

# **Sixth Semester B.Tech. Degree Examination 2013 Scheme**

## **MODEL QUESTION PAPER**

### **13.606.14 TOOL ENGINEERING (M) (Elective II)**

Duration: 3 Hours

Maximum: 100 Marks

#### **Part-A (Answer all the questions)**

1. Define jig and fixture.
2. Describe 3-2-1 principle for location
3. What is multi purpose tooling.
4. Explain profile locators
5. What is fool proofing ?
6. Classify types of presses.
7. What is dowel and screws ?
8. What is drop forging.
9. Sketch and explain trimming.
10. Sketch holes and cavities in forging.

**(10 × 2 = 20 marks)**

#### **Part-B (Answer any one question from each module)**

##### **Module-I**

11. a. Describe various types of drilling jigs.  
b. Write shorts notes on (i) equalizing jacks (ii) recess locators (iii)wedge clamp(iv) nut mandrel.

**OR**

12. a. Sketch and explain Pneumatics & Hydraulics for jigs & fixtures..  
b. Describe Swarf disposal methods.

##### **Module- II**

13. a Explain types of milling fixtures?  
b. Sketch and explain work holding devices for various surfaces.

OR

14. a. A hole is to be drilled in a 80mm diameter rod which has a tolerance of  $\pm 0.25$ mm.  
V- block fixture is to be used. Determine the possible variations from the centre line of the drill bushing when  $90^\circ$  V-block is used.
- b. Explain types of fixtures used in CNC machines.

**Module- III**

15. a. State and explain press work tools.
- b. Sketch and explain briefly the terms (i) fine blanking (ii) embossing (iii) coining

OR

16. a. Explain stripper plate and Pilots.
- b. Design and explain compound and progressive dies

**Module- IV**

17. a. Explain flexible manufacturing system.
- b. Discuss about group technology and state its merits and demerits.

OR

18. a. Explain design of forging dies.
- b. Write short notes on computer applications used in short metal press work

**(4 × 20 = 80 marks)**