PG/IIIS/BML/301/24

M.Sc. 3rd Semester Examination, 2024

BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT

PAPER – BML-301

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 do you mean by optimum concentration during the reaction of antigen and antibody ?

2. Define titre value and transplant rejection. 1+1

3. Name any four biomarkers along with its specified cancerous form.

4. What is cold chain ?

5. What is the significance of types of HLA in the progression of RA and SLE ?

6. Differentiate agglutination and precipitation.

GROUP – B

Answer any **four** questions from the following : 4×4

7. Why RID is called single phase RID ? Write the principle of ouchterlony double diffusion. $1\frac{1}{2}+2\frac{1}{2}$

8. Discuss about anti-CCP test technique with its application.

9. Define bacteria in typhoid. When will you find the typhyoidal antigen in blood, stool and urine ? When do you consider 'O' and 'H' antigen titer is significant during WIDAL test ? 1 + 2 + 1

10. Discuss briefly the immunological features of tumorous cells.

11. Give the national vaccination schedule with defining each types of vaccine.

12. Why myeloma cells are used in hybidoma technology ? Discuss the role of HGPRT in monoclonal antibody formation. $1\frac{1}{2}+2\frac{1}{2}$

GROUP – C

Answer any **two** questions from the following : 8×2

13. How do you interpret the RPR screening test for syphyllis ? Give an account on different confirmative tests of syphylis along with the principle of FTA-abs test. 2 + 6

14. Discuss in brief the pathophysiology of SLE. What are the tests to be executed for detection of SLE ? Write the principle of FANA. 4 + 2 + 2

15. Describe the pathogenesis of AIDS with diagrammatic presentation. Write the principle of any one highly acceptable test based on antigen antibody reaction in the detection of HIV. 5 + 3

16. Write the underlying mechanism of type-I hypersensitivity. What do you mean by delayed type of hypersensitivity. Discuss briefly about the diagnostic test and treatment of delayed type hypersensitivity. 3 + 1 + (2 + 2)

[Internal Assessment — 10 Marks]