



**SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES
(Autonomous)**

DEPARTMENT of MECHANICAL ENGINEERING

QUESTION BANK

18MEC313 MACHINE TOOLS TECHNOLOGY

QUESTION BANK

Question No.	Questions	PO Attainment	Bloom's Taxonomy
UNIT – 1: THEORY OF METAL CUTTING			
PART-B			
1	Draw a Merchant's circle diagram and derive expressions to show relationships among the different forces acting on the cutting tool?	PO1	BT2
2	Explain the geometry of a single point cutting tool?	PO1	BT1,BT2
3	Explain the mechanism of chip formation while machining?	PO1	BT2
4	Describe the factors affecting on tool life and write its effects?	PO1	BT2
5	Explain about the impact of tool on the surface finish of the work piece?	PO1	BT2
6	Explain about different types of chips formed while machining?	PO1	BT2
7	a) Explain the mechanics of orthogonal cutting ? b) How chip size vary from machining to non machining?	PO1	BT2
8	Explain the terms cutting speed, feed and depth of cut?	PO1	BT2
9	a) Explain different types of Cutting fluids? b) Explain about tool materials?	PO1	BT2
10	Give formula for cutting power in a metal cutting machine and explain about Material removal rate and Specific energy and its significance?	PO1	BT2



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Question No.	Questions	PO Attainment	Bloom's Taxonomy
UNIT-2: LATHES			
PART-B			
1	Explain the different parts of lathe with neat sketch?	PO1	BT1
2	Explain about different operations performed in lathe with neat sketches?	PO1	BT2
3	Explain about work holding devices and tool holding devices?	PO1	BT2
4	Explain any two types of lathe machines with neat sketch?	PO1	BT2
5	Explain about single spindle automatic lathe?	PO1	BT2
6	Explain about multi spindle automatic lathe?	PO1	BT2
7	Briefly explain about step turning, taper turning and thread cutting performed in lathe?	PO1	BT2
8	Explain the difference between single spindle and multi spindle lathe?	PO1	BT2
9	Explain the different parts of capstan lathe with neat sketch?	PO1	BT2
10	Explain the different parts of turret lathe with neat sketch?	PO1	BT2



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Question No.	Questions	PO Attainment	Bloom's Taxonomy
UNIT – 3: MILLING, SHAPER, SLOTTER, AND PLANNER MACHINES			
PART-B			
1	Explain the different parts of milling machine with neat sketch?	PO1	BT2
2	What are the different types of milling cutters, explain with neat sketch?	PO1	BT2
3	Explain the different parts of shaper machine with neat sketch?	PO1	BT2
4	Describe the operation of quick return motion in mechanical shaper?	PO1	BT2
5	Explain the different parts of slotting machine with neat sketch?	PO1	BT2
6	Briefly explain about different operations performed in a shaper with neat sketches?	PO1	BT2
7	What are the various types of milling cutters used in milling explain?	PO1	BT1
8	Explain up milling and down milling process with neat sketch?	PO1	BT2
9	Explain the different parts of planner machine with neat sketch?	PO1	BT2
10	Briefly explain about different operations performed in a slotter with neat sketches?	PO1	BT2



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Question No.	Questions	PO Attainment	Bloom's Taxonomy
UNIT – 4: DRILLING, BORING, JIGS AND FIXTURES			
PART-B			
1	a. Explain the types of drilling machine that are used in machine shop with neat sketch?	PO1	BT2
2	What are the different types of operations performed on drilling machines?	PO1	BT2
3	Explain about the principle and specifications of drilling machine?	PO1	BT1
4	Briefly explain about different tool holding devices in drilling?	PO1	BT2
5	Explain fine boring machine with help of neat sketch?	PO1	BT2
6	Explain deep hole drilling machine with help of neat sketch?	PO1	BT2
7	What is the work holding device of boring and drilling machine kinematic schemes of drilling and boring machines?	PO1	BT2
8	Explain fine boring machine with help of neat sketch?	PO1	BT2
9	What are the types of jigs and fixtures used in machining process?	PO1	BT1
10	What are the various work holding devices and clam pings used in jigs and fixtures?	PO1	BT2



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Question No.	Questions	PO Attainment	Bloom's Taxonomy
UNIT – 5: ABRASIVE PROCESSES AND BROACHING			
PART-B			
1	Explain about horizontal broaching machine with neat sketch?	PO1,	BT2
2	Explain briefly about lapping process with help of neat sketch?	PO1,	BT2
3	What do u mean by broaching explain principle related to broaching and types of broaching machines?	PO1	BT2
4	Explain briefly about honing process with help of neat sketch?	PO1	BT2,BT 4
5	How is grinding different from other machining operations explain its applications in view of capabilities?	PO1	BT2
6	Explain about cylindrical grinding machine with neat sketch?	PO1	BT2
7	Explain the different types of abrasives used in grinding wheel ?	PO1	BT2
8	Explain about surface grinding machine with neat sketch?	PO1	BT2
9	Mention various types of bonds used in making of grinding wheel also mention their application?	PO1,	BT2
10	Briefly explain about tool and cutter grinding machine with neat sketch?	PO1	BT2



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