

PROD/CBGS/VI/DJ & F / 13-12-2016

## Design of Jigs & Fixture

Q.P. Code : 608402



(3 Hours)

[ Total Marks : 80

- N.B. :** (1) Question number 1 is compulsory.  
(2) **Attempt** any **three** questions out of the remaining five questions.  
(3) Use of half imperial drawing sketches are permitted and will be supplied as demands.

1. Design and draw a drilling to drill and two holes as shown in fig. A. Draw two views to the scale with dimensions. 20
2. a) Explain locating and clamping method in the above design brief it. 5  
b) Draw free hand sketch for milling fixture for the component shown in fig.A. 5  
For milling the two end faces to maintain dimension  $40^{+0.100}$  mm as shown in the sketch (marked  $\triangle$ ). Show clearly method of tool guide; clamping to machine table and fool proofing in your design.
3. Explain any three of the following :- 20
  - a) Box drill jig.
  - b) Principle of clamping.
  - c) Centraliser
  - d) Equaliser
4. Differentiate following :- 20
  - a) Jigs and fixture
  - b) Allen screws and Dewels
  - c) Plate jig and post jig.
5. a) Discuss the importance of "diamond pin" in dual location. 5  
b) Differentiate Built Up; welded and cast fixture. 5  
c) Explain in detailed; prevention of Jamming in jigs and fixture. 5  
d) C-washer is time saving device. State whether above statement is "True" or false with giving reason. 5

[ TURN OVER ]

6. a) Explain the following with sketch 10  
 i) Stacking  
 ii) Vacuum clamping.  
 b) What is Triangular locater. Explain in detail with sketch. 10

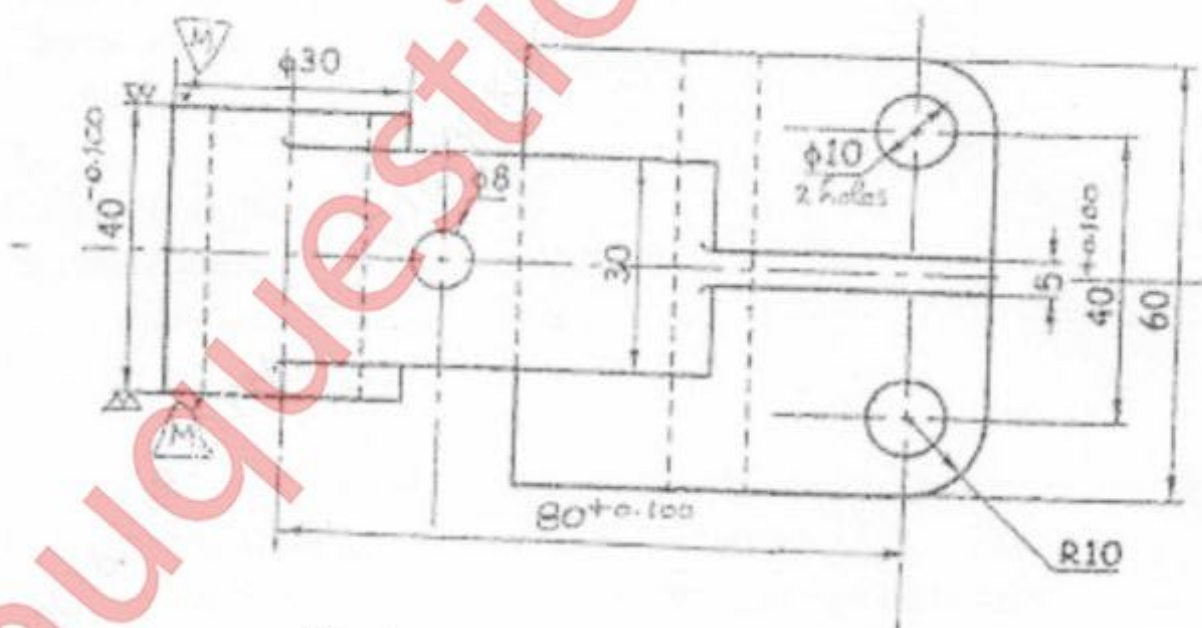
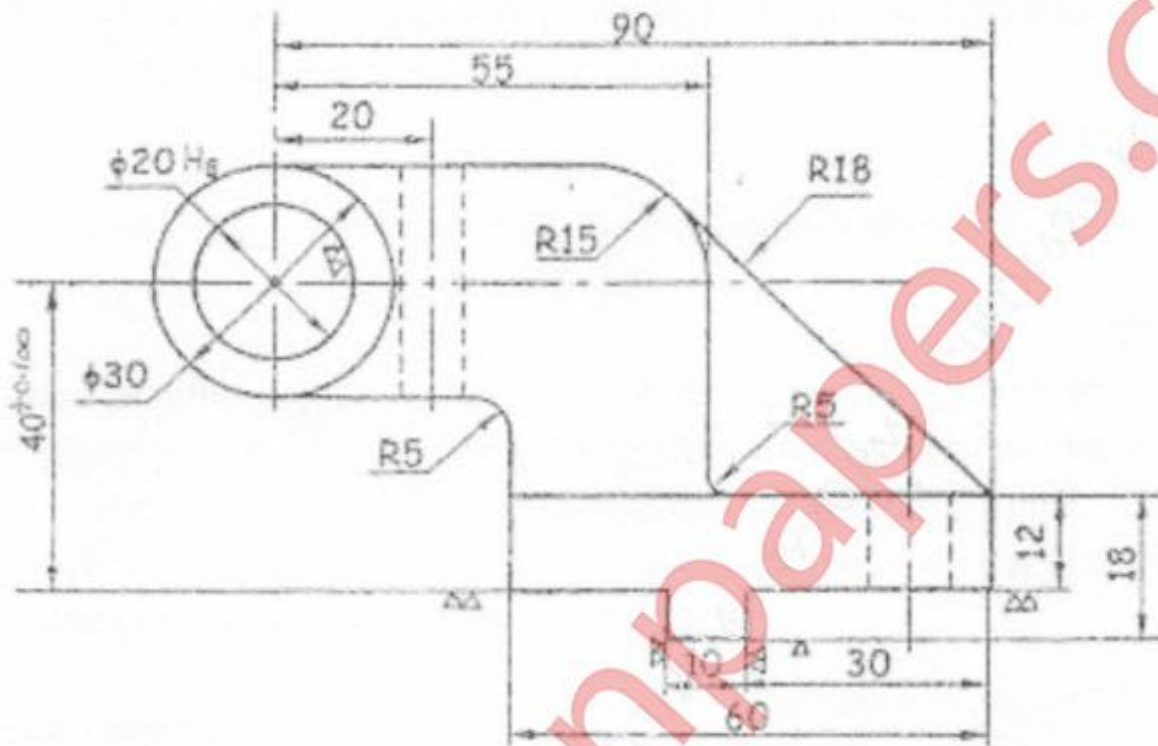


Fig.A  
 for Q. 1 & Q.2