

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2012230

Roll No.

B.TECH.

Regular Theory Examination (Odd Sem - VII), 2016-17

COMPUTER AIDED MANUFACTURING

Time : 3 Hours

Max. Marks : 100

SECTION - A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (10×2=20)
- State the reasons to justify the need for automation in manufacturing a product.
 - What are the advantages of automation?
 - List some of the application Numerical Control.
 - What are the methods used for improving accuracy of NC System?
 - Name the two types of controller used in the CNC Machine tool.
 - How feedback devices are classified in CNC System?
 - Distinguish between G and M function.
 - What are Geometry statements in APT?
 - List the benefits of Computer Aided Process Planning.
 - Define a robot.

SECTION - B

Attempt any 5 questions from this section (5×10=50)

- Identify the various levels of automation in a production plant and explain their hierarchy with a flow chart.
- Briefly explain automated manufacturing system.
- Identify and briefly describe the three basic components of a numerical control (NC) system.
- Write short note on NC coordinate system.
- What is control system in CNC system and explain its functions?
- Explain the features and elements of CNC machines.
- Explain the procedure for developing manual part program with example.
- Explain generative computer aided process planning in detail.

SECTION - C

Attempt any 2 questions from this section(2×15=30)

- Explain the various features of modern CNC systems.
 - Explain the advantages of incremental programming over absolute system.

NME-031/NPL-031

11. a) Classify automated systems used in manufacturing and write short notes on it.
- b) Discuss how group technology is used in designing manufacturing cells.
12. Write a part program for the following part with plate thickness of 5 mm.

Take spindle speed = 1500 rpm; feed rate = 100 mm/min.

