2019

MSc

2nd Semester Examination

Bio Medical Laboratory Science & Management (Theory)

PAPER – BML-203

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Group A

1. Answer any four of the following : 4×2=8

a) What is meant by OMR?

b) What do you mean by computer security?

c) Differentiate between RAM and ROM.

d) What is super computer?

e) What do you mean by leptokurtic and platykurtic types of frequency distribution?

f) What is Yate's correction?

g) When ' one-tail t-test' is conducted?

h) When ' Null Hypothesis' is rejected?

Group B

2. Answer any four of the following : 4×4=16

a) What are the basic units of a computer system?

b) Briefly discuss about the various generations of computers.

c) Explain about health-care data analytics.

d) What are meant by the micro and mini computer?

e) How can you compute the smallest 'fe' in x^2 test? What do you mean by 'goodness of fit' -$5x^2$ test? 2 + 2

f) Write the formula for the computation of Srp. If n=25, Cf_1 =20, i=5, X_1 =88.5, then Compute Mdn. 2 + 2

g) The mean blood volume was found 5.2 lit and 5.6 lit of two groups of 10 and 15 humans. Find out the mean blood volume of all the 25 individuals. Write the relationship among mean, median and mode. 2½+2½

h) Write the assumption of correlation. Classify correlation. 2 + 2

Group C

3. Answer any two of the following : 2×8=16

a) What are the different types of application software? Write the benefits of artificial intelligence in healthcare. 4 + 4 = 8

b) Briefly discuss the different parts of computer hardward system. 8

c) Compute 'r' and find out whether the computed 'r' value is significant or not using the following data. 5 + 3 = 8

t0.05(7) = 2.365, t0.001(7) = 5.405

Individual	1	2	3	4	5	6	7	8	9
Insulin dose (iu)	5	8	11	6	7	12	4	9	10
Blood glucose level (mg/d1)	140	125	105	135	148	98	142	95	85

d) Find out whether or not the cardiac out put (minute volume) is significantly higher after exercise than pre-exercise level. 8

t0.05(8) = 1.860, t0.01(8) = 2.896

Individuals	1	2	3	4	5	6	7	8	9
Cardiac output after exercise (lit/min)	6.8	7.2	6.5	7.0	6.4	7.8	8.1	5.8	6.7
Cardiac out put before exercise (lit/min)	4.9	5.2	5.0	5.3	5.1	4.8	6.0	4.8	5.4