

2021

MICROBIOLOGY — HONOURS — PRACTICAL

Paper : CC-14P

(Medical Microbiology)

Full Marks : 30

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Determine the sensitivity of *E. coli*, *S. aureus* and *P. aeruginosa* against various antibiotics by Kirby-Bauer method. 2+4+4
- (a) Write down the principle of the experiment.
- (b) Note down the results in tabular form.

Table for Measurement of Zone Diameter

Sr. No.	Antibiotics	Zone of inhibition (in mm)		
		<i>E. coli</i>	<i>S. aureus</i>	<i>P. aeruginosa</i>
1	Streptomycin			
2	Tetracycline			
3	Chloramphenicol			
4	Kanamycin			

- (c) Compare the Susceptibility of each organism (results obtained from the above table) to determine the susceptibility of each organism to each of the five antibiotics and record them in the following table as follows: S-Sensitive I-Intermediate R-Resistant

Table for Interpretation of Susceptibility

Sr. No.	Antibiotics	Organism		
		<i>E. coli</i>	<i>S. aureus</i>	<i>P. aeruginosa</i>
1	Streptomycin			
2	Tetracycline			
3	Chloramphenicol			
4	Kanamycin			

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2. Identify the bacteria of the *Enterobacteriaceae* family on the basis of IMViC tests. 4+6

(a) Write down the principle of the experiment.

(b) Note down the observations of IMViC tests (with '+' or '-' sign) for the following organisms in the tabular form below and comment on the type of bacteria: *E. coli*, *Salmonella spp.*, *Staphylococcus aureus*.

Sr. No.	Organism	Indole Test	Methyl Red Test	Voges Proskauer Test	Citrate Test

3. Laboratory Notebook 3

4. Viva-voce 7
