Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Automation & Robotics) (Sem.–7)

PROGRAMMING INDUSTRIAL AUTOMATION SYSTEMS

Subject Code : BTAR-702

M.Code : 71807

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Q1 Write briefly :

a) What are continuous sequential processes?

b) What is the use of ladder logic methodology?

c) Write the merits of PLC.

d) Write the advantages of relay logic.

e) What is the application of ladder diagram?

f) What is latching?

g) Write addition function.

h) What is the function of on-delay timers?

i) What is NOT function?

j) What are convert functions?

SECTION-B

2. Discuss the various process variables.

3. What is the function of relays? Write its different types.

4. Compare the on-delay and off-delay timers.

5. Discuss the data moves instructions.

6. Explain AND and OR function with suitable example.

SECTION-C

7. Discuss the PLC architecture and explain its input and output module.

8. Write notes on :

   a) Up-counter

   b) Down-counter

9. Explain the PLC FIFO and LIFO functions.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.