Q.26 Differentiate between open and close loop control system. (CO2)

Q.27 Differentiate between a canned cycle and a subroutine in CNC part Programmming. (CO7)

Q.28 Describe mirror image and its command. (CO7)

Q.29 Write a finishing cut program of step turning. (CO7)

Q.30 What are the main problem in electrical components of CNC machine. (CO5)

Q.31 What are the general precautions adopted in CNC machines? (CO4)

Q.32 Explain the classification of fault in CNC machines. (CO5)

Q.33 Give the 5 applications of robots. (CO6)

Q.34 What are the automation strategies and applications of automation? (CO6)

Q.35 Define law of Robotics. (CO6)

SECTION-D

Note: Long answer type questions. Attempt any two out of three questions. (2x10=20)

Q.36 Describe CNC systems. What are its main functions ? Explain the main features of a CNC systems. (CO1)

Q.37 Describe LVDT. Explain the construction , working and advantages of LVDT in detail. (CO6)

Q.38 Explain the different formats and basic structure of a part program. Explain in detail. (CO7)

(**Note:** Course outcome/CO is for office use only)

No. of Printed Pages : 4 181755/171755
Roll No. ..... /121755/031755

5th Sem. /Mechanical / Mechatronics/ Prod.(T & D)/ Fabrication/ Auto

Subject :CNC M/C & Automation

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple choice Questions. All questions are compulsory (10x1=10)

(Course Outcome/CO)

Q.1 CNC machining centers do not include operations like.

a) Welding b) Boring (CO1)

c) Milling d) Tapping

Q.2 Which of the following is not the advantage of CNC machine? (CO3)

a) Higher flexibility b) Improved Quality

c) Reduced scrap rate

d) Improved strength of the components

Q.3 Several machine tool can be controlled by a central computer in. (CO1)

a) NC b) CNC

c) DNC d) CCNC

Q.4 In the CNC machine tool , the part program entered into the computer memory. (CO2)

a) Can be used only once

b) Can be used again and again

c) can be used again but it has to be modified every time

d) none of the mentioned

Q.5 The linking of a computer with a communication system is called (CO2)

a) Networking b) Pairing

c) Interlocking d) Assembling

Q.6 _____ of motion is always the axis of the main spindle of the machine. (CO3)

a) Z-axis b) Y-axis

c) X-axis d) None of the mentioned

Q.7 G-codes are also known as (CO7)

a) Preparatory codes b) Spindle speed codes

c) Tool selection codes d) Miscellaneous codes

Q.8 The following type of robot is most suitable for pick and place operations. (CO6)

a) Rectangular b) Cylindrical

c) Spherical d) jointed arm type

Q.9 A robot's arm is also known as its (CO6)

a) Actuator b) End effector

c) Manipulator d) servomechanism

Q.10 A configuration for a robot is (CO6)

a) Octagonal b) Oblong

c) Square d) Spherical

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Write full from of MCU. (CO1)

Q.12 What are the types of NC systems. (CO1)

Q.13 Give binary equivalent of 27. (CO1)

Q.14 Write use of tool holder. (CO4)

Q.15 Describe sensor. (CO6)

Q.16 Define feedback. (CO5)

Q.17 What is a part program. (CO2)

Q.18 What is control statement. (CO7)

Q.19 What is a logic pulser. (CO5)

Q.20 Define automation. (CO6)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Enlist the advantages of DNC over conventional machines. (CO1)

Q.22 Explain the rules for axis identification in NC machines. (CO2)

Q.23 What are the different types of slide ways? Explain. (CO1)

Q.24 Write a short note on swarf removal in CNC machines. (CO1)

Q.25 Write a short note on automatic tool changer and its significance. (CO6)