

**B.Voc Production -Tool and Die Manufacturing****Subject: Basics of Jigs and Fixtures****Subject Code: ME 602****Semester: III****September 2022****Theory (External): 70 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 02 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 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

**Roll Number**

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**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x02=20Marks)

- A. What is the use of Jigs in Manufacturing?
- B. Define interchangeability
- C. What is the use of angle plate?
- D. What is the material used to manufacture angular post also write its one application?
- E. Draw any one type of broaching fixture.
- F. What is the basic principle of grinding fixture?
- G. When is diamond-pin used for locations?
- H. What are non-conventional clamps?
- I. In which operation jigs are preferred over fixture and why?
- J. What is the principle of location?

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**SECTION –B (ESSAY TYPE QUESTIONS)**  
(5x10=50 Marks)

1. (a) Differentiate between Jigs and Fixtures. (5)  
(b) What are the advantages to the use of Jigs and Fixtures? (5)
2. With the help of neat sketches discuss various types of drilling jigs. (10)
3. What is the basic principle of welding fixture? Discuss any one type of welding fixture. (10)
4. (a) While designing for clamping what are the essential factors to be considered? (5)  
(b) With a neat sketch explain pneumatic and hydraulic clamping. (5)
5. Discuss various types of locating methods. (10)
6. Discuss the essential features of Jigs and Fixture design. (10)
7. (a) What is the difference between planning fixture and shaping fixture? (5)  
(b) What is Toggle clamp? Write its various applications. (5)
8. (a) What is redundant location? (5)  
(b) State the provision made on latch or leaf Jig. (5)

==END OF PAPER==