

B.Tech. SEM -IV Production 2014 Course (CBCS) : SUMMER - 2019

SUBJECT: MACHINING TECHNOLOGY

Day: Saturday
Date: 25/05/2019

S-2019-2628

Time: 10.00 AM TO 01.00 PM
Max Marks.: 60

N.B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
 - 4) Assume suitable data if necessary.
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- Q.1** a) What are the types of metal cutting process? Explain metal cutting process. (05)
b) Describe speed, feed and depth of cut. (05)

OR

- Q.1** What are the basic objectives of metal cutting? Explain with suitable sketches orthogonal cutting and oblique cutting. (10)

- Q.2** A Carbide tipped tool of designation 0-15-5-5-8-90-1mm (ORS) is used to turn a steel workpiece of 50mm dia. With a cutting speed of 280 m/min. and feed of 0.25 mm/rev. The data obtained shows the cutting force = 200kg, feed force = 110 kg and chip thickness = 0.32mm. Calculate shear angle, shear force, normal force, friction force, coefficient of friction, Angle of friction and chip flow velocity. (10)

OR

- Q.2** Describe with suitable sketch tool geometry of single point cutting tool. Also explain tool signature. (10)

- Q.3** With aid of suitable sketches explain lathe operations in detail. (10)

OR

- Q.3** What is function of Automate lathe? How automate lathe differ from center lathe? Explain bar feeding mechanism of Automate lathe (10)

- Q.4** a) What do you understand by the terms Drilling, Reaming and Boring? (05)
b) How are the milling machines classified? (05)

OR

- Q.4** What is indexing? What are the different methods of indexing? Explain direct indexing and plain indexing in detail. (10)

- Q.5** a) Explain mounting of grinding wheel. (05)
b) Describe Electroplating with sketch. (05)

OR

- Q.5** a) Describe the Indian standards method of specifying a grinding wheel. (05)
b) How lapping is differ from honing process? (05)

- Q.6** How do you classify different types of Broaching machines? Explain continuous broaching machine in detail. (10)

OR

- Q.6** Describe classifications of NC system in detail. (10)

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