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**Course: B. Voc, Program: Medical Laboratory Technology**  
**Subject: Clinical Enzymology and Automation, Code: MLT-702**  
**Semester: VI**

**Time: 03 Hours****Max Marks: 35****Instructions to the Students:**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of short answer type. All questions are compulsory. Each question carries 1 marks.
3. Section B comprises 8 long answer type questions out of which students must attempt any 5. Each question carries 5 marks.
4. Do not write anything on the question paper.

Q.No.	SECTION –A (SHORT ANSWER TYPE QUESTIONS)	Marks
1. a	Enzymes are made up of I. Fats II. Proteins III. Vitamins IV. Nucleic acids	(1)
b	What is alanine transaminase? I. Enzyme found in liver II. Enzyme found in stomach III. Enzyme found in small intestine IV. Enzyme found in pancreas	(1)
c	Which of the following is not a co-enzyme? I. NAD II. FAD III. NADP IV. $Mn^{++}$	(1)

- d . An enzyme brings about (1)
- I. Increase in activation energy
  - II. Reduction in activation energy
  - III. Increase in reduction time
  - IV. Mango product order
  - V. All the above
- e What is PPP Units for measuring enzyme activity? (1)
- f Define myoglobin. (1)
- g Discuss the principle of clinical chemistry analyzer. (1)
- h Define troponin. (1)
- i What is amylase test and its range? (1)
- j Draw the structure of NADP+. (1)

**SECTION -B (LONG ANSWER TYPE QUESTIONS)**

2. What is enzyme and explain the lock and key mechanism with diagram? (5)
3. Explain the various factors effecting enzyme activity. (5)
4. What is lipase test? Explain its needs and importance. (5)
5. What is coenzyme? Classify coenzyme and its functions. (5)
6. What is enzyme inhibition and types of enzyme inhibitors? (5)
7. What do you understand by hospital laboratory management system? (5)
8. What is Michaelis-Menten equation and also explain its physiological significance? (5)
9. What is clinical assay and it types? (5)

===END OF PAPER===