain limits of resolution.

(3) Explain different filters used in inflouroscence microscope.

(4) Discuss desiccation as antimicrobial process.

(5) Explain the principle of simple staining.

(6) Explain leucocompounds with example.

(c) Write short notes on : (any two) **10**

(1) Write about major differences of prokaryotes and eukaryotes.

(2) Phrase contrast microscopy.

(3) Explain the gram staining theory.

(4) Write about the sporulation process in bacteria.

(5) Bacterial cell wall.

3 (a) Write short note : (any three) **6**

(1) Chromatophore

(2) Define fungi

(3) Bacterial photolaxis and magnetotoxis.

(4) What is viruses ?

(5) Describe autoradiography.

(6) Gram staining principle.

(b) Write brief notes : (any three) **9**

(1) What are bacterial capsule ?

(2) Describe filtration.

(3) What are antibiotics ? Give two examples.

(4) What is TEM ?

(5) Give principle and uses of differential staining.

(6) Give Whittakers five kingdom classification.

(c) Write any two notes : **10**

(1) Spore formation in bacteria.

(2) Major aspects of electron mictribution of microscope.

(3) Distribution of microorganism in nature.

(4) Penicillins

(5) Germ theory of disease.
