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**312313 – Manufacturing Technology (Sem II)**

**As per MSBTE's K Scheme**

**ME / AE / MK / PG**

<b>Unit I</b>		<b>Fundamentals of Lathe and drilling machines</b>		<b>Marks - 16</b>	
<b>S. N.</b>	<b>MSBTE Board Asked Questions</b>	<b>Exam Year</b>	<b>Marks</b>		
1.	Designate a tool 8 - 10 - 6 - 6 - 5 - 10 - 0.8 signature in ASA system	W-23 W-19	2M		
2.	Explain mechanics of chip formation with neat sketch.	W-23 W-22 S-22 W-19	4M		
3.	Explain cutting parameters of Lathe machine with their SI units	W-23	4M		
4.	Draw neat sketch of radial drilling machine and label all parts following components: i) Column ii) Worktable iii) Radial arm iv) Drill head	W-23 S-23 W-22 S-19	4M		
5.	Write down the steps involved for internal thread cutting on lathe machine	W-23 W-19	4M		
6.	Explain various drilling machine operation with neat sketch. (atleast three)	W-23 S-22	6M		
7.	State any four operations performed on lathe machine	S-23	2M		

8.	Explain single point cutting tool signature	S-23 S-19	4M
9.	Explain two cutting parameters of drilling operations	S-23	2M
10.	Calculate the time required for one complete cut on a work piece of 60 mm diameter and 400 mm long. The cutting speed is 50 m/min and the feed 0.5 mm/rev.	S-23 W-22	4M
11.	Explain various types of chips observed in conventional machining process with neat sketch	S-23	6M
12.	State basic parts of center lathe	W-22	2M
13.	Define following terms with reference to a single point cutting tool: i) Back rake angle ii) Side rake angle iii) End relief angle iv) Side relief angle	W-22	4M
14.	Estimate the time to drill the hole for a length of 40 mm considering the approach and over travel of 2.6 mm each with a feed of 0.3 mm/rev. At what speed of 30 mm drill will run for cutting the steel at 30 m/min surface speed.	W-22	4M
15.	Enlist elements of tool signature of single point cutting tool.	S-22	2M
16.	State various types of chips. Explain any one with neat sketch	S-22 S-19	4M 2M
17.	Explain with neat sketch thread cutting operation on lathe machine.	S-22	4M
18.	Explain Taper turning operation on lathe machine with neat sketch.	S-22	6M
19.	Draw a neat sketch and explain the accessory used to support long work	W-19	4M
20.	Calculate the machining time for a steel drill 10 mm diameter to penetrate a 18 mm thick steel plate. Assume a feed of 0.2 mm/rev. and cutting speed for steel as 20 m/min	W-19	4M

21.	Write down the basic parts of a lathe machine with their proper functions	W-19	6M
22.	List types of chips produced in machining processes	S-19	2M
23.	List any four accessories used on Lathe.	S-19	2M
24.	Explain with neat sketch following drilling operations : (i) Reaming (ii) Boring (iii) Counter sinking	S-19	6M
25.	List the types of taper turning methods and explain any one with neat sketch	S-19	6M

**Thank You**

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