

School of Mechanical Engineering

Mechanical Engineering

ETE - Jun 2023

Time : 3 Hours

Marks : 100

Sem IV - G3UB401C - Manufacturing Processes II and Metrology

Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

1. Describe the different types of chips with neat sketches. K2 CO1 (5)
2. Compare traditional and non-traditional machining processes. K2 CO3 (5)
3. Enumerate the purpose of various attachments used on a centre lathe. K2 CO2 (5)
4. How drilling, boring and reaming is important in machining process. K3 CO2 (10)
5. Explain the different types of milling operations with neat sketches. K3 CO3 (10)
6. Explain the various forms of wear found in cutting tools with a neat sketch. K2 CO1 (10)
- 7) With neat sketch, explain working principle of shaper machine. K3 CO4 (10)

OR

- Explain the use of different bounding material while manufacturing of grinding wheel. K3 CO4 (10)
8. Describe the different parts of a coordinate measuring machine. What are the advantages of a coordinate measuring machine? K4 CO4 (15)
 9. During orthogonal turning of Mild Steel bar of 65 mm diameter on a lathe a feed of 0.8 mm was used. A continuous chip of 1.4 mm thickness was removed at a rotational speed of 85 rpm of work. Calculate the chip thickness ratio, chip reduction ratio and total length of the chip removed in one minute. K3 CO1 (15)
 - 10) Demonstrate the working principle of EDM along with construction details with the help of neat diagram. K4 CO5 (15)

OR

- With neat sketch explain the principle of ultrasonic machining with their process parameter. K4 CO5 (15)