

22611

M. Tech. 2nd Semester (M.E.) CBCS Scheme
(Elective-II) Examination, July-2022

JIGS & FIXTURE

Paper-MTME22D2

Time allowed : 3 hours *[Maximum marks : 100]*

Note : Attempt any five questions in all, selecting atleast one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

1. (a) Design of dowel pins
(b) Purpose of jigs
(c) Automatic drill jig
(d) Assembly fixture 4×5=20

Unit-I

2. Discuss about :
 - (a) Degree of Freedom and Restrain 10
 - (b) Location of irregular geometrical product 10
3. Discuss in detail about calculation of forces and torque exerted by machining methods. 20

Unit-II

4. Write about :
 - (a) Functions of fixture 10
 - (b) Materials used in jigs 10

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5. Discuss in detail pneumatic and hydraulic actuation fixtures. 20

Unit-III

6. Write note on :
- (a) Pot jig 10
 - (b) Air operated jigs components 10
7. Write in detail about design and development of jigs for given components. 20

Unit-IV

8. (a) Write about general principles of broaching fixtures. 10
- (b) Write about fixture for machining and inspection. 10
9. Discuss about :
- (a) Grinding fixtures 10
 - (b) Welding fixtures 10