

D.Voc Mechanical Manufacturing
Subject: Jigs Fixtures and gauge Design
Subject Code: ME-502
Semester: Fifth
Session: - Sept. 2022
Theory (External):35 Marks

Time: 03 Hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 01 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 05 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

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SECTION -A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x01=10Marks)

- A. Define interchangeability.
- B. Which of the following is not correct about fixture?
 - a) It is used to hold the work
 - b) It is used to position the work the work
 - c) It assures high accuracy of parts
 - d) It is used to guide the cutting tool
- C. Write any two requirements of clamping devices.
- D. Mention the various locating methods.
- E. Define indexing device.
- F. What is the use of channel jig?
- G. What is the function of mandrels in turning fixture?
- H. In which of the one operation jigs are preferred over fixture and why?
- I. What is snap Gauge?
- J. Define Taylor's principle.

SECTION -B (ESSAY TYPE QUESTIONS)
(5x05=25 Marks)

1. What are the Fundamental principles of Jigs and Fixtures design?
2. Explain briefly with neat sketch latch and wedge clamping.

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3. Illustrate the working of an automatic drill jig.
4. What are factors to be considered while designing milling fixture?
5. Explain briefly materials used in jigs and fixtures.
6. List various Factors to be considered for design of Jigs and Fixtures.
7. (a) Draw any one type of cylindrical and adjustable locator. (03)
(b) Discuss the working of thread gauge. (02)
8. Explain any four types of drill bushes with sketch

==END OF PAPER==