

Question Bank

Manufacturing Practices

Short Questions

- a. Mention various Shearing Operation used in Sheet Metal Work.
- b. Differentiate between Hard and Soft Wood.
- c. Differentiate between Blanking and Punching with neat sketches.
- d. What is the purpose of making Hems in Sheet Metal Work?
- e. Differentiate between Drilling and Reaming.
- f. Differentiate between Chipping and Scraping.
- g. How the Rip Saw differs from Cross Cut Saw?
- h. What is the similarity in use of Claw Hammer and Pincer?
- i. How will you test trueness of a Try Square with the help of a surface plate?
- j. What is the use of Snips? How curved Snips are different from Straight Snips?
- k. What is weldability of a Metal?
- l. Explain HAZ (Heat Affected Zone) in context of welding process?
- m. What are cores? Why are they used?
- n. Write a brief note on Molding Sand?
- o. What is the effect of polarity in DC Arc Welding?

Long Questions

- a) Write a note on Defects in Timber.
- b) List and Explain different types of Carpentry Joints.
- c) Write advantages of Wood as a material for engineering applications enumerating its important uses. Also mention its disadvantages.
- d) Why preservation of Timber is necessary? Describe in brief some of the methods of preservation.
- e) Why the Stakes are used in Sheet Metal Work? Name three types of Stakes with sketches giving their uses.
- f) Describe various types of Hammers used in Sheet Metal with neat sketches.
- g) Describe the common Joints used in Sheet Metal Work.
- h) Describe Construction and use of various types of Chisels with neat sketches used in fitting work.
- i) Explain the care and precautions taken in use of Files.
- j) With a neat sketch, name different parts of a rectangular File. How are the Files specified?
- k) What are the different type of power sources used in arc welding? What are the advantages and limitations of each?
- l) Explain reason why electrodes are coated?
- m) What are the important considerations taken into account selecting material for pattern making? Enumerate the characteristics that a good pattern material should possess.

Q3. What is seasoning of Wood? Why is it required? Explain various common methods of Seasoning.

Q4. What do you mean by "Layout" in Sheet Metal Work? Explain with example why allowance are provided on the Layout prepared and how they vary?

Q5. Explain the following Sheet Metal Operations:-

- a) Hand forming
- b) Bending
- c) Roller forming
- d) Drawing.

Q6. What is setting of "Saw teeth"? Why is it done?

Q7. What is welding? How the welding is classified?

Q8. Discuss, with the help of neat sketch, the principle of electric arc welding? What is straight polarity and reversed polarity?

Q9. Sketches and describe the principles of submerge arc welding?

Q10. Describe with help of sketches the following arc welding processes-

- a. Plasma arc welding
- b. Atomic hydrogen arc welding
- c. Flux cored arc welding
- d. Electro slag welding

Q11. Describe with the help of sketches the following arc welding processes

- a. TIG welding
- b. MIG welding

Q12. With the help of neat sketches explain the process of resistance spot welding. Distinguish between spot welding and seam welding?

Q13. Explain briefly the projection welding process. Also give its advantages and disadvantages?

Q14. State difference between upset butt welding and flash butt welding. Explain their principles.

Q 15. How is a pattern defined? What are the common materials used for pattern making? Discuss their relative merits and demerits.

Q 16. Describe various factor which are taken into account when providing various type of allowances on a pattern.

Q.17 How a pattern is different from the casting itself?

Describe various pattern allowances.

Q 18. Describe in brief with sketches various type of patterns common in use.

Q 19. What are the desirable properties of a molding sand and state what defects in casting may arise in absence of these?

Q20. Describe the different type of additives as binders and facing additives used in silica sand to improve molding quality.

Q21. State the advantages of the following:

- * Dry sand molds over green sand molds.
- * Loam molds over dry sand molds.