M. Sc. (Medical Biotechnology) Sem-I (Choice Based Credit System)
SUMMER - 2019
SUBJECT : MEDICAL MICROBIOLOGY

Day : : Friday
Date : 05/04/2019
Time : 02.00 PM TO 05.00 PM
Max. Marks : 60

S-2019-1501

N.B.

1) **Q.1** and **Q.5** are **COMPULSORY.** Attempt any **TWO** questions from **Q.2, 3,4** and any **TWO** questions from **Q.6,7,8.**
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in 'SAME' answer book.
4) Draw neat diagrams **WHEREVER** necessary.

SECTION – I

Q.1 Attempt any **TWO** of the following: **(10)**

a) Describe virulence factors of bacteria with examples.
b) With the help of suitable diagram explain the principle of compound microscope.
c) Describe the nutritional requirement of bacteria and explain the bacterial growth curve.

Q.2 Answer the following: **(10)**

a) Differentiate between cell wall of Gram Positive Bacteria and Gram Negative Bacteria.
b) Describe differential staining techniques with suitable examples.

Q.3 Answer the following: **(10)**

a) Define "Sterilization" and explain filtration as a method of sterilization.
b) Describe the biochemical tests based on sugar utilization for identification of bacteria.

Q.4 Write short notes on: **(10)**

a) Precipitation test
b) Contributions of Robert Koch

SECTION – II

Q.5 Attempt any **TWO** of the following: **(10)**

a) Describe general characteristics of fungi and elaborate morphological classification of fungi with suitable examples.
b) Explain the laboratory diagnostic methods for haemoparasites.
c) What are viruses? Describe different methods of cultivation of viruses.

Q.6 Briefly describe the following: **(10)**

a) Describe emerging bacterial infections with examples.
b) Describe principle and applications of ELISA.

Q.7 Elaborate on: **(10)**

a) Stool concentration methods
b) Processing of urine

Q.8 Briefly describe **(10)**

a) Common diagnostic methods for sputum.
b) Carriers

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