

Roll No. : .....

Total No. of Questions : 16 ]

[ Total No. of Printed Pages : 3

# SMIC-322

M.Sc. (IIIrd Semester) Examination, 2021

## MICROBIOLOGY

Paper - MB-303 (A)

(Medical Microbiology)

Time : 1½ Hours ]

[ Maximum Marks : 40

### Section-A

(Marks : 1 × 10 = 10)

**Note :-** Answer all *ten* questions (Answer limit **50** words). Each question carries 1 mark.

### Section-B

(Marks : 3 × 5 = 15)

**Note :-** Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries 3 marks.

### Section-C

(Marks : 5 × 3 = 15)

**Note :-** Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries 5 marks.

### Section-A

1 each

1. (i) Define TCID<sub>50</sub>.

(ii) Name *two* pathogenic bacteria discovered by Robert Koch.

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- (iii) Who discovered the plague pathogen ? Name any *two* medically important species of this pathogen.
- (iv) Define Antiphagocytic Factors.
- (v) Name the causal organisms of Syphilis and Brucellosis.
- (vi) Define the term Epidemiology.
- (vii) What is the symptom of Ringworm Infection.
- (viii) What is BCG ? When is it given ?
- (ix) Define MRSA.
- (x) Give an example of Cephalosporin and Macrolides antibiotics.

**Section-B**

3 each

**Unit-I**

- 2. Write a note on types of hospital infections and their control.
- 3. Discuss the difference between MDL, LD<sub>50</sub> and ID<sub>50</sub>.
- 4. Differentiate between Pathogenicity and Virulence.

**Unit-II**

- 5. Describe the diagnosis and treatment of Tetanus.
- 6. Through animal saliva and bite, which disease can be transmitted. Identify the causal organism, diagnosis and treatment.
- 7. Write a detailed note on 'Black Quarter'.

**Unit-III**

- 8. Describe the reasons for Antimicrobial Resistance.
- 9. What is the significance of biofilms in Medical Microbiology ?
- 10. Write a note on Type I-IV Secretion Pathways.

**Section–C**

5 each

**Unit–I**

11. Describe the mechanism of cell and tissue damage by pathogens.
12. What is UTI ? Describe the mechanism of bacterial pathogenesis.

**Unit–II**

13. If a person drinks sewage contaminated water, what type of disease is most likely to occur ? Describe the causal organism, pathogenesis, diagnosis and treatment.
14. Write short notes on the following :
  - (a) Toxoplasmosis
  - (b) Yellow Fever

**Unit–III**

15. Why is antibiotic assay in body fluids carried out ? Discuss different methods used for it.
16. Elaborate upon the role played by the coordinated regulation of virulence genes in pathogenesis.