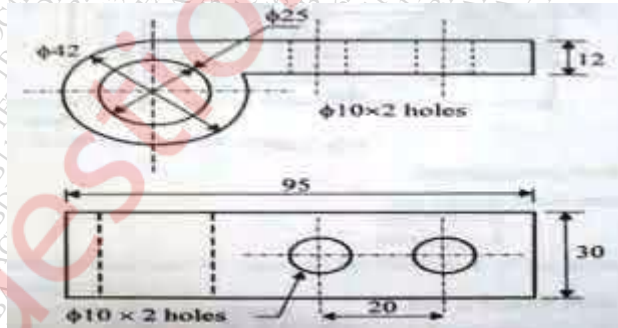


3 Hours

(80 Marks)

- N.B.:
- (1) All questions carry equal marks.
 - (2) Question No.1 Compulsory.
 - (3) Attempt any three from remaining five questions.
 - (3) Figures to the right indicate full marks.
 - (4) Draw neat sketches wherever necessary.

1. Write short notes on the following. (Any four) (20)
 - (a) Essential features of Jigs or Fixtures
 - (b) Fool Proofing
 - (c) C Clamps
 - (d) Broaching Fixture
 - (e) Indexing Devices
2. (a) With the help of neat diagrams explain 3-2-1 locating principle. (10)
 - (b) Draw and explain multiple clamping and equalizing devices. (10)
3. (a) With the help of neat sketches explain various types of Jig bushes. (10)
 - (b) Sketch and explain latch Jig and Channel Jig. (10)
4. Design a Jig for drilling two holes of 10 mm diameter on the given work piece. (20)



5. (a) With neat sketches explain different turning fixtures (10)
 - (b) With neat sketches explain construction of Milling fixture (10)
6. (a) Describe Grinding fixtures. (10)
 - (b) Explain essential features of an Indexing Jigs/fixtures. (10)
