

M.Sc. 3rd Semester Examination, 2024
BIO-MEDICAL LABORATORY SCIENCE
& MANAGEMENT

(Diagnostic Microbiology I : Bacteriology)

PAPER — BML-302

Full Marks : 50

Time : 2 hours

Answer **all** questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP — A

Answer any **four** questions from the following :

2 × 4

1. What is meant by polymicrobial infection ?

(Turn Over)

2. What is meant by 'Satellitism phenomenon' ?
3. Why is gastrointestinal one of the important entry portals for pathogens in human ?
4. Write the features of exponential phase of bacterial growth.
5. What are the "HACEK" organisms ?
6. What is meant by "MDR-TB" ?

GROUP – B

Answer any **four** questions from the following :

4 × 4

7. Discuss about the clinical and laboratory markers of inflammatory response for diagnosis of infection.
8. What is mean by direct antibiotic susceptibility testing ? State its clinical significance.

3 + 1

9. What are the sterile and non-sterile anatomical body sites and fluids ? Infections at sterile sites are comparatively more fatal than non-sterile sites. Explain with suitable infections and pathogens. 2 + 2
10. What are the different suppurative and non-suppurative *Streptococcal* infections ?
11. Briefly discuss about the common Gram-negative bacterial pathogens causing UTI and the antibiotics used for treatment. 3 + 1
12. What are the different antibiotics inhibit protein synthesis ? Discuss their mode of action. 1 + 3

GROUP – C

Answer any two questions from the following :

8 × 2

13. State the characteristics of pathogen causing cholera. Discuss the sign, symptoms and pathogenesis of cholera. 2 + 2 + 2 + 2

14. What is meant by pulmonary tuberculosis ?
Discuss the microbiological identification of
the causative agent of TB. What are the anti-
tuberculosis drugs available for treatment ?

2 + 4 + 2

15. What is meant by catheter-associated urinary
tract infection ? State the differential
biochemical identification of staphylococci
and streptococci.

$2\frac{1}{2} + 5\frac{1}{2}$

16. Discuss about two clinically important
nosocomical pathogens focusing on disease
spectrum and laboratory diagnosis. State the
time-line of blood culture.

$2 + 3\frac{1}{2} + 2\frac{1}{2}$

[Internal Assessment — 10 Marks]
