

- Q.27 State the working principle of PAM. (C0-1)  
 Q.28 Write classification of robot. (C0-4)  
 Q.29 Write the properties of generator in USM. (C0-2)  
 Q.30 Explain Universal Milling Machine with neat sketch. (C0-4)  
 Q.31 Prepare Part Program for Turning. (C0-5)  
 Q.32 Explain NC part programming Languages. (C0-3)  
 Q.33 Explain Part program structure with example.(C0-4)  
 Q.34 Name some industrial applications of Robots.(C0-4)  
 Q.35 Explain the variation of Metal removal rate (MMR) with respect to voltage effect in EDM. (C0-5)

#### SECTION-D

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

- Q.36 Explain the principle and process of ECM and state its limitations. (C0-3)  
 Q.37 Explain plain milling cutter & End milling cutter with neat sketch. (C0-5)  
 Q.38 Explain in details the various components of robot. Also give the main advantages and disadvantages of robots in industries. (C0-4)

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

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Roll No. ....

**5th Sem / Branch : Automobile Engineering.**

**Sub. : Advanced Manufacturing Processes**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 The full form of CNC (C0-1)  
 a) Computer numerical component  
 b) Common numerical control  
 c) Both A & B  
 d) Computer numerical control
- Q.2 In a DNC system. (C0-1)  
 a) Many machine tools can be controlled simultaneously  
 b) Only a single machine tools can be controlled  
 c) NC machine cannot be controlled  
 d) None of the mentioned
- Q.3 Several machine tools can be controlled by a central computer in (C0-2)  
 a) N.C. b) CNC  
 c) DNC d) None of the above
- Q.4 Computer numerical control machines use (C0-2)  
 a) Digital data & a computer  
 b) A computer and a CAM program  
 c) A computer, a CAM program & a digital data  
 d) None

- Q.5 Open loop system controls the \_\_\_\_\_ (C0-2)  
 a) Input                              b) Output  
 c) Both A & B                      d) None
- Q.6 Collets in milling machines are generally used to \_\_\_\_\_ (C0-5)  
 a) Hold cutters  
 b) Hold the work piece on table  
 c) Act as auxiliary spindle  
 d) None of the mentioned
- Q.7 Which of the following system has feedback system? (C0-2)  
 a) Open loop system      b) Closed loop system  
 c) Direct loop system      d) None of the above
- Q.8 Laser is produced by \_\_\_\_\_ (C0-1)  
 a) Diamond                      b) Ruby  
 c) Graphite                      d) Magnesium
- Q.9 Ultrasonic machining is based upon \_\_\_\_\_ (C0-3)  
 a) Vibrational waves of zero frequency  
 b) Vibrational waves of low frequency  
 c) Vibrational waves of high & low frequency  
 d) Vibrational waves of high frequency
- Q.10 Frequency of tools's oscillation in USM ranges between \_\_\_\_\_ (C0-1)  
 a) 5-10 kHz                      b) 10-15 kHz  
 c) 18-20 kHz                      d) 25-50 kHz

### SECTION-B

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

- Q.11 DNC stands for \_\_\_\_\_ (C0-3)  
 Q.12 LASER Stands for \_\_\_\_\_ (C0-3)

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- Q.13 Down milling is also called \_\_\_\_\_ (C0-3)  
 Q.14 Conversion of units is possible in case of CNC machines (True/False) (C0-3)  
 Q.15 Name any two dielectric fluids used in electric discharge machining. (C0-1)  
 Q.16 For CNC Absolute system command \_\_\_\_\_ (C0-93, CO-92, C0-90, C0-91)  
 Q.17 \_\_\_\_\_ code is used for cutter radius compensation right?  
 Q.18 \_\_\_\_\_ gas is filled in flash lamp is laser beam machining. (C0-1)  
 Q.19 First milling machine came into existence in about 1770 (True/False) (C0-4)  
 Q.20 Name the M code for "spindle stop" and "Tool Change". (C0-3)

### SECTION-C

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

- Q.21 State the disadvantages of EDM. (C0-1)  
 Q.22 Describe NC Words. (C0-1)  
 Q.23 Discuss various types of DNC system. (C0-2)  
 Q.24 Explain constructional details of CNC milling machine. (C0-2)  
 Q.25 Differentiate between absolute and Incremental coordinate system. (C0-2)  
 Q.26 Explain the following milling operations. (C0-5)  
 a) Face milling                      b) Side milling

(3)

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