M.Sc. 2nd Semester Examination, 2012

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER — BMLSM-202/(Unit-12)

Full Marks : 40

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

Illustrate the answers wherever necessary

MODULE — I

1. Answer any *five* of the following :   1 × 5

   (a) Define Null hypothesis.

   (b) What is molality ?

   (c) What is meant by dilution ?

   (d) What do mean by mode ?

(e) Find H^+ concentration of a 0·1 N H_2SO_4.

(f) Write the formula of SD.

(g) Convert 6(M) NaOH in to percentage.

(h) What do you mean by co-efficient of variation?

2. (a) What is ANOVA?

(b) Why ANOVA has greater strength than t-test?

(c) Write the Assumption of ANOVA. $2 + 4 + 2$

Or

(a) What will be the concentration resulting from mixing 20 ml of a 5% NaCl with 30 ml of 10 % NaCl?

(b) Make 1000 ml of 0·5 (M) NaCl.

(c) What are the basic rules for strength determination of a solution? $4 + 2 + 2$

(Continued)

3. Find out whether or not there is a significant difference between the following groups of Hb% of 16 individuals

   Group-1(Hb%) : 12, 11, 14, 13, 15, 10, 11, 16

   Group-2(Hb%) : 11, 10, 9, 12, 13, 9, 10, 11

   Critical $t_{0.05(8)}$ = 2·305

   $t_{0.05(7)}$ = 2·365

   $t_{0.05(6)}$ = 2·447.   7

Or

(a) The values listed on the label of a bottle of HNO_3 are Sp. Gravity 1.42 and assay 70%. What do these mean ? How much HNO_3 is in 1 ml ?

(b) A urine sample is diluted 1/2 with dH_2O, rediluted 1/4, again 1/4 and again 1/4 . Calculate the concentration of 3rd and 4th dilution.

(2 + 2) + 3

MODULE – 2

(*Computer Application*)

4. Answer any *five* :   1 × 5

(a) What is virus ?

(b) What are the full form of 'RAM' and 'CDROM' ?

(c) Give one example of Primary memory and secondary memory each.

(d) What is DBMS ?

(e) Define Data.

(f) What is WWW ?

(g) What is 'cell' in MS-Excel ?

(h) Give one example of multi user operating system.

5. (a) What is CPU ? What are the function of CPU ? Draw the logical block diagram of computer.

(b) What is memory ? State the difference between Primary memory and secondary memory. 8

Or

(a) What is software ? State the difference between system software and application software.

(b) What is 'Operating System' ? Give luceid example. Why an operating system is called an 'Interpretor' ? (1 + 2) + (2 + 3)

(Continued)

6. (a) What are the various components software available in a complete MS Office package ? Write down the differences in application of MS Word and MS Excel

(b) Write down step by step approach to copy a file from Rendrive (F :) to 'C:\data'.

(c) Give two example of Internet browser.

$(2 + 2) + 2 + 1$

Or

(a) Write down step by step approach to prepare a bar chart using 'MS Excel'.

(b) What is RDBMS ? What are entity and relationship in it . Draw an E-R diagram for a pathological Laboratory data base . $2 + (1 + 2 + 2)$