

Seat No. : _____

B.Sc. Sem.-I

Dec. 2016

BSC0C-105 : Microbiology

Time : 3 Hours

[Max. Marks : 70]

- Instructions :
- (1) All Questions carry equal marks.
 - (2) All Questions are compulsory.

- 1 Answer any Two. 14
 - (a) Draw a labelled diagram of bacterial cell.
 - (b) Give a brief account of : Fungi.
 - (c) Write short note on : Protozoa.
 - (d) Explain general characteristics of Viruses.
- 2 Answer any Two. 14
 - (a) Discuss conflict over theory of spontaneous generation.
 - (b) Explain work of Robert Koch and Alexander Fleming in the field of medical microbiology.
 - (c) Give a brief account of development of Industrial Microbiology.
 - (d) Explain the terms : biotechnology, bioinformatics and nano biotechnology.
- 3 Answer any Two 14
 - (a) What do you mean by resolving power of a microscope ? How it can be increased in a light microscope ?
 - (b) Write a note on : Fluorescence Microscopy.

- (c) Why fixation is necessary before staining smears ? Explain physical and chemical fixation giving example.
- (d) Write a note on : Differential staining.

4 Answer any Two

14

- (a) Write in brief giving examples : Types of Chemical bonds.
- (b) Explain : classification of carbohydrates.
- (c) Biological significance of nucleic acids.
- (d) Explain general properties and structure of proteins.

5 Answer in one or two lines.

14

- a) Name two algae.
- b) What are PRIONS ?
- c) What do you mean by a prokaryotic cell ?
- d) Name two viruses.
- e) Who introduced concepts of aseptic surgery ?
- f) Name two antibiotics ?
- g) What is pure culture ?
- h) What is the wavelength range of visible light ?
- i) What is an acidic dye ? Give example.
- j) List two major differences of Light microscope and electron microscope.
- k) Name two polysaccharides.
- l) Draw general structure of an amino acid.
- m) Write full forms of DNA and RNA.
- n) Name two proteins.