Reg. No. : .....

Name : .....

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E – 4765

Fourth Semester B.Tech. Degree Examination, September 2018
(2008 Scheme)
Branch : Mechanical Engineering
08.404 : MANUFACTURING PROCESS (MN)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions. **(10×4=40 Marks)**

1. What is meant by Natural Sand, Synthetic Sand and Loam Sand ? Give its application.

2. Briefly explain the application of chills in casting.

3. What are the merits and demerits of bottom gating ?

4. Explain the advantages and disadvantages of permanent mould casting compared to that of sand casting.

5. Briefly explain Butt welding and Seam welding.

6. What are the parameters to be controlled in the resistance welding process ?

7. Explain the principle of friction welding.

8. What is the significance of recrystallisation temperature in metal working ?

9. How does Cold Rolling differ from Hot Rolling Process ?

10. Distinguish between open and closed die forging processes.

P.T.O.

PART – B

Answer **one full** question from **each** Module. **(20×3=60 Marks)**

Module – I

11. a) What is meant by directional solidification ? What are the factors through which the metal contraction takes place during the solidification of the casting ?

    b) Explain briefly the important properties of moulding sand.

12. a) Explain, what are the normal binders used in core sand. Sketch different types of cores used in foundry practice.

    b) How will you compare a cold chamber die casting process with that of a hot chamber process ?

Module – II

13. a) With the help of a sketch, explain the structural changes that takes place at the welded joint.

    b) Write notes on DCSP and DCRR in Arc welding process.

14. a) Explain with sketch plasma arc welding process.

    b) Write notes on soldering and brazing.

Module – III

15. a) Explain with sketch upset or machine forging. Give an example.

    b) Write short note on "Roll Pass".

16. Explain the following with sketches :

    a) Metal spinning

    b) Roll forging

    c) Hydrostatic extrusion

    d) Wire drawing.