

**B.TECH. SEM -VI PRODUCTION 2014 COURSE (CBCS) :
SUMMER - 2018**

SUBJECT: JIG FIXTURE AND DIE DESIGN*

Day: Friday
Date: 01/06/2018
S-2018-2445
Time: 02.30 PM TO 06.30 PM
Max. Marks: 60

N.B:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use of non-programmable **CALCULATOR** is allowed.
- 4) Draw neat labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data if necessary.

Q.1 i) Discuss the guidelines for clamping of workpiece in a Jig / Fixture. (05)

ii) Describe Principles of location of a Workpiece. (05)

OR

Q.1 Discuss with suitable sketches any five types of clamps in design of Jig and Fixtures. (10)

Q.2 Design a drill Jig for use when drilling the four ϕ 12mm holes in the flange of the Housing shown in figure No 1. The housing is complete except for these holes. (10)

OR

Q.2 Design an index drilling Jig for use when machining four ϕ 12mm holes in Boss shown in figures No.2. The boss is complete except for these holes. (10)

Q.3 i) Explain design consideration for grinding fixtures. (05)

ii) Explain design consideration of setting block in fixtures. (05)

OR

Q.3 i) Why the clamps on milling fixtures should be extremely rigid? (05)

ii) Write a short note on welding fixtures. (05)

Q.4 i) Give the classifications of plastics. Explain thermosetting plastics in detail. (05)

ii) Describe with neat sketch Compression molding process. (05)

OR

Q.4 Explain 'Transfer Molding and Blow Molding' process in detail. (10)

Q.5 Design an injection molding die for component shown in figure No.3 Draw assembly and details of mold for solid circular component. (10)

OR

Q.5 Describe with suitable sketches methods of ejection. (10)

Q.6 Explain with neat sketch Cold chamber die casting machine with its advantages, disadvantages and applications. (10)

OR

Q.6 i) Explain defects and remedies in die casting processes. (05)

ii) Discuss die lubrication and rules for die lubrications. (05)

(P.T.O.)

