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SIXTH SEMESTER B.TECH DEGREE EXAMINATION

(2013 Scheme)

Branch: MECHANICAL PRODUCTION ENGINEERING

13.604 PRODUCTION PROCESS-II (P)

Time: 3 Hours **Max. Marks: 100**

Part –A

Answer all questions (10x2=20 Marks)

1. Briefly explain the principles of metal rolling.
2. Explain the principle & applications of metal spinning?
3. Briefly explain the theory of metal forming.
4. Explain in detail about forging dies.
5. Briefly explain the principle of ultrasonic welding.
6. What are the methods adopted to weld plastics.
7. Differentiate soldering and brazing processes.
8. What do you mean by weld dilution?
9. With the help of neat diagram explain hydro forming.
10. How to eliminate residual stress developed during welding?

Part –B

Answer one full question from each module (20x4= 80 Marks)

Module-I

11. (a) Explain briefly about the rolling mills & their classifications.
    (b) With the help of neat diagram explain tube rolling & the major defects in rolling process.

OR

12. (a) Explain briefly roll passes & different types of roll pass design.
    (b) Briefly explain high energy rate forming and its classifications.

Module-II

13. (a) Explain briefly the classification of metal forming process.
    (b) Briefly explain the metallurgical aspects of metal forming.

OR

14. (a) Briefly explain forging process & its classifications.
    (b) With the help of neat diagram explain hot & cold extrusion with its applications.

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Module-III

15. (a) .Explain electro slag welding process with neat sketch
    (b) What are the methods used for under water welding? Explain in detail.

OR

16. (a) Explain Laser beam welding process, what are the advantages of it?
    (b) Explain the thermal effect on the microstructure of welded joints.

Module-IV

17. (a) What is the principle of Electric resistance welding, explain any two methods.
    (b).Explain various positions of welded joints with welding symbol.

OR

18. (a) What are the common defects in welded joints? Explain the causes and remedies.
    (b) Explain any two non destructive testing methods of welded joints

(4 x 20 = 80 Marks)