

**B.TECH. SEM -IV PRODUCTION 2014 COURSE (CBCS) :**  
**WINTER - 2017**  
**SUBJECT: MACHINING TECHNOLOGY**

Day: **Tuesday**  
Date: **21/11/2017**

Time: **02.30 PM TO 05.30 PM**  
Max. Marks 60

**W-2017-2099**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Neat diagram must be drawn **WHEREVER** necessary.

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- Q.1** a) Describe each type of chip with the help of suitable sketches. (06)  
b) Define:- i) Cutting speed ii) Feed iii) Depth of cut (04)

**OR**

- a) What is metal cutting principle? Discuss basic elements of machining? (06)
- b) Write a short note on mechanism of chip formation. (04)

- Q.2** Discuss tool failure and types of cutting fluids in details. (10)

**OR**

Draw neat sketch of Merchant's circle diagram and explain the different cutting forces acting on cutting tool. (10)

- Q.3** a) Different between capstan lathe, turret lathe. (04)  
b) Explain with neat sketch the following Accessories. (06)  
i) Mandrels ii) Rests iii) chucks

**OR**

Describe with suitable sketch different operations performed on center lathe machine. (10)

- Q.4** a) What do you understand by the terms drilling, reaming and boring? How do they differ from each other? (06)  
b) With the help of sketch, show the different angles of a drill and explain them in brief. (04)

**OR**

Draw neat sketch of different types of cutting and explain in details? (10)

- Q.5** Explain with suitable sketches cylindrical machine and centerless grinding machine. (10)

**OR**

Write a short notes on:- (10)  
i) Super finishing ii) Burnishing iii) Electroplating iv) Shot Peening

- Q.6** a) Describe 'Pull' and 'Push' broaching with the help of neat sketches. (06)  
b) What is Broaching? How different types of broaches are classified? (04)

**OR**

- a) Explain CNC controller with block diagram. (06)
- b) Explain open loop and closed loop control system used in NC machines. (04)

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