ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END-SEMESTER EXAMINATION : MAY 2021** (Academic Session: 2020 – 21)		
Name of the Program:	B. Tech ME	**Semester:**	VI
Paper Title :	Machine Tools And Machining	**Paper Code:**	EME43104
Maximum Marks :	40	**Time duration:**	3 Hours
Total No of questions:	8	**Total No of Pages:**	01
Instruction to the Candidate:	**1.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **2.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **3.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

Answer all the Groups

Group A

Answer all the questions of the following $5 \times 1 = 5$

1. **a)** what is shear plane in orthogonal metal cutting
b) Represent hobbing operation in Generatrix and Directrix (G/D) method.
c) How many motions are provided to the tool and job together in gear shaping machine?
d) The cutting tool is reciprocated in shaping machine by which mechanism?
e) Which mechanism is used for changing feed in center lathe?

GROUP –B

Answer *any three* of the following $3 \times 5 = 15$

2. Differentiate between shaping, planning and slotting as regards to relative tool and work motion.
3. Discuss working principles of the cylindrical grinding process. In what way centreless process is more advantageous than cylindrical grinding process? 3+2
4. A grey cast iron shaft is machined in a center lathe in 1 min with a single cut. The shaft is 100 mm long and 75 mm in diameter. If the feed used is 0.30 mm/revolution, what was the cutting speed used? Assume over run = 2 mm.
5. If the point angle of a twist drill is unsymmetrical with the axis, then what type of a hole profile can be generated? Draw the picture of imagined profile. 3+2

GROUP –C

Answer *any two* of the following $2 \times 10 = 20$

6. Define cutting speed, feed and depth of cut as applied to drilling operations. What are the major factors on which these three factors depend? 5+5
7. Write various gear production methods. Explain any two of them with neat sketche. 4+6
8. What are Write a typical nomenclature of a single point cutting tool.

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