B.Tech. – VIEP – MECHANICAL ENGINEERING (BTMEVI)

00563   **Term-End Examination**

June, 2018

BIME-014 : PRODUCTION TECHNOLOGY – II

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **five** questions. All questions carry equal marks. Use of scientific calculator is permitted.*

1. (a) Explain briefly the parts of a lathe. How is the size of a lathe specified ?   7

   (b) List and describe the commonly used lathe attachments on lathe machines.   7

2. (a) Explain the difference between a push cut shaper and a pull cut shaper. With the help of a simple sketch, explain the quick return mechanism of a shaper.   7

   (b) Briefly explain the classification of shapers. With a simple sketch, explain the table feed mechanism of shaper.   7

3. (a) What are the salient differences between plain and universal milling machines ? Name the common work-holding devices used in milling machines. 7

   (b) Describe the three types of milling cutters according to the method of mounting the cutters. 7

4. (a) What are the principal types of broaching machines ? Why are robust fixtures required to support jobs to be broached ? 7

   (b) Describe the continuous type broaching machine. How is a broaching machine specified ? 7

5. (a) Describe the constructional features of a horizontal boring machine. 7

   (b) Describe the various types of abrasives. What are the differences between wheel dressing and wheel truing ? 7

6. (a) Sketch and explain three methods of cylindrical grinding. 7

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

7. (a) What is NC part programming ? Describe the sequence of using NC words in a part program. 7

(b) Briefly describe the various components of an NC machine. 7

8. Write short notes on any *four* of the following : $4 \times 3\frac{1}{2} = 14$

(a) Thread Cutting Operation

(b) Broaching Tools

(c) Universal Chuck

(d) Counter-boring

(e) APT Programming

(f) Selection of Grinding Wheel

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