

EIGHTH SEMESTER B.TECH DEGREE MODEL QUESTION (2013 SCHEME)

BRANCH: PRODUCTION ENGINEERING

13.803 TOOL ENGINEERING (P)

TIME:3 Hours

Max Marks:100

INSTRUCTIONS: 1)ANSWERALL QUESTIONS FROM PART (A) AND EACH QUESTION CARRIES 2 MARKS

2) ANSWERANY ONE FULL QUESTION FROM EACH MODULE IN PART B.EACH FULL QUESTION CARRIES 20 MARKS

PART(A)

1. What is the significance of jigs and fixtures?
2. Sketch a push toggle clamp.
3. What are the principles of pin location?
4. Write briefly about Tool presetting fixtures
5. Briefly explain the concept of modular fixtures
6. With a neat sketch explain the metal flow in drawing operation
7. Sketch the load variation in blanking when correct clearance is used
8. What is group tooling?
9. What are the plastic materials commonly used for tooling?
10. What is drop forging?

(10 x 2 = 20)

PART (B)

MODULE-1

11. Explain in detail the Economics of Jigs and Fixtures (20)

OR

12a) what are the swarf disposal methods commonly used in Jigs &Fixtures? (10)

b) Explain the significance of Diamond pins in Radial Location? (10)

MODULE-2

13a).With neat sketches Explain the Fixtures used in CNC Machines (10)

b) Draw and explain an Arc Welding Fixture (10)

OR

14.a) Draw and Explain the types of Bushes used as Guiding devices in Drill Jigs (20)

MODULE-3

15.a) With neat sketches explain the differences between Embossing and Coining (10)

b) How do you estimate the Blank size in Drawing a Cup (10)

OR

16. With sketches explain the difference Between Combination & Compound dies (20)

MODULE-4

17a). Draw and explain the Merchant Force circle diagram used in Orthogonal cutting (10)

b) Explain the computer application (CAD/CAM) in press working (10)

OR

18a) How will you estimate the Roll separating Force, Torque and Power required in Flat rolling process? (12)

b) Explain briefly about Turret Press FMS (8)