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Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination July 2021



Course Code: ME306

Course Name: ADVANCED MANUFACTURING TECHNOLOGY

Max. Marks: 100

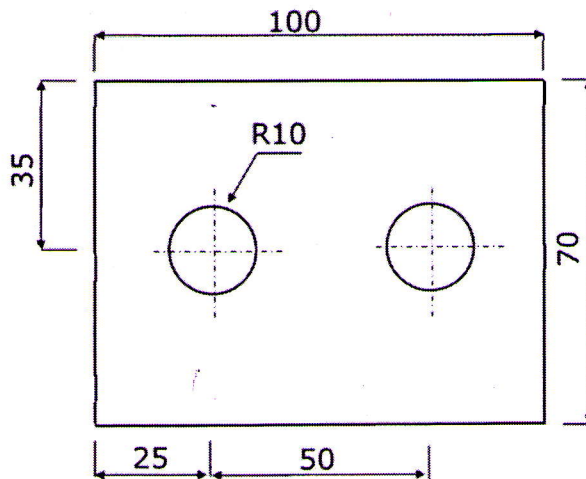
Duration: 3 Hours

**PART A**

*Answer any three full questions, each carries 10 marks.*

Marks

- 1 Explain Powder metallurgy method in production and the steps involved in it with figures. (10)
- 2 Write a PLC ladder logic diagram to get continuous reciprocating movement of a punch, after designing the system using two limit switches, two motors and other necessary devices. Draw input and output diagrams also. (10)
- 3 Write an APT program for drilling two holes as it is given in figure. Thickness of work piece is 20mm. All dimensions are in mm (10)



- 4 a) What is DDA? Explain its functions and importance in manufacturing. (5)
- b) Write any FIVE preparatory codes used in NC part programming and its functions. (5)

**PART B**

*Answer any three full questions, each carries 10 marks.*

- 5 What are the functions of dielectric fluid and electrode in EDM? Write the desirable properties of dielectric material and electrode materials used in EDM. (10)

- 6 Explain the working of Electro Chemical Machining with a neat sketch and example. (10)
- 7 Explain the working of AWJM with a neat sketch (10)
- 8 Compare the advantages and limitations of LBM and EBM (10)

**PART C**

*Answer any four full questions, each carries 10 marks.*

- 9 a) What are the advantages of HVF methods over conventional method of forming? (5)
- b) Explain the types of elastic body waves (5)
- 10 Explain the effect of high speed on stress strain relationship of mild steel and aluminium with graphs (10)
- 11 Explain different types of explosive forming techniques with sketch. (10)
- 12 Explain magnetic abrasive finishing with sketches (10)
- 13 Explain magnetic float polishing with sketch. Write its advantages and applications (10)
- 14 Name various material addition processes. Explain any One type with sketch. (10)

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