

**B. Tech 4th Semester Examination**  
**Manufacturing Process (NS)**  
**AU-222**

**Time : 3 Hours**

**Max. Marks : 100**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt one question each from section A, B, C & D. Section E is compulsory.

**SECTION - A**

1. (a) Explain various types of pattern and core. (7)  
(b) Discuss sand molding processes. (8)
2. (a) With neat sketch, explain construction and working of cupola. (7)  
(b) Explain different types of gating systems. (8)

**SECTION - B**

3. (a) What is die casting process? (7)  
(b) What are its applications? Explain it with suitable diagrams. (8)
4. Explain:  
(a) Drop forging (7)  
(b) Difference between hot and cold working (8)

[P.T.O.]

**SECTION - C**

5. Write short notes on following:  
(a) Stretch forming  
(b) Coining  
(c) bending (15)
6. (a) Explain Submerged Arc Welding process with suitable diagram? (7)  
(b) Explain various welding defects. (8)

**SECTION - D**

7. (a) What is principle of resistance welding? Explain seam welding process with neat sketches. (7)  
(b) Discuss flash welding process. (8)
8. (a) Explain with suitable diagrams working of capstan lathe. (7)  
(n) Discuss indexing in milling and other operations. (8)

**SECTION - E**

9. Explain the followings:  
(i) Molding materials.  
(ii) Chaplets.  
(iii) Cupola.  
(iv) Continuous casting.  
(v) Forging defects.  
(vi) Press tool operation.  
(vii) MIG  
(viii) Friction welding.  
(ix) Brazing and soldering.  
(x) Oxy-acetylene Welding. (4×10=40)