

Q.22 Write classification of robot. (CO4)

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### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the principle and process of EBM and state its limitations. (CO3)

Q.24 Explain the following milling Cutters with neat sketch. (CO5)

I) Plain milling cutter

II) End milling cutter

Q.25 Explain in details the various components of robot. Also give the main advantages and disadvantages.

Roll No. ....

**4th Sem / Automobile Engineering**  
**Subject : CNC Machines and Advanced**  
**Manufacturing Processes**

Time : 3 Hrs.

M.M. : 60

### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Computerized numerical control machines use

- a) Digital data & a computer
- b) Computer and a CAM program
- c) A computer, a part program & a digital data
- d) None of the above

Q.2 A code for coolant off

- a) G09
- b) G02
- c) M01
- d) M09

Q.3 In the block diagram of the CNC machine, data processing and control loop are a part of \_\_\_\_\_

- a) Speed and position sensor
- b) Feedback system
- c) Machine control unit
- d) Input device

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Q.4 What is the full form of CNC?  
a) Computer numerical control  
b) Computer number control  
c) Computer network control  
d) Computer numbers count

Q.5 What does CNC machine use to control motion and speed?  
a) Numerical  
b) Programs, as well as computer keyboard, Graphical user interface  
c) Feedback system  
d) GUI

Q.6 Sensors used in measurement systems are \_\_\_\_\_  
a) Speed and position sensor  
b) Consist of amplifier circuits, driving motors and ball lead screw  
c) Numerical control sensors  
d) Measurement sensors

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 LASER stands for \_\_\_\_\_ (CO3)  
Q.8 Write full form of ECM. (CO3)  
Q.9 Conversion of units is possible in case of CNC machines (True/False) (Co3)

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Q.10 In which year, OTC DAIHEN have introduced a line of arc welding and handling robots. (CO4)  
Q.11 First milling machine came into existence in about 1770 (True/False) (CO4)  
Q.12 Open loop control systems are accurate as compared to close loop control system. (True/False) (CO1)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Give the advantages of NC and application of CNC machines. (CO2)  
Q.14 Describe G00, G04, G32, G42 code in part programming. (CO3)  
Q.15 State the disadvantages of Electro Chemical Machining. (CO1)  
Q.16 Differentiate between absolute and incremental coordinate system. (CO2)  
Q.17 Write the properties of generator in USM. (CO2)  
Q.18 Explain Universal Milling Machine with neat sketch. (CO4)  
Q.19 Describe NC words. (CO1)  
Q.20 Explain any two milling operations with figure. (CO5)  
Q.21 State the working principle of EDM with figure. (CO1)

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