

S.E. (Mechanical) (Semester - I)(2003 Course) Examination, 2010 MANUFACTURING PROCESSES-I

Time: 3 Hours Max. Marks: 100

		SECTION -1	
1.	a)	Define the term "Pattern" and "Casting". Why casting is preferred over the other method of manufacturing? State any one example of casting	
		component.	4
	b)	Explain briefly multipiece pattern with neat sketch.	4
	c)	Describe briefly principle of centrifugal casting with suitable block diagram.	4
	d)	Differentiate between thermoplastic and thermosetting plastic material. OR	4
2.	a)	What is core and core prints? Explain its use in moulding process with suitable	
		example.	4
	b)	Describe in brief, principle of continuous casting with neat sketch.	4
	c)	Explain following defects of casting.	4
		i) Mismatch ii) Hot tear	
	d)	Compare injection and compression plastic moulding methods.	4
3.	a)	Describe in brief working principle of wire drawing with simple block	
		diagram.	4
	b)	Explain with neat sketch, 3-high mill and 4-high mill of rolling process.	4
	c)	Write down advantages and limitations of mechanical and hydraulic	
		presses.	4
	d)	Describe principle of metal spinning sheet metal operation with neat sketch.	4
		OR Submission Of	-4
4.	a)	Compare forward and backward extrusion process with sketch.	4
	b)	What do you understand by term "forging"? How does hand forging differ	
		from machine forging?	4
	c)	Explain following sheet metal operations with diagram.	4
		i) Notching ii) Perforating	
	d)	Explain following categories of forging:	4
		i) Open die forging ii) Closed die forging	
		, -1	



5.	a)	Describe principle, working, and set up of ultrasonic welding with neat sketch.	10
	b)	Explain spot and seam type resistance welding with suitable set up diagram. OR	8
6.	a)	Describe principle, working and set up of laser beam welding with neat sketch.	10
	b)	Describe soldering and brazing processes.	8
		SECTION – II	
7.	a)	With the help of neat sketches, explain briefly the various tool elements and tool angles in case of a single point cutting tool.	8
	b)	Explain taper turning operation by swivelling the compound rest with neat sketch.	8
		What is core and core prims? Explain its use in moulding mocess with soil	
8.	a)	List various accessories used in lathe machine, also explain any two with suitable diagram.	8
	b)	Explain taper turning operation by setting over the tail stock centre with neat sketch.	8
9.	a)	Describe construction, working of horizontal and vertical milling machine with block diagram.	10
	b)	Explain briefly following milling operation with diagram i) Form milling OR	8
10.	a)	Describe construction and working of radial drilling machine with neat sketch.	10
	b)	Explain briefly following drilling operation with diagram i) Counterboring ii) Countersinking	8
11.	a)	Explain contruction and working of plain cylindrical grinder with suitable block diagram.	8
	b)	Describe "Honing" and "lapping" finishing process with example of it. OR	8
12.	a)	Explain internal and external type centreless grinder with neat sketch.	8
		Describe buffing and burnishing finishing process with example of each.	8