

41389

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PART - B

(5×13=65 Marks)

11. a) In context of sand casting describe the following :
- i) Outline the procedure to make sand mould with the steps involved in it. (8)
 - ii) Enumerate the desirable mould properties in sand casting . (5)
- (OR)
- b) i) Illustrate the working principle of investment casting and list advantages and disadvantages also. (7+2)
- ii) Draw the schematic diagram for shell moulding process. (4)
12. a) i) Classify the various types of welding process with flow chart. (5)
- ii) Explain the working mechanism of resistance welding with simple sketch. (4+4)
- (OR)
- b) i) List the various welding defects in manufacturing and explain any two. (6)
- ii) Explain the working mechanism of Thermit welding with the neat sketch. (7)
13. a) Outline the common operations performed in the following machine with simple sketches :
- i) Lathe (8)
 - ii) Shaper. (5)
- (OR)
- b) Discuss the working principle of the Abrasive jet machining process. Let its merits and demerits. (11+2)
14. a) i) Summarize the working principle of injection moulding with neat sketch. (8)
- ii) Compare thermo set curing process and thermoplastic curing process. (5)
- (OR)
- b) Demonstrate the following processes with neat sketches.
- i) Blow moulding. (7)
 - ii) Metal extrusion process. (6)



15. a) With the help of neat sketch describe the following process :

i) Flat rolling process.

(7)

ii) Forging process.

(6)

(OR)

b) Describe the principle steps involved in powder metallurgy process with simple sketch and list its applications also.

PART – C

(1×15=15 Marks)

16. a) i) Categorize the characteristics of the forming and shaping processes.

(7)

ii) Interpret the methods of production for the following shapes :

1) Parts with cavities

2) Thin hollow shapes

3) Curvature on thin sheets

4) Reducing cross sections.

(4×2=8 Marks)

(OR)

b) Analyse the case study of welding process for industrial purposes.