

**B.Sc. Semester-IV Examination, 2022-23****MICROBIOLOGY [Honours]**

Course ID : 42215 Course Code : SH/MCB/405/SEC-2

Course Title : Microbial Diagnosis in Health Clinics

Time : 2 Hours

Full Marks : 40

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***UNIT-I**1. Answer any **five** of the following questions:

2×5=10

- i) Give examples of one skin and one lung disease with responsible pathogen.
- ii) What is the significance of blood agar?
- iii) What is leucodye?
- iv) Define probe. Write one of its application.
- v) What is Q-PCR?
- vi) What is meant by MBC?
- vii) State the two processes of storage of clinical samples.
- viii) What is rapid antigen test?

*[Turn Over]***UNIT-II**2. Answer any **four** of the following questions:

5×4=20

- i) What do you mean by serological methods? Add a short note on method of sputum and blood collection with proper precautions.  
1+4=5
- ii) Discuss precisely antibiotic resistance mechanism in microorganisms. 5
- iii) What is Hybridization? Write applications of PCR. 1+4=5
- iv) Write a short note on use of culture media in microbial diagnosis. 5
- v) Discuss the principle of Gram staining. Write the name of one Gram positive and one Gram negative bacteria. 4+1=5

**UNIT-III**3. Answer any **one** of the following questions:

10×1=10

- i) What do you mean by therapeutic index of a drug? How the sensitivity of bacteria against antibiotic will be determined? Write the mode of action of Streptomycin. 2+6+2=10

- ii) Discuss different fungal and protozoan diseases associated with human body systems. Differentiate Natural immunity from artificial immunity. What is the role of T cells in immunity?  $6+2+2=10$

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