Code No: 115EE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, November - 2015
MACHINE TOOLS
(Common to ME, MCT, MSNT)

Time:	3 hours	Max, Marks: 75
3,9,401		
Note:	This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions consists of 5 Units. Answer any one full question from each unit. Each 10 marks and may have a, b, c as sub questions.	in Part A. Part B i question carries
(0.5) 4 44 2/5: 5:5	PART - A (25 Marks)	grand controlled and controlled
1.a)	Discuss the variables affecting tool life.	[2]
- b)	Explain requirement of tool materials?	[3]
်)	Discuss about attachment of lathe.	[2]
d)	What are the main parts capstan and turret lathes?	[3]
e)	List out the types of boring machine.	[2]
1)	List the advantages of shapers.	[3]
a)	Describe a 'milling cutter'.	[2]
h)	Define honing process. / / / /	[3]
i)	What is the difference between rough grinding and precision grinding?	[2]
j)	Define grinding operation.	[3]
2.a)	PART - B (50 Marks) Describe basic requirements of machining.	
2.a) b)	Explain the construction of merchant force diagram.	[5+5]
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3.a)	List out various tool materials and explain their applications.	
b)	Explain the use of chip breakers in metal cutting.	[5+5]
4.a)	Explain the principal features of automatic lathes.	
b)	Discuss about the thread turning attachment on lathe.	[5+5]
	Secretary for the first $oldsymbol{0}$, which is the secretary $oldsymbol{0}$.	
5.a)	Differentiate between single spindle and multi spindle automatic lathes	re en
b)	Discuss the working of various tool holding devices of lathe.	[5+5]
oʻrokoo-ne-ni⊊i ariti ali	i juliance in Juliana machine	
6.a)	Explain various operations performed in drilling machine. Sketch and explain the working of hydraulic drive of a horizontal shape	ar. [5+5]
b)	Sketch and explain the working of hydraune drive of a northeness shap. OR	**************************************
7.a)	What is the planner? Illustrate and describe its working principle.	
b)	Explain operation of vertical boring machine.	[5+5]
8.a)	Sketch and describe a vertical milling machine.	
b)	List the product applications of lapping process. OR	[5+5]
9.a)	With the help of a neat diagram, explain the honing process.	
b)	Explain the factors to be considered while selecting a milling cutter.	[5+5]

10.a) Sketch and explain the three methods of external cylindrical centre less grinding. b) Explain different types of abrasives used in grinding wheel. [5+5] OR Differentiate between traverse and plunge grinding. b) Explain with neat sketch [4+6]ii) Internal grinding i) Centre less grinding and the commence of the control of t ---00O00---. Program in the convergence of 20 A Charles of The English to Carli particular and Expenses has been been Contraction Calded Contraction (Calded Contraction Calded Contraction . Jelysiamiesky kytyspiejo TOU COURTS WITH THE REAL PROPERTY. kariosoona orasanaan ah madari 111 axo jour characach le <u>ir charac</u>har bailt A. I iden ni veripen orta (e deronio mandi). stitua bila mous pilmer mio : cub dibern birna esperal di diberni for s Abul in indical galdine der meteri in naphys/seriency) willing hours to bound any more more market namicilianos in presidentes de la companie de la c Serimana maren in a company and the company of the