Q.27 Write a simple program for drilling a hole in the centre of a 3mm thick plate which is 30mm wide and 40mm long. (CO3)

Q.28 Explain the working of indexing head. (CO5)

Q.29 Describe the principle of milling. (CO5)

Q.30 Give the constructional details of a CNC milling machine. (CO2)

Q.31 Enlist the five applications of Ultrasonic machining. (CO1)

Q.32 Explain the principle of working of Electron Beam Machining. (CO1)

Q.33 Give the advantages of Advanced machining processes. (CO1)

Q.34 Write the applications of the various robotic sensors. (CO4)

Q.35 Describe the basic robot motions. (CO4)

Section-D

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

Q.36 Enumerate ten applications of CNC machines. (CO2)

Q.37 Explain the working principle of Electrical Discharge machining. Give its advantages and limitations also. (CO1)

Q.38 Describe any five milling operations. (CO5)

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SECTION-A

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

Q.1 Which of the following is not the advantage of CNC machines? (CO2)

a) Higher flexibility

b) Improved quality

c) Reduced scrap rate

d) Improved strength of the components

Q.2 Point-to-point systems are used for_____ (CO3)

a) drilling   b) parting

c) grooving   d) facing

Q.3 G-codes are also known as (CO3)

a) preparatory codes   b) spindle speed codes

c) tool selection codes d) miscellaneous codes

Q.4 Which of the following code is used in programming in incremental coordinates? (CO3)

a) G90   b) G91

c) G92   d) G94

Q.5 Drilling can be performed more effectively by_____ milling machine. (CO5)
a) horizontal b) vertical
c) can't say anything d) none of the mentioned

Q6. Which of the following milling is known as conventional milling? (CO5)
a) upmilling
b) downmilling
c) both upmilling & down milling
d) none of the mentioned

Q.7 In USM, material removal occurs due to (CO1)
a) abrasion action b) corroding action
c) chemical action d) chip formation

Q.8 What is the full form of LBM in advanced machining processes? (CO1)
a) Laser Beam Manufacturing
b) Laser Beam Machining
c) Light Blast Manufacturing
d) Light Beam Machining

Q.9 How many types of robotic joints are there? (CO4)
a) two b) four
c) three d) five

Q.10 ECM process is based on which of the following laws? (CO1)
a) Coulomb's law
b) Faraday's law
c) Law of definite proportions
d) Law of chemical combination

Section-B

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

Q.11 Define part programming. (CO3)

Q.12 Name any one type of tape reader. (CO2)

Q.13 Write the function of Machine Control Unit. (CO3)

Q.14 Write the G code for circular interpolation. (CO3)

Q.15 The horizontal axis of a CNC lathe is called._____(X/Y/Z) AXIS. Choose any one.(CO2)

Q.16 Give the use of collet in milling machine. (CO5)

Q.17 Define downmilling. (CO5)

Q.18 Write full form of ECM. (CO1)

Q.19 State the principle of Electro Discharge machining. (CO4)

Q.20 What is the function of proximity sensor in robot. (CO4)

Section-C

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

Q.21 Enlist any five industrial applications of robot. (CO3)

Q.22 Describe word address format of programming with an example. (CO3)

Q.23 Compare NC machine with CNC machine. (CO2)

Q.24 Classify CNC machines. (CO3)

Q.25 Describe the application of various NC Words. (CO2)

Q.26 Write the advantages and disadvantages of DNC system. (CO2)