

Total No. of printed pages = 4

3 (Sem-1)MLT

2015

MEDICAL LABORATORY TECHNICIAN

Paper : S-1.2

(Biochemistry I)

Full Marks : 40

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer the following questions in brief : 1×5=5
- (a) What is pH?
 - (b) What is an anticoagulant?
 - (c) Mention one example of deliquescent compound.
 - (d) What do you mean by ppm?
 - (e) Give one example of laboratory apparatus used in acid-base titration.

(2)

2. Answer the following questions (any five): $2 \times 5 = 10$

- (a) What are the different types of pipettes used in a laboratory? Which pipette is most suitable for micro level works? $1+1=2$
- (b) What do you mean by PLT and PT in blood test? How INR relates with PT? $1+1=2$
- (c) Write the principle of centrifugation. 2
- (d) Mention some of the advantages of digital burette. 2
- (e) What is readability of a digital balance? What is the minimum readability of an analytical balance? $1+1=2$
- (f) State Beer's-Lambert's law. How absorbance and molar extinction coefficient relates? 2
- (g) Calculate the normality of 4.9g H_2SO_4 is dissolved in 500mL of solution. 2

3. Answer the following questions (any three): $5 \times 3 = 15$

- (a) Draw a levelled diagram of hot air oven or laboratory incubator. What are the advantages of a CO_2 incubator? Mention one commercial use of incubator. $2+2+1=5$

(3)

(b) Mention different components of a standard table top balance with diagram. Explain the terms accuracy and precision involved in a weighing scale. $3+2=5$

(c) Illustrate the uses of preservatives in bio-chemistry laboratory with their specific examples. Briefly describe the method of collection of CSF and other fluids. $2+3=5$

(d) Mention the different components of a pH meter. Write the principle involved in determination of pH of a solution by a pH meter. What is a standard hydrogen electrode? $1+2+2=3$

(e) State the uses of three glass apparatus with their diagram. How a glass pipette is calibrated? $3+2=5$

4. Answer any one of the following questions : $10 \times 1 = 10$

(a) (i) What is a standard solution? How they are classified? What types of standard solution can be prepared from the following chemicals :

KMnO_4 , $\text{H}_2\text{C}_2\text{O}_4$, HNO_3 and Ha_2CO_4
 $1+2+2=5$