

**M. Sc.**

**2017**

**2nd Semester Examination**

**BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT**

**PAPER—BLM-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.*

Answer question no.1 and any three from the rest.

1. Answer any five questions of the following : 5×2

- (a) What do you mean by non-paramedical variable ?
- (b) Write the full form of ANOVA.
- (c) What do you mean by median ?

(Turn Over)

- (d) When will you apply two tail 't' test for the study of significance ?
- (e) What do you mean by 'Null Hypothesis'?
- (f) Write the names of any two software used for your laboratory data analysis.
- (g) Write the names of any two data storage devices in computer.
- (h) Write the full form of 'www' and CD.

2. (a) Define mean.

- (b) Compute the mean value of the following group distribution.

Groups :	35-37	38-40	41-43	44-46	47-49	50-52
Frequency :	4	3	8	7	2	4

- (c) Write the formula of mode using mean and median.

$$2+6+2$$

3. (a) Write the names of Chi-square test used for significance study.

- (b) Compute the chisquare test and interpret your results.

The observed frequency of following trait given below :

Round eye with Black cornea - 20

Round eye with Blue cornea - 8

Extended eye with Black cornea - 5

Extended eye with Blue cornea - 2

Whether the distribution is fit with Mendelian law of Independence ? ( $df_{2,0.05} = 7.05$ ,  $df_{3,0.05} = 8.50$ )

- (c) What are the conditions for using 'Yate's Correction' factor ?

2+5+3

4. (a) What do you mean by parametric statistics ?
- (b) Write the assumption of single group pair observation study.
- (c) Compute the 't'-value of the following problem and interpret the results.

Individuals :	1	2	3	4	5	6	7	8	9
Before Drug intake, SP (mm of Hg) :	160	180	165	170	172	182	168	171	164
After Drug intake, SP (mm of Hg) :	110	140	151	142	153	172	141	140	146

Find out whether or not the SP is significantly higher after drug intake than before drug intake.

Critical value of  $t$  :

One tail  $0.05(8) = 1.86$ ,  $0.01(8) = 2.89$ ;

Two tail  $0.05(8) = 2.306$ ,  $0.01(8) = 3.355$ .

2+3+5

5. (a) Write the differences between system software and application software.
- (b) Discuss any four basic operation performed by the computer.

6+4

6. (a) Write in brief about the use of internet in Bio-Med. Lab. Sci.
- (b) State in brief about the common trouble shooting during computer operation.

5+5

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