



**Sri Vidya College of Engineering and Technology**  
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**Department of Mechanical Engineering**  
**ME6302 Manufacturing Technology I**  
**Question Bank / Unit 4 – SHEET METAL PROCESSES**

**PART-A (2 MARKS)**

1. What is blanking?
2. What is punching operation?
3. What are the different types of metals used in sheet metal work?
4. Mention any four products produced by spinning process?
5. In which member the clearance should be given for blanking and piercing?
6. What is the difference between stretch forming and bending?
7. List various operations generally performed in a sheet metal shop
8. Show the details of punching process with the help of a simple sketch
9. Give the difference between punching and blanking
10. List the various sheet metal that can be formed in press working
11. Define the term spring back
12. What are the advantages of stretch forming operation?
13. What are the types of special forming processes?
14. What are the advantages of hydro forming process?
15. State the limitations and applications of rubber pad forming process
16. What is metal spinning process?
17. State the advantages and applications of explosive forming process
18. What is peen forming process?
19. What are the advantages and disadvantages of peen forming process
20. What are the applications of super plastic forming process?

## PART-B (16 MARKS)

1. i. Explain any one stretch forming operation  
ii. Define formability and how it is tested?  
iii. What is drawing operation?
- 2.i. Explain the metal spinning operation  
ii. Describe the magnetic pulse forming process
- 3.What is deep drawing operation? Explain with a neat sketch.
4. i. Explain rubber pad forming process  
ii. Describe the electro hydraulic forming process
5. i. Describe the explosive forming process  
ii. How are aluminium kitchen utensils produced?
6. i. Describe the process of hydro forming  
ii. Describe the various methods of rubber forming. Where are these processes used?
7. i. What is super plastic forming?  
ii. Describe the hydro forming process with the help of neat diagram
8. i. Explain the characteristic features of sheet metal used in forming process  
ii. Explain peen forming process
9. i. Find the total pressure, dimensions of tools to produce a washer 5cm outside dia with a 2.4 cm diameter hole, from a material 4 mm thick, having a shear strength of  $360 \text{ N/mm}^2$   
ii. Determine a) blank diameter b) Least no. drawing operations c) force and energy for the first draw with 40% reduction to produce a cup of 5 cm in diameter and 7.5cm deep to be drawn from 1.5mm thick drawing steel with a tensile strength of  $315 \text{ N/mm}^2$