

**NETTUR TECHNICAL TRAINING FOUNDATION
DIPLOMA IN TOOL ENGINEERING & DIGITAL MANUFACTURING– CP01
III SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JAN 2023**

**Subject: Jigs & Fixtures
Subject Code: CP01311T**

**Total Time: 2 Hr.
Total Marks: 50 Marks**

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING 2*8=16

- 1.1 Mention any two types of Jigs & Fixtures
- 1.2 What do you mean by Location of work piece?
- 1.3 What is a conical locator & where it is used?
- 1.4 When do you prefer a plate jig?
- 1.5 Write the uses of modified angle-plate fixture
- 1.6 List out any four different types of clamps used in jigs & fixtures?
- 1.7 Briefly write about Jigs & machine relation
- 1.8 What is liner bush & why it is used in jigs?
- 1.9 What are the elements of jigs & fixtures design?
- 1.10 Briefly explain about Swarf

2.0 ANSWER ANY SIX OF THE FOLLOWING 3*6=18

- 2.1 Write the formula to find the economy and cost of Jig & fixtures.
- 2.2 Differentiate between Fool proofing of work & redundant location
- 2.3 With a neat sketch explain about Table jig
- 2.4 What is plate fixture?
- 2.5 What are strap clamps? Explain
- 2.6 Which materials are used in making of Jigs & fixtures?
- 2.7 Write the Design principles of milling fixture.
- 2.8 Why Magnetic and vacuum chucks are used?

3.0 ANSWER ANY FOUR OF THE FOLLOWING 4*4=16

- 3.1 What are the advantages of Jigs & Fixtures?
- 3.2 Explain the 3-2-1 method of location
- 3.3 What are the steps followed while designing a Jigs & Fixtures?
- 3.4 What are the twelve degrees of freedom? Support your answer with neat sketch
- 3.5 Explain the types of Cylindrical pin locators.
- 3.6 What are various steels used in jigs and fixture

