



JAS-003-0011011

Seat No. _____

B. Sc. (Sem. I) (CBCS) (W.E.F. 2016) Examination

December - 2019

MB - 101 : Microbiology
(Basic Aspects of Microbiology)
(Old Course)

Faculty Code : 003

Subject Code : 0011011

Time : **2.30** Hours]

[Total Marks : **70**

- Instructions :** (1) All questions are compulsory.
(2) Figures on right indicate total marks of the question.
(3) Draw neat Diagrams wherever necessary.

- 1 (A) Answer the following : 4
(1) Give an example of Bacteria.
(2) Give an example of Fungi.
(3) Give an example of Protozoa.
(4) Give an example of Algae.
- (B) Answer in brief : (Any **One**) 2
(1) Define Microbiology & who is the father of microbiology?
(2) Discuss distribution of microorganisms in nature.
- (C) Answer in detail : (Any **One**) 3
(1) Define Virus & enlist 4 examples of viruses.
(2) Discuss Koch's Postulates.
- (D) Write note on : (Any **One**) 5
(1) Discuss applied areas of Microbiology.
(2) Discuss Spontaneous generation.

- 2 (A) Answer the following : 4
- (1) Define Magnification.
 - (2) Define Resolution of microscope.
 - (3) Define Refractive index.
 - (4) Define Stain.
- (B) Answer in brief : (Any One) 2
- (1) Define leuco compound and give example of it.
 - (2) Darkfield microscopy.
- (C) Answer in detail : (Any One) 3
- (1) Phase Contrast Microscopy.
 - (2) Fluorescent Microscopy.
- (D) Write note on : (Any One) 5
- (1) Bright Field microscopy.
 - (2) Electron Microscopy.
- 3 (A) Answer the following : 4
- (1) Define sphaeroplast.
 - (2) Define cyst.
 - (3) Define Pleomorphism.
 - (4) Define Phototaxis.
- (B) Answer in brief : (Any One) 2
- (1) Draw a Typical Bacterial Cell.
 - (2) Bacterial capsule and its function.

- (C) Answer in detail : (Any One) 3
- (1) Give the differences between Prokaryotic and Eukaryotic Cell.
 - (2) Which are the different basic shapes and arrangements found in the bacteria?
- (D) Write note on : (Any One) 5
- (1) Bacterial flagella.
 - (2) Discuss the process of sporulation in bacteria.
- 4 (A) Answer the following : 4
- (1) Define Autotrophs.
 - (2) Define Heterotroph.
 - (3) Define Aaerobes.
 - (4) Define Media.
- (B) Answer in brief : (Any One) 2
- (1) What is pure Culture?
 - (2) What do you mean by selective media and give its example.
- (C) Answer in detail : (Any One) 3
- (1) Types of Media.
 - (2) Temperature requirement of bacteria.
- (D) Write note on : (Any One) 5
- (1) Oxygen toxicity.
 - (2) Nutritional types of Bacteria.

- 5 (A) Answer the following : 4
- (1) Define Chemostat.
 - (2) Define Growth.
 - (3) Define Generation time.
 - (4) Generation time of E. coli is _____
- (B) Answer in brief : (Any One) 2
- (1) Septum formation in gram negative bacteria.
 - (2) Derive the equation used in calculation of generations.
- (C) Answer in detail : (Any One) 3
- (1) Explain different modes of cell division in bacteria.
 - (2) Define synchronous growth and which type of graph is obtained in it?
- (D) Write note on : (Any One) 5
- (1) Growth curve of Bacteria.
 - (2) Continuous culture of Bacteria.
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