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BIME-014

B. TECH. VIEP MECHANICAL ENGINEERING (BTMEVI)

Term-End Examination

June, 2019

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 the working principle of a lathe machine with a neat sketch. 10

   (b) Define the following terms : 4

   (i) Depth of cut

   (ii) Feed

   (iii) Speed

2. (a) How can shapers be classified ? Explain the table feed mechanism of shaper with a neat sketch. 7

(b) With the help of a neat sketch, show the different angles of a drill and explain them in brief. 7

3. (a) With the help of a neat sketch, discuss the working of a surface broaching machine. 7

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

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

(b) What are the various factors to be considered in selection of grinding wheel ? Discuss each in detail. 7

5. (a) Explain the working of external cylindrical grinding machine. 7

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

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

(b) Discuss the advantages of CNC machines over corresponding NC machines. 7

7. (a) What do you mean by APT programming ? Describe the main features of APT programming. 7

(b) List out the reasons for implementing CNC controlled production machine tools. Briefly explain. 7

8. Write short notes on any ***four*** of the following :

$3\frac{1}{2}$ each

(a) Universal chuck

(b) Taper turning

(c) Slotter machines

(d) Counter boring

(e) Gear hobbing

(f) Motion statements