

NETTUR TECHNICAL TRAINING FOUNDATION
DIPLOMA IN ELECTRONICS ENGINEERING & EMBEDDED SYSTEM-CP04
VI SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-MAY 2023

Subject: Programmable Logic Controllers
Subject Code: CP04604T

Total Time: 2 Hr.
Total Marks: 50

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING

2*8=16

- 1.1 Define the terms NO, NC with symbols.
- 1.2 What is the concept of mutual interlock in direction control of motor?
- 1.3 Write any 4 digital input & output device names.
- 1.4 List out the different registers in PLC
- 1.5 Draw the repetitive clock circuit.
- 1.6 Expand FIFO, LIFO, FAL, and CLR.
- 1.7 What is the use of SWEEP function?
- 1.8 What is BIT SET Function?
- 1.9 Draw the block format of timer and label it.
- 1.10 Define PLC and its role in automation.

2.0 ANSWER ANY SIX OF THE FOLLOWING

3*6=18

- 2.1 Write the difference between SKIP and MCR function.
- 2.2 Explain PLC output group register
- 2.3 List the various types of comparison functions in PLC.
- 2.4 Explain jump instruction with return.
- 2.5 Explain about SCADA system
- 2.6 List the types of counters and explain any one
- 2.7 Draw the PLC ladder diagram for Motor forward-reverse with Direct Reversal
- 2.8 Explain Transistor type output module with neat sketch.

3.0 ANSWER ANY FOUR OF THE FOLLOWING

4*4=16

- 3.1 What are the programming formats followed for proper construction of ladder diagram?
- 3.2 Differentiate between Retentive and Non-Retentive type timer.
- 3.3 Explain PLC addition function with example
- 3.4 Explain each part of PLC with the block diagram
- 3.5 Explain Analog Input Module with neat sketch
- 3.6 Write the advantages of HMI over a PLC

