

22448

11920

3 Hours / 70 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (8) Use of Steam tables, logarithmic, Moiler's chart is permitted.

Marks

- 1. Attempt any FIVE of the following:** **10**
- a) State the importance of Non-conventional Machining.
 - b) Classify 'CNC' on motion control system.
 - c) List four advantages of Electrochemical Machining.
 - d) State the working principle of 'Buffing' process.
 - e) Identify Linear and Rotary axes of Drilling machine.
 - f) List major elements in Capstan lathe.
 - g) State the meaning of 'G 00' and 'G 04' code.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Differentiate between 'EDM' and 'ECM'.
 - b) Explain in brief 'Open loop control system' of CNC.
 - c) Classify cutting tools for CNC on the basis of
 - (i) Setting up of tools.
 - (ii) Tool construction.
 - (iii) Cutting tool material.
 - d) State any four functions of Tool Magazines.
- 3. Attempt any THREE of the following:** **12**
- a) List any four applications of 'Wive-cut Discharge Machining.
 - b) Explain with neat sketch the 'Abrassive Jet Machining'.
 - c) Differentiate between Absolute and Incremental co-ordinate system.
 - d) Write safety procedure to be followed while working on CNC.
- 4. Attempt any THREE of the following:** **12**
- a) Explain in brief 'Point to point motion control system'.
 - b) Draw a neat diagram of 'Laser Beam Machining'?
Explain its working principle.
 - c) Explain with suitable example 'Canned Cycle'.
 - d) List four applications of 'Lapping Process'.
 - e) State the advantages and disadvantages of 'Polishing Process'.

5. Attempt any TWO of the following:

- a) Write part programme for sketch shown in Figure-No.1 if Z-level at 5mm above plate surface and plate thickness is 10mm.

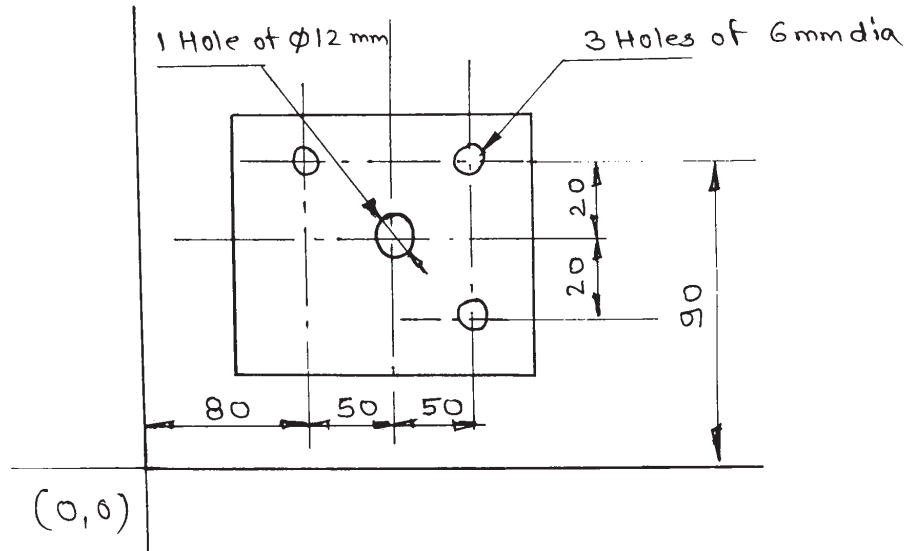


Figure - No. 1

- b) Explain procedure of 'Tool presetting' for CNC machine in detail.
- c) Draw a layout of 'Turret Indexing Mechanism'? Explain its working in brief.

6. Attempt any TWO of the following:**12**

- a) Write part programme for making a job shown in Figure-No.2 from bar of 45mm dia.

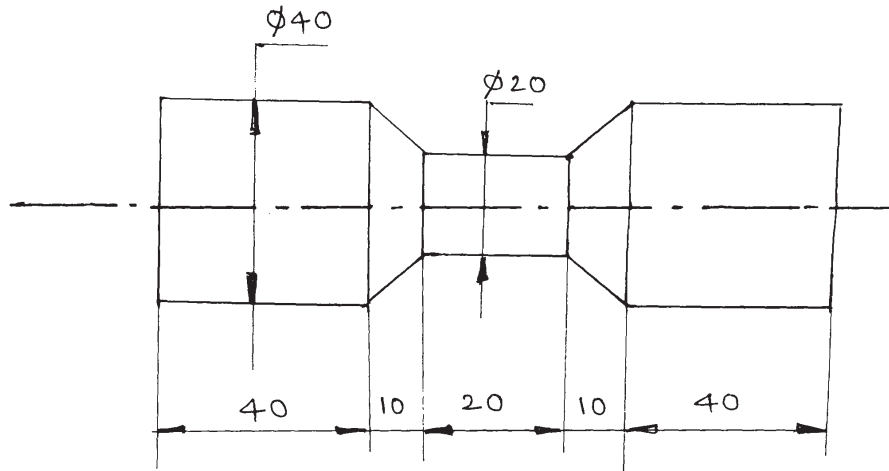


Figure - No. 2

- b) Explain 'Honing' process with neat sketch? Enlist any four applications of Honing process.
- c) Draw a layout of 'Bar Feeding Mechanism' for Capstan lathe.
