Q.29 Explain real time fault finding diagnosis.

Q.30 Describe the term group technology. Explain part families.

Q.31 Write a short note on CAD and CAM.

Q.32 What are the common problems in pneumatic parts of CNC machines?

Q.33 Explain linear type potentiometer.

Q.34 Explain Computer Integrated Manufacturing.

Q.35 Explain Optical encoder.

SECTION-D

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

Q.36 What are the common problems and their remedies in mechanical and electronic part of CNC machines?

Q.37 Explain in detail the principle, construction, advantages and disadvantages of LVDT.

Q.38 Write a note on
1. Automation
2. FMS

5th Sem / Branch : CNC
Sub. : Maintenance of CNC Machines

Time : 3Hrs.   M.M. : 100

SECTION-A

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

Q.1 Which device is used for feedback system in CNC?
a) Control unit   b) Axis motor
c) Encoder   d) Spindle motor

Q.2 Which of the following is not the advantage of CNC machines?
a) Higher flexibility
b) Improved quality
c) Reduced scrap rate
d) Improved strength of the components

Q.3 An ATC plays a significant role in reducing:
a) Control time   b) Tool change time
c) Idle time   d) Machining time

Q.4 The minimum number of axis of a CNC machine is
a) 4   b) 5
c) 3   d) None

Q.5 A control system in which the control action is dependent on the output is known as

a) Closed loop system

b) Semi closed loop system

c) Open system

d) None of the above

Q.6 Which of the following quantity can be directly measured by LVDT?

a) Displacement   b) Force

c) Pressure   d) Weight

Q.7 CNC machining do not include operations like

a) Boring   b) Tapping

c) Milling   d) Welding

Q.8 What is the full form if CIM

a) Computer integrated machining

b) Computer integrated Manufacturing

c) Computer integrated Mobilizing

d) None

Q.9 IN CNC machine tools, the change of tools between tools magazine and spindle is accomplished by

a) Robot   b) ATC

c) AGV   d) Conveyer

Q.10 In case of complex jobs on machining centres, the machine utilization is prominently improved by using_____.

a) AGV   b) ATC

c) Tool Magazine   d) Multiple Pallets

SECTION-B

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

Q.11 What is the full form of CNC?

Q.12 Name any two CNC cutting tools materials.

Q.13 Name types of control loops.

Q.14 What is the function of MCB?

Q.15 Define the term CAD.

Q.16 Explain the term FMS.

Q.17 What is fixed automation?

Q.18 What is the function of tool holder?

Q.19 Enlist two types of pallet systems.

Q.20 Tachometer is used to measure speed. (True/False)

SECTION-C

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

Q.21 Explain different types of slideways.

Q.22 Describe various swarf removal methods in CNC machines.

Q.23 Write a short note on Automatic tool changer.

Q.24 Explain open loop control system.

Q.25 Explain Actuators.

Q.26 What are the characteristics of a transducer?

Q.27 differentiate between encode and decoder.

Q.28 What are the general precautions adopted in CNC machines?