

Roll No

ME/IP-603**B.E. VI Semester**

Examination, June 2014

Metal Cuttings and CNC Machine*Time : Three Hours***rgpvonline.com****Maximum Marks : 70****Note:** Attempt any five questions. All questions carry equal marks.

1. a) Draw a neat sketch of a lathe machine. How conventional lathe machine is different from capstan and turret lathes? 7
b) State methods of thread production on lathe machine. Discuss any one in detail. 7
OR
2. a) Define "tool signature." Draw a neat sketch of single point cutting tool. 7
b) State various operations performed on lathe machine. Explain any four operations. 7
OR
3. a) Define grinding. How a grinding wheel is specified? State advantages of grinding. 7
b) Explain the working principle of centre-less grinding. 7
OR
4. a) Compare surface and cylindrical grinding. 7
b) Discuss in detail wheel Truing and dressing. 7

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5. a) Compare Drilling, Broaching and Milling processes with advantages and disadvantages. 7
b) Draw a neat sketch of "radial drilling machine" showing various components. State the functions of any three components. 7

OR

6. a) Classify milling machines. Draw a neat sketch of universal type milling machine. 7
b) State the principle of broaching. Classify various broaches. State its various parts. 7

OR

7. a) Discuss any five operations performed on shaper machine. 7
b) Briefly discuss on gear shaving and gear testing. 7
OR
8. a) State various gear cutting methods. Explain die casting method for gear cutting. 7
b) Explain with neat sketch quick return mechanism used in shaper machine. 7
9. a) What do you mean by mechatronics? Compare analog and digital controls. 7
b) State the functions of CNC. State its various types and applications. 7

OR

10. Write short note on following (Any two): 7 each
 - i) PLC and its applications
 - ii) Transducers
 - iii) Signal flow diagram