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2112E047

**MASTER OF VOCATION**  
**Robotics and Automation**  
**Subject: MOOC-Online Course-III**  
**(Automation in Manufacturing)**  
**Subject Code: OET 901**  
**Semester: Third**  
**December 2021**  
**Theory (External): 70 Marks**  
**Time: 03 Hours**

**Instructions to the Students**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 2 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

**Roll Number**

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**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x2=20 Marks)

- A. List the merits and demerits of the automations in production systems.
- B. What are some industrial items that use microprocessors?
- C. Give one word for the following statement “Systematic Economic Activity that could be related to Manufacture/Service/ Trade.”
- D. How is automation in manufacturing related to profit? Give significant explanation.
- E. What is the relation between Industrial automation and industrial information technology
- F. What are different parts of electric drive?
- G. How a flexible assembly line works?
- H. What is a lobe lift?
- I. Explain the terms (i) Average production time TP (ii) Average production rate Rp
- J. What are different factors for the selection of Electric drives.

**SECTION –B (ESSAY TYPE QUESTIONS)**  
(5x10=50 Marks)

1. What kind of automation would you recommend for manufacturing and why?
  - a. Light Bulbs
  - b. Garments

- c. Textile
  - d. cement
  - e. printing
  - f. pharmaceuticals
  - g. toys
2. List and explain different sensors required in automated manufacturing industry.
  3. What are three types of camshaft drives? Write their typical functions
  4. Explain the difference between flat and roller type camshaft.
  5. What are the different types of automated material handling systems and describe their functions.
  6. Profit = (Price/unit – Cost/unit) x Production Volume. Explain how automation in manufacturing influence Production volume with significant reasons.
  7. What is the function of pressure control valve in pneumatic system? Explain with diagram.
  8. Differentiate programmable and flexible automation.

==END OF PAPER==