

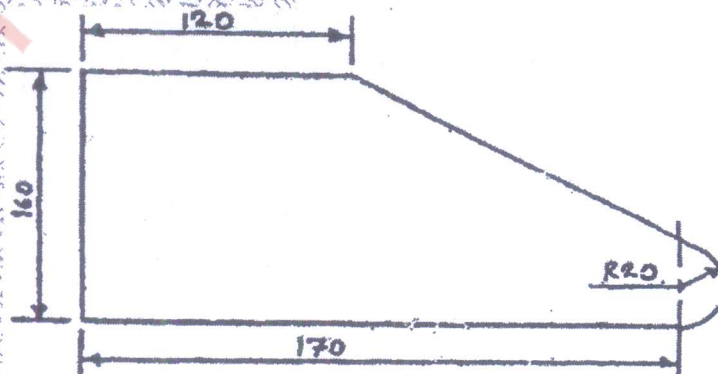
(3 Hours)

(Total Marks: 80)

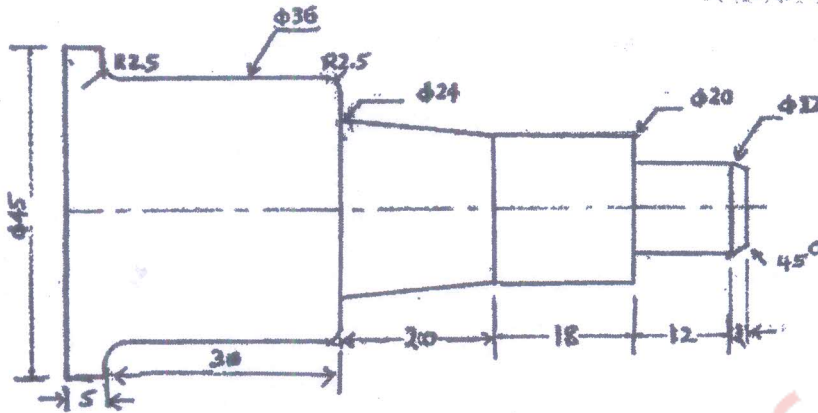
Please check whether you have the right question paper

- N.B:
- 1) Attempt any four questions out of six questions.
 - 2) Assume suitable data if required with proper justification.

- Q1.** Differentiate the following (give only 4 points) 20
- a) TNRC and Tool length compensation
 - b) Linear and circular interpolation
 - c) DC and AC servomotor
 - d) Absolute and incremental programming
 - e) CNC sinking EDM and wire EDM
- Q2.**
- a) Square cavity of 30mm side is to be die sink in a rectangular block of 150x100x50mm thick. Depth is 15mm. write the program for the same on CNC EDM. Provide a draft of one degree all over the cavity. Material is En 24. Use two electrodes. 10
 - b) Explain the working of wire EDM along with limitations. 10
- Q3.** Write short note 20
- a) Post processing
 - b) Antifriction bearing
 - c) Zero friction ball screw
 - d) Six axis machining
 - e) Canned cycles
- Q4.**
- a) How the coordinate system is defined in CNC surface grinding and cylindrical grinding? 5
 - b) Describe in short the different work holding devices used in CNC machining centre 7
 - c) What are the different flushing methods used in CNC EDM? 8
- Q5.** a) Write an APT program for external profile milling 10mm deep as shown in fig. below. 10
Material is m.s. block of size 200 x 180 x 25 thick.



- b) For the following component, write a part program on a CNC turn. Raw material is En 24 and size is 50mm dia x 90mm long.



- Q6. Write the program for complete machining of the component shown in fig. below using R parameters and cycles. Operations are as under,
- Face mill surface marked 'B'
 - Pocket mill dia. 80 by 10 deep -4nos.
 - Drill and finish bore dia. 25 H7 -4nos.
 - Drill and tap M16 x 2 - 4nos.
- Prior to milling plate has been machined to 32 x 320 x 42mm.

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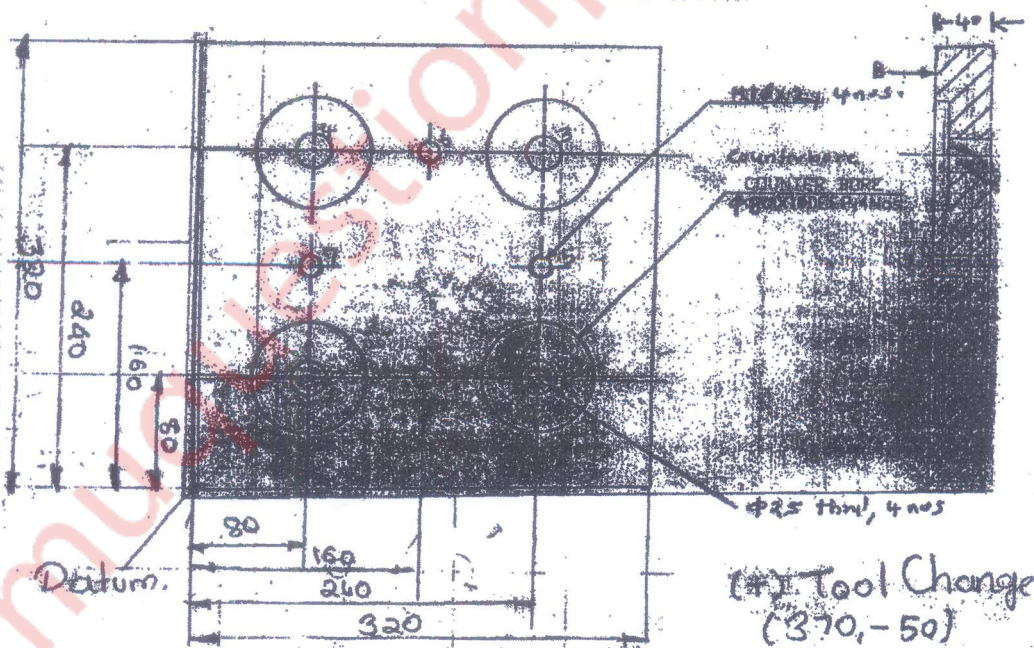


Fig. 1
