

Day: Thursday
Date: 23/11/2017

Time: 10.00 AM TO 02.00 PM
Max. Marks: 80

W-2017-2531

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt any **TWO** question from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Draw diagrams **WHEREVER** necessary.

SECTION - I

Q.1 Design a milling fixture for milling slot 4mm wide as shown in figure1. Prepare (14) manufacturing during of non standard part.

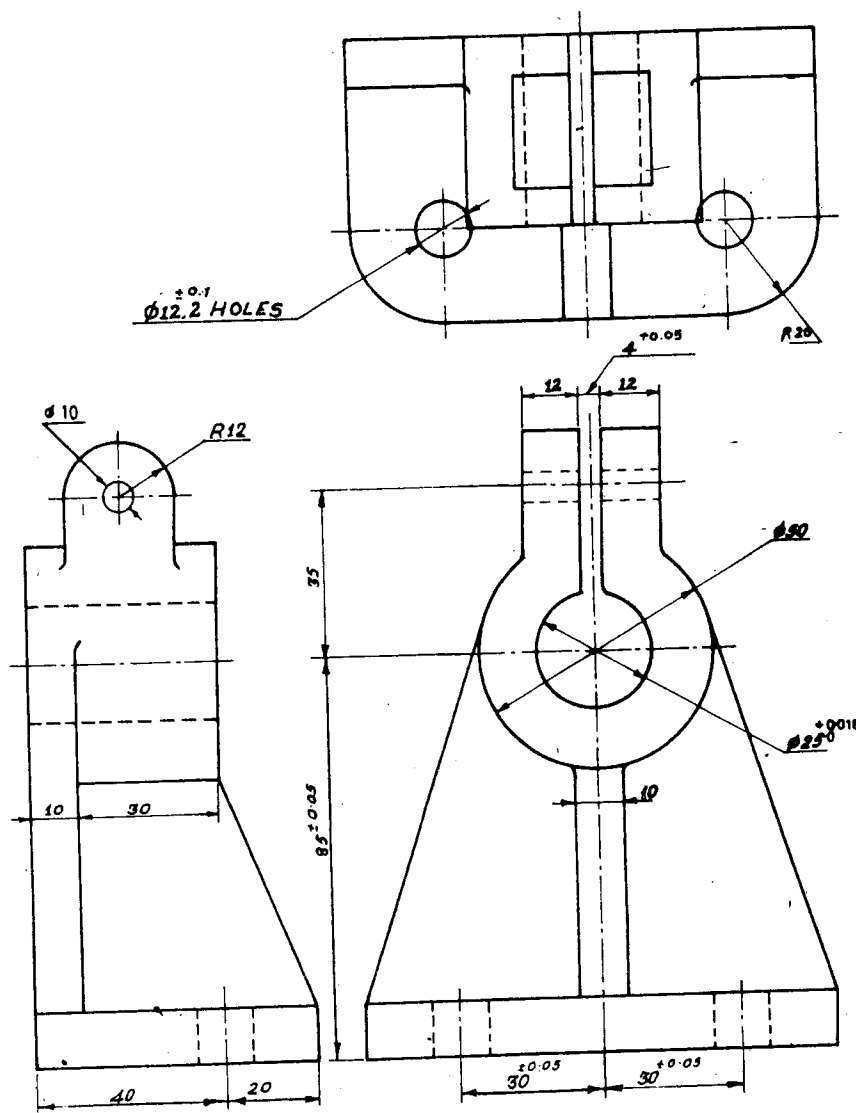


Figure No: 01

- Q.2** a) Explain 6 point principle of location for jig and fixture, with detail explanation of degree of constraint. (07)
- b) Explain any two quick acting clamps with neat sketch. (06)
- Q.3** a) Explain the principles of the Box type of jig. (07)
- b) Explain with neat sketch the role of setting block in milling fixtures. (06)
- Q.4** a) Explain the design consideration of die casting dies and its procedure. (07)
- b) Explain the defects and remedies of die casting. (06)

SECTION-II

- Q.5** Design an injection molding die for the component shown in figure. 2. Draw assembly and details of mold for solid circular component. (14)

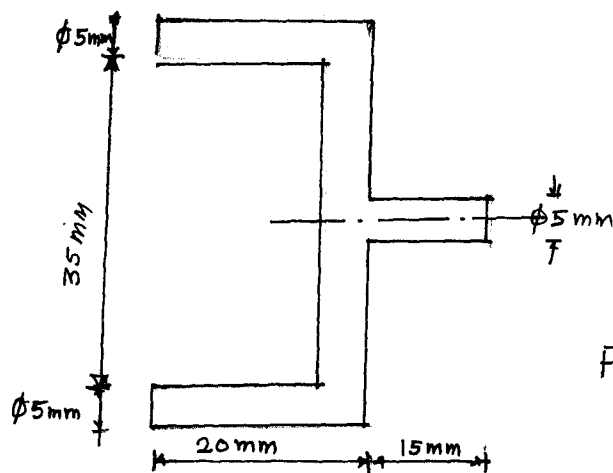


Figure No: 02

- Q.6** a) Explain the design consideration for designing flash and gutters, size of stocks in forging jobs. (07)
- b) Explain the design steps to manufacture the crank shaft by forging process. (06)
- Q.7** a) Explain injection moulding machine with neat sketch, specification, advantages, limitations and list any five products manufactured by this process. (08)
- b) Distinguish between injection moulding and blow moulding. (05)
- Q.8** a) Explain design procedure to manufacturing one litre of plastic water bottle by blow moulding process. (08)
- b) Explain the defects and remedies in blow moulding process. (05)

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