Q. P. Code: 22849

Duration: 3 hours

Max. Marks: 80

N.B. (1) Question No. **ONE** is compulsory.
(2) Attempt any **THREE** Questions from remaining **FIVE** questions.
(3) Support your answer with sketch wherever necesssary.
(4) All questions carry equal marks.

Q.1.		Explain in brief :-	20
	(a)	Classification of manufacturing processes and machine tools.	
	(b)	Nomenclature of single point cutting tool.	
	(c)	Deep hole drilling.	
	(d)	Gear finishing processes.	
Q2.	(a)	Explain with a neat sketch the gear hobbing process for spur and helical gear production.	10
	(b)	Explain trueing, dressing, shaping and balancing of grinding wheels.	10
Q3.	(a)	Describe how shapers are classified?	10
	(b)	Briefly, explain the process of thread rolling with its advantages, limitations and applications.	10
Q4.	(a)	Briefly describe various types of milling machines.	10
	(b)	Briefly explain different types of surface grinding machines.	10
Q5.	(a)	Define the term ‘cutting speed’ and ‘feed,’ as applied to milling operations. How do you calculate the cutting speed of a milling cutter? Also explain how to estimate the machining time required in milling operations.	10
	(b)	Explain various methods of turning a taper on a lathe.	10
Q6.	(a)	Enlist various advantages, limitations and applications of broaching.	10
	(b)	Describe various types of lathes.	10

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