PG/IS/BML/102/24

M.Sc. 1st Semester Examination, 2024

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

(*Research Methodology & Medical Statistics*)

PAPER – BML-102

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** of the following : 2×4

1. What do you mean by Kurtosis ?

2. Why is Chi-Square test weaker than Correlation test ?

3. What is 'Statistics of Dispersion' ?

4. Why cumulative percentage ogive is preferred over cumulative frequency ogive ?

5. What is self plagiarism ?

6. Write any two features of a good research project.

GROUP – B

Answer any **four** of the following : 4×4

7. State the four types of correlation with their graphics and example.

8. 'Laboratory technologists are action researchers'–Justify the statement.

9. Compute the 't' test of the following :
   Population mean = 35.38
   Sample mean = 40.12
   SD = 2.51 N = 10.

10. Write the criteria for application of 'Yates correction factor'.

11. Write the interpretation if your computed t-value is greater than critical 't'-value and in reverse case.

12. Write the difference between 'Dissertation and Thesis'.

GROUP – C

Answer any **two** of the following : 8×2

13. Out of 20 diabetic individuals, 15 are suffering from hypercholesterolemia and 5 are from non-hypercholesterolemia. Similarly out of 30

nondiabetic individuals, 25 are from non-hypercholesterolemia and 5 are from hyper-cholesterolemia.

Findout whether there is any association between diabetes and hypercholesterolemia.

$\chi^2 0.01(1) = 6.64$

14. Compute r_p between blood cholesterol level (mg/dl) and high fat in diet (g/day). Interpret your result.

Blood Cholesterol level 130, 140, 125, 135, 145,132, 160, 170, 142, 163, 145, 155

Fat in diet 30, 22, 28, 35, 30, 28, 36, 32, 40, 37, 27, 36

$t = 0.01(10) = 3.169$.

15. Describe the feature of experimental research. Why out-door patient treatment is under quasi-experimental research ? 4 + 4

16. Discuss in brief, the different steps of project formulation.

[Internal Assessment — 10 Marks]
