SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENTSTUDIES

(Autonomous)

DEPARTMENT of MECHANICAL ENGINEERING

QUESTION BANK **MANUFACTURING TECHNOLOGY (18MEC)**

QUESTION BANK

Question No.	Questions	PO Attainment	Bloom's Taxonomy
	UNIT 1 –METAL CASTING		
	PART-A (Two Marks Questions)		
1	Define casting	PO1	BT1
2	Name the Materials used for making Patterns	PO1	BT1
3	What are the different types of pattern?	PO1	BT1
4	Define core.	PO1	BT1
5	What are the tools used in moulding process?	PO1	BT1
6	What are the various types of pattern allowance?	PO1	BT1
7	Name the different zones in Cupola furnace?	PO1	BT1
8	List any four casting defects.	PO1	BT1
9	List the properties of molding sand	PO1	BT1
10	What are the important methods of sand testing?	PO1	BT1
11	Define the term mould	PO1	BT1
12	Tell any two merits and demerits of investment casting process	PO1	BT1
13	What are the functions of riser?	PO1	BT1
14	What are core prints?	PO1	BT1
15	Which process is called "Lost wax process"?Why?	PO1	BT1
16	Explain any two merits and demerits of die casting	PO1,	BT2
17	What is meant by split pattern	PO1	BT1
18	Define Permeability.	PO1	BT1
19	Define greensand.	PO1	BT1
20	Define refractiveness.	PO1,	BT1
	PART –B		
1	Classify the types of patterns and sketch any three of them	PO1	BT2
2	Define Allowance and explain the types of pattern allowances.	PO1	BT1,BT2
3	Classify briefly the types of sand and properties of sand.	PO1	BT2
4	Explain the steps involved in sand casting.	PO1	BT2
5	Summarize the casting defects,causes and remedies.	PO1,	BT2
6	Explain the working principle of investment casting	PO1	BT2
7	Explain centrifugal casting with neat sketch.	PO1	BT2
8	Explain the design considerations in casting.	PO1,PO2,PO3	BT2
9	Illustrate pressure die casting process with neat sketch.	PO1,	BT2
10	Explain cold-chamber die casting process with a neat sketch	PO1	BT2

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Question No.	Questions	PO Attainment	Bloom's Taxonomy
	UNIT 2 –WELDING TECHNOLOGY		
	PART-A (Two Marks Questions)		
1	List out any four arc welding equipment.	PO1	BT1
2	What is the role of fluxes in welding? Or function of flux in welding?	PO1	BT1
3	Define Welding.	PO1	BT1
4	What are the different types of gas flames? How are they formed?	PO1	BT1
5	Define resistance welding	PO1	BT1
6	What is the principle of Thermit welding?	PO1	BT1
7	What is the principle of resistance welding?	PO1	BT1
8	Show the defects that are generally found in welding?	PO1	BT2
9	How slag inclusions in welding be avoided?	PO1	BT1
10	What are the diameters and length of electrodes available in the market?	PO1	BT1
11	What are the advantages of a.c. arc welding?	PO1	BT2
12	List any four applications of TIG Welding process.	PO1	BT2
13	List any two differences between TIG and MIG welding	PO1	BT1
14	What are the types of Electrode.	PO1	BT1
15	What is the chemical reaction occurs in thermit welding?	PO1	BT2
16	Compare soldering and brazing .	PO1	BT2
17	What are the advantages of submerged arc welding?	PO1	BT2
18	What is meant by friction welding?	PO1	BT1
19	What are the types of arc welding processes.	PO1	BT1
20	What types of welded joints	PO1	BT1
	PART-B (Ten Marks Questions)		
1	List a brief account of classification of welding processes?	PO1	BT1
2	Explain submerged are welding with neat sketch	PO1,	BT2
3	Demonstrate metal inert Gas arc welding process with a neat sketch.	PO1,	BT2
4	Explain TIG welding process variables and enumerate its advantages	PO1,	BT2
5	Illustrate oxy acetylene gas welding with neat sketch.	PO1	BT2
6	Explain Resistance welding with neat sketch	PO1	BT2
7	Summarize shielded metal arc welding process with suitable diagram. What are its applications?	PO1	BT2
8	Explain Thermitwelding and its limitations.	PO1	BT2
9	Compare and contrast the difference between welding, brazing and soldering process?	PO1	BT2
10	Explain any six Welding defects and briefly explain its causes and its remedies.	PO1	BT2

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Question No.	Questions	PO Attainment	Bloom's Taxonomy
	UNIT 3 –ROLLING,EXTRUSION AND DRAWING PROCESSES		
	PART-A (Two Marks Questions)		
1	What are the types of rolling mills?	PO1	BT1
2	What the types of extrusion	PO1	BT1
3	What are the four major draw backs of hot working?	PO1	BT2
4	List the defects in rolled parts.	PO1	BT2
5	What the limitations of hot working process	PO1	BT2
6	What do you understand by recrystallisation and recrystallisation temperature?	PO1	BT2
7	Tell the functions of Back-up rollers in rolling operation?	PO1	BT2
8	Define Extrusion	PO1	BT1
9	List out some common applications where extrusion is used	PO1	BT2
10	Define angle of bite in rolling	PO1	BT1
11	List out any four parts that can be manufactured by shape rolling operations	PO1	BT2
12	Define hot working of metals	PO1	BT1
13	Define cold working of metals	PO1	BT1
14	Name the different types of shape rolling operations.	PO1	BT1
15	Give some examples for mechanical working of metal?	PO1	BT2
16	What are the Methods used for producing seam less tube	PO1	BT1
17	What is impact extrusion ?	PO1	BT1
18	What is meant by deep Drawing.	PO1	BT1
19	What is wire drawing.	PO1	BT1
20	Why are a number of passes required to roll a steel bar?	PO1	BT2
	PART-B (Ten Marks Questions)		
1	compare hot and cold extrusion process and briefly explain one in each.	PO1	BT2
2	Explain the principle of rolling. Write the various kinds of rolling mills along withtheir applications	PO1	BT2
3	Explain the forward and back extrusion process	PO1,	BT2
4	Explain hot working and cold working processes.	PO1	BT2
5	(i) Explain in detail about wire drawing (ii) Explain with neat sketches the process of tube drawing of metals.	PO1	BT2
6	(i) Compare direct and indirect Extrusion process. (ii) Write short notes on impact extrusion and hydro static extrusion.	PO1	BT2
7	Explain the following(I)Coining (II)Shot peening	PO1	BT1
8	Explain in detail the various types of defects found in the rolled parts and ways to eliminate them.	PO1,	BT2
9	Describe and specify the merits and limitations of different kinds of rolledparts.	PO1	BT2
10	With neat diagram explain the process of forward extrusion and also explain how hollow sections can be produced in this process	PO1	BT2

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Question No.	Questions	PO Attainment	Bloom's Taxonomy
	UNIT 4 – FORGING AND SHEETMETAL PROCESSES		
	PART-A (Two Marks Questions)		
1	Listout the types of forging machines	PO1	BT1
2	Why is drop forging called so?	PO1	BT1
3	What do you understand by forging? What are the advantages?	PO1	BT2
4	List out the forging defects	PO1	BT2
5	Name any four limitations of hot forging	PO1	BT2
6	What is the principle of impact forging?	PO1	BT1
7	Discuss in brief open die and closed die forging	PO1	BT1
8	What is blanking?	PO1	BT1
9	What is punching operation?	PO1	BT1
10	What are the different types of metals used in sheet metal work?	PO1	BT1
11	Differentiate between stretch forming and bending.	PO1	BT1
12	Define forging.	PO1	BT1
13	Define fullering	PO1	BT1
14	List out test methods for testing formability of material	PO1	BT1
15	Distinguish between piercing and blanking	PO1	BT1
16	List the advantages of super plastic forming processes	PO1	BT1
17	Defines peen forming	PO1	BT1
18	Define micro forming.	PO1	BT1
19	Explain the limitations of Explosive forming.	PO1	BT2
20	List out the advantages of hydro forming process.	PO1	BT1
	PART-B (Ten Marks Questions)		
1	Classify the types of forging machines and explain any one	PO1	BT2
2	Summarize the sheet metal characteristics	PO1	BT2
3	Write short notes on the following a. Shearing b. Blanking c. clearance in shearing d. Spring back in bending	PO1	BT1
4	(i)Explain with a neat sketch hydro forming. (ii)Describe Rubber Pad Forming with suitable sketch	PO1	BT2
5	(i)Explain peen forming with sketch. (ii)Describe super plastic forming and Explain with neat sketch.	PO1	BT2
6	(i)Explain the steps involved in drop forging with neat sketches (ii)With suitable sketches describe open die forging.	PO1	BT2
7	(i)Explain various sheet metal drawing operations with sketches. (ii)Describe with a neat sketch any two type of stretch forming Operations.	PO1	BT2
8	(i)Explain Metal spinning operation with a diagram. (i)Summaries the advantages and application of metal spinning.	PO1	BT2
9	Explain in detail the Coining and Embossing Process.	PO1	BT1
10	Explain the different types of bending process.	PO1	BT2

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Question No.	Questions	PO Attainment	Bloom's Taxonomy
	UNIT 5 – POWDER METALLURGY AND MANUFACTURING OF PLASTIC COMPONENTS		
	PART-A (Two Marks Questions)		
1	Name the types of plastics.	PO1	BT1
2	Define polymerization.	PO1	BT1
3	Name the common Thermosetting plastics	PO1	BT1
4	Name two differences between thermoplastics and thermosetting plastics	PO1	BT1
5	Discuss a few application of plastics	PO1	BT2
6	List out the different type's compression moulds.	PO1	BT1
7	Point out some applications of transfer moulding.	PO1	BT1
8	Define Sintering	PO1	BT1
9	Define Infiltration	PO1	BT1
10	Mention various methods of metallic powder preparation process	PO1	BT1
11	Define blending	PO1	BT1
12	Define Compacting	PO1	BT1
13	Define Elastomers.	PO1	BT1
14	What Are The Advantages Of Plastics Over Metals?	PO1	BT2
15	Explain The Disadvantages Of Plastics?	PO1	BT2
16	Write the basic components of injection moulding system.	PO1	BT1
17	Define compression moulding.	PO1	BT1
18	What are the advantages of compression moulding?	PO1	BT2
19	Explain various plastics used for blow moulding.	PO1	BT1
20	Define thermoforming.	PO1	BT1
1	Enumerate various steps involved for making a product in powder metallurgy.	PO1,	BT2
2	Illustrate blow molding process with neat sketch.	PO1,	BT2
3	Enumerate the characteristics of metal powder and discuss the applications of powder metallurgy.	PO1	BT2
4	Explain briefly design considerations of powder metallurgy.	PO1,PO2,PO3	BT2,BT4
5	Describe sintering process in detail.	PO1	BT2
6	(i)Discuss in detail the various thermosetting and thermoplastic compound and their application. (ii)Describe any two types of thermoforming process.	PO1	BT2
7	(i)Compare blow moulding and rotational moulding. (ii)Explain the Process Rotational moulding.	PO1	BT2
8	(i)Explain transfer moulding. Discuss its advantages and limitations. (ii)Explain the process of compression moulding with neat diagram	PO1	BT2
9	(i)Explain the injection blow moulding process. (ii)Enumerate injection moulding of plastic	PO1,	BT2
10	Explain the various methods of Bonding of Thermoplastics.	PO1	BT2