

Time: 3 Hour

Total Marks: 80

Note:

1. Question one is compulsory.
2. Solve any three out of remaining five.

- Q.1 Write Short notes with sketch wherever applicable. (Solve any Four) 20**
- a Pattern Allowances
  - b Electron beam welding
  - c Rolling mills
  - d Gear Hobbing
  - e Industry 4.0
- Q.2 a Explain different design principles of gating and risering system 10**  
**b Classify Welding processes and compare arc, gas and resistance welding 10**
- Q.3 a Describe different sheet metal operations with neat sketches 10**  
**b Write short not on Radial drilling machine 10**
- Q.4 a List various methods of taper turning and Explain any one in detail. 10**  
**b Explain stepwise procedure of powder metallurgy 10**
- Q.5 a Describe the investment casting with working principle, advantages, limitations and applications 10**  
**b Write short note on gas welding with different types of flames produced in it. 10**
- Q.6 a Compare the following 10**  
1. Shaper and Planer  
2. Hot working and cold working  
**b List various nontraditional machining methods and explain Ultrasonic machining in detail 10**
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