Total No. of Questions :6]	26	SEAT No.:
P17	TE/Insem./APR-20	[Total No. of Pages : 2
	T.E. (Mechanical)	

302051: MANUFACTURING PROCESS - II (2015 Pattern) (Semester - II)

Time: 1 Hour] [Max. Marks: 30

Instructions to the candidates:

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of electronic pocket calculator is allowed.
- 4) Assume Suitable data, if necessary.
- Q1) a) A 300 mm diameter bar is turned as 45 rev/min with depth of cut of 2mm and feed of 0.3 mm/rev The forces measured at the cutting tool point are -cutting force 1850 N and feed force = 450 N Calculate
 - i) Power consumption and
 - ii) Specific cutting energy

[6]

b) List types of chips and Explain the cutting conditions for chip type formation. [4]

OR

- Q2) a) The tool life of high speed steel (HSS) tool and carbide tool have the same tool life of 60 minutes at a cutting speed of 75 m/min. the exponent of tool life in Taylor's equation "n" is 0.15 for HSS, while it is 0.2 for carbide tool. Compare tool life for the two tools at a speed of 90 m/min.
 - [6]
 - b) With help of neat sketch, explain single point cutting tool geometry. [4]
- (23) a) Explain construction & working of radial drilling machine with block diagram. Show the different motion of drill head. [6]
 - b) A slot is to be milled by a side and face milling cutter with 10 teeth and of diameter 150 mm the cutting speed is 50m/min and feed is 0.25 mm/tooth. Determine the table fed in mm/min. [4]

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Q4)	a)	With neat sketch explain any three milling operations.								6]
	b)	dept	th, if t	_	ameter is 2 ç	. ()		st iron flange atting speed as	21.9 m/mi	
					Y X .					
Q5)	a)				apes of grine	ding whe	el sh	apes used with	its names	&
		appl	icatio	ons.	,0					6]
	b)	Differentiate between honing and lapping.								4]
				6	OF	2				
Q6)	A)	Evn	lain tl	ne meaning	of Grinding	wheel sid	matu	re with suitable	e evample I	61
<i>Q0)</i>)		WIICCI SIE	znatu	ic with surable		-
	B)	Ans	wert	he followii	ngs.				[4]
		i) Q	Whi	ch of the f	followings is	very har	d gra	ide?		
		J.	a)	T-Z,			b) >	L-O,		
	0	×)					O.	,		
			c)	G-K,		70	a)	A-E		
		ii)	The	se two are	known a nat	tural abra	asive	S.		
			a)	Granite		63/	b)	Magnetite		
			c)	Corundu	m S	2,	d)	Ferrite		3
		iii) is a type of artificial abrasive.								Ç, V
			a)	Sand stor	ne		b)	Emery	le k	<i>Y</i> -
			c)	Corundu	m		d)	Alumina oxid	le	
		iv)	Grir	nding is als	so known as	:		20, 3	2.	
			a)	Lapping			b)	Honning		
			c)	Abrasive	machining		d) .	Reaming		
					machining O O	\$		26		
					000)	10.			
						N.).V			