Q.26 Explain in brief Basic Components of NC Machines. (CO1)

Q.27 Describe various types of Transducers (CO3)

Q.28 State any 5 applications of Robots (CO7)

Q.29 Differentiate between CNC Machines and NC Machines (CO1)

Q.30 Explain Axis Identification of a CNC Machine (CO1)

Q.31 Write a short note on LVDT (CO3)

Q.32 Explain the following terms (CO4)

a) Subroutines b) Do loops

Q.33 Discuss common problems faced Pneumatic components (CO5)

Q.34 Describe the emerging trends in Automation (CO6)

Q.35 Explain various types of NC Words (CO4)

SECTION-D

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

Q.36 Define Control System. Explain various types of control systems with advantages and disadvantages (CO3)

Q.37 Define FMS and Group Technology. Explain their benefits and limitations. (CO6)

Q.38 Define CNC Machine. Explain different components of a CNC Machine. (CO1)

Roll No. .....

4th Sem / Mech. Engg. (MSIL)
Subject:- CNC Machines & Automation

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 What is the full form of FMS (CO6)

a) Fair Manufacturing System
b) Flexible Manufacturing System
c) Flexible machine System
d) Full Machine System

Q.2 In NC machine tool, the machine is controlled by _____ characters (CO1)

a) Alphanumeric c) Capital
b) Small d) Special

Q.3 _____plays a vital role in reducing the idle time during tool change operation (CO2)

a) Clamps c) FMS
b) Fixture d) ATC

Q.4 The set of coded instructions or commands is called _____ for NC Machine tools (CO1)

a) Order c) Rules
b) Input d) Part Program

Q.5 A systematic layout to accommodate the required number of tools is called a (CO2)

a) Tool Screw and Nut c) Tool Magazine
b) Tool Container d) Tool Cover

Q.6 The Open-Loop control System is also known as (CO3)
a) Non-feedback System
b) Multivariable Control System
c) Feedback System
d) Hybrid System

Q.7 Which of the following G-code will give Circular Interpolation counter clockwise (CO4)
a) G01 c) G03
b) G02 d) G04

Q.8 Which of the following M-code will stop the spindle (CO4)
a) M02 c) M03
b) M05 d) M04

Q.9 The two types of CNC Machine faults according to the elements are (CO5)
a) Recoverable and Unrecoverable
b) Mechanical and Electrical
c) Hardware and Software
d) Opening and Closing

Q.10 What is the full form of CAD (CO6)
a) Controlled Aided Designing
b) Controlled Angle Designing
c) Computer Aided Designing
d) Computer Angle Designing

SECTION-B

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

Q.11 What is the full form of CIM (CO6)

Q.12 What is the binary Equivalent of 102 (CO1)

Q.13 What is the other name of Closed Loop Control System (CO3)

Q.14 Name the G-code used for Dwelling or pausing (CO4)

Q.15 Name the M-Code used for Stopping the program (CO4)

Q.16 Define CNC Tool Holder (CO2)

Q.17 Name the device capable of Converting Energy from one form into another (CO3)

Q.18 Name any two fault finding techniques (CO5)

Q.19 Name 3 types of motion system of Robots (CO7)

Q.20 Define HCS and HSS tool materials (CO2)

SECTION-C

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

Q.21 Explain the concept of CNC tool holder (CO2)

Q.22 Enlist the various advantages of using CNC (CO1)

Q.23 State the difference between Absolute and Incremental system (CO4)

Q.24 Explain any 5 On-time fault finding diagnostic capabilities of a CNC (CO5)

Q.25 Explain briefly the Ball screw and nut assembly (CO2)