00821

B.Tech. MECHANICAL ENGINEERING (BTMEVI)

Term-End Examination

December, 2013

BIME-014 : PRODUCTION TECHNOLOGY - II

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any five** questions only. Assume suitable data if any missing. All questions carry **equal** marks.*

1. (a) How is power transmitted from the lathe spindle to (i) Feed shapt (ii) Lead screw ? List and describe commonly used attachements on lathe. 7

(b) What do you mean by continuous and discontinuous chips ? Under what conditions can you expect (i) Continuous chips (ii) Discontinuous chips ? 7

2. (a) Briefly explain the working principles of turret and capstan lathe. Also explain the difference between the above lathe machines. 7

(b) Describe the "Indian standards' method of specifying a grinding wheel. 7

3. (a) Sketch and describe the essential elements of a two lipped twist drill. How are drill signs designated ? 7

(b) What to you mean by boring and counter boring ? Why is it often necessary to bore a hole ? 7

4. (a) Describe the principle of operation of a shaper. Briefly explain the different types of shapers. 7

(b) How a contour shape work can be done on a planer ? How can a planer be economically used on many smaller and similar parts ? 7

5. (a) Describe the various types of cutters that are commonly used on milling machine. What machining operations can be done on milling machines ? 7

(b) What are the essential differences between a planer and a planer type milling machine ? Name various milling attachments. 7

6. (a) What is broaching ? What are its advantages ? What are the principal types of broaching machines ? 7

(b) What factors contribute to increased production rate for broaching ? How a broaching machine is specified ? 7

7. (a) What are the reasons for popularity of CNC controlled production machine tools ? 7

(b) Write and explain manual part programming. What are the design considerations of N.C machine tools ? 7

8. Write short notes on **any four** of the following : **4x3½=14**

(a) Universal chuck

(b) Advantages of up milling

(c) APT programming

(d) Slotted link quick return mechanism

(e) Milling attachments

(f) Centreless grinding machine