

Total No. of Pages : 02

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Total No. of Questions : 09

B.Tech. (ME) (Sem.-7,8)
AUTOMATION IN MANUFACTURING

Subject Code : BTME-702-18

M.Code : 90475

Date of Examination : 21-11-2023

Max. Marks : 60

Time : 3 Hrs.

INSTRUCTIONS 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

1. Write briefly :

- a) List out the advantages of automation.
- b) What is a production system?
- c) How mechanical feeding is replaced by automation?
- d) What are two reasons for the existence of partially automated production lines?
- e) What are the functions of buffer storage?
- f) How a flexible assembly line works?
- g) What is meant by Adaptive Control Constraint (ACC)?
- h) What is the application of indexing mechanism?
- i) What is data acquisition?
- j) Write the applications of microcontroller.

SECTION-B

2. Discuss some of the reasons used to justify automation system.
3. What are the special features of AS/RS components?
4. Write the advantages and limitations of synchronous transfer mechanisms.
5. Describe the use of Material Handling Equipments in Machine Tools.
6. Explain the factors to be considered in designing and building an automated flow line.

SECTION-C

7. Discuss the various control functions of an automated transfer line.
8. Draw the block diagram of a typical computerized Adaptive Control with Constraints system for drilling operation and explain in detail.
9. What are the important pneumatic components used in automated system? Describe briefly.

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.