BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

(MID SEMESTER EXAMINATION)

CLASS: **BE** **SEMESTER : VI**
BRANCH: **PROD** **SESSION : SP/17**

SUBJECT: PE6001 TOOL DESIGN

TIME: 1.5 HOURS **FULL MARKS: 25**

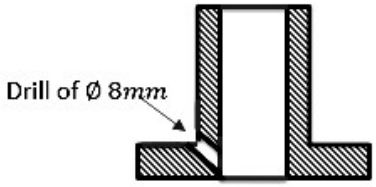
INSTRUCTIONS:

1. The total value of the questions are 30 marks.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtain exceed 25 marks. The excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, If any, may be assumed suitably.

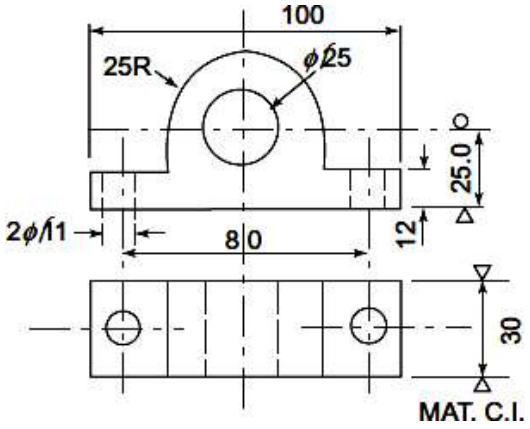
Q1. Write down the Jigs and Fixture Design Factor. [5]

Q2. Write-down the broad principles involved in the design of clamping elements of jigs and fixtures? [5]

Q3. Draw a drill jig for the component shown below. Write the type of locating and clamping mechanism you have used for the same. [5]



Q4. Draw the boring and facing fixture for the component shown below. Write the type of locating and clamping mechanism you have used for the same. [5]



Q5. (a) Explain the 3-2-1 type of location [2]
(b) Discuss the requirements of locating elements for rough surfaces. [3]

Q6. Make a note on three types of special type of bushes used in jigs with their application(s). [5]

***** 27.02.2017 M*****