

ME404 - Manufacturing Processes

P. Pages : 2

Time : Three Hours



GUG/W/16/3925

Max. Marks :80

- Notes :
1. All questions carry marks as indicated.
 2. Answer Q. 1 Or Q. 2, Q. 3 Or Q. 4, Q. 5 Or Q. 6, Q. 7 Or Q. 8 Q. 9 Or Q. 10.
 3. Due credit will be given to neatness and adequate dimensions.
 4. Assume suitable data wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.
 6. Use of Non-Programmable calculator is permitted.

1. a) What are the different types of moulding sand? Describe any four properties of moulding sand. **8**
b) What do you mean by "Pattern"? What are the different types of pattern used in foundry shop. **8**

OR

2. a) Why allowances provided on pattern? Explain all the allowances with neat sketches. **8**
b) Explain with neat sketch any two moulding machines. **8**
 - i) Jolt machine.
 - ii) Sand slinger.
 - iii) Squeezer machine.
3. a) Explain with neat sketch construction, operation and various zones of cupola furnace. **8**
b) What is 'Gating system'? what are its main functions? Describe with neat sketch the main components of gating system. **8**

OR

4. a) Explain the cold chamber and Hot chamber Die casting processes. **8**
b) Explain with neat sketch process of. **8**
 - i) Centrifugal casting.
 - ii) Shell moulding.
5. a) List various criteria of press classification. Explain with neat sketch the construction and operation of "Hand Press". **8**

- b) Differentiate between 8
- i) open die forging & closed die forging.
 - ii) Hot rolling and cold rolling.

OR

6. a) i) What are the different types of forging hammers? Describe any one with neat sketch. 8
- ii) List the various factors upon which the selection of forging equipments for a particular job depends.

- b) Write short notes on. 8
- i) Hot extrusion & Cold extrusion.
 - ii) Process of wire drawing.

7. a) Explain the Electric Discharge machining process. State its advantages, disadvantages and applications. 8
- b) Describe Abrasive Jet machining process. what are its advantages, applications & limitations. 8

OR

8. a) Explain Electro-chemical machining process. What are its advantages, applications and disadvantages. 8
- b) Explain "Ultrasonic Machining" Stating its applications, advantages & limitations. 8
9. a) Describe "MIG" & "TIG" welding in details with neat sketches. 8
- b) Explain with neat sketch "Thermite welding". What are its advantages and limitations. 8

OR

10. a) Write short notes on. 8
- i) Spot welding.
 - ii) Seam welding.
 - iii) Soldering and brazing.
- b) Define Resistance welding. Explain with neat sketches any two methods of Resistance welding with its applications. 8
