

**2005 MAHATMA GANDI UNIVERSITY**  
**B.TECH DEGREE EXAMINATIONS**  
**V SEMESTER MECHANICAL ENGINEERING**  
**MANUFACTURING PROCESS**

**TIME: 3 HOUR**  
**MAXIMUM MARK 100**

**Part- A:**

All questions carry equal marks

1. What are the functions of a pattern? What are the factors affecting the selection of pattern material?
2. What are the steps for pattern construction?
3. Explain with a neat sketch about Butt welding
4. What are the functions of filler metals and fluxes?
5. Differentiate between Hot and Cold rolling.
6. What are the considerations to be adopted in Roll pass design?
7. Explain with a sketch how drawing operation is done for metal.
8. Explain with sketches how bending operation is done.
9. What are the equipments used for forging? Give a brief explanation.
10. List the various furnaces for heating during forging operations? Give a brief explanation to any one.  
[10x4 = 40 marks]

**Part- B**

11. What are the principal ingredients of moulding sand? Explain how moulding sand can be classified.  
or
12. What are the various tests done for moulding sand?
13. Explain with suitable sketches the basic equipment used to carry out gas welding.  
or
14. What is submerged arc welding? Explain how it is carried out.
15. Explain the steps for rolling wheels.  
or
16. What do you mean by roll pass? What are the types of passes?
17. Explain with suitable sketches:
  - (a). Electric motor driven presses.
  - (b). Hydraulic presses.or
18. Explain with suitable sketches:
  - (a). Injection moulding.
  - (b). Compression moulding.
19. Explain with suitable sketches the following:
  - (a). Drop Hammer.
  - (b). Pneumatic Hammer.or
20. Explain with suitable sketches the various presses used for forging.  
[5x12 = 60 marks]