No. of Printed Pages : 3

BME-008

B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING) / (BTMEVI)

Term-End Examination

00631 **December, 2019**

BME-008 : MACHINING TECHNOLOGY

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any* ***five*** *questions. All questions carry equal marks.*

1. (a) Explain the mechanics of chip formation. *4*

(b) Describe the sources of heat generation in metal cutting. *5*

(c) List and briefly explain the factors affecting tool life. *5*

2. (a) Define machinability. Explain the Taylor's tool life equation with suitable notations. *7*

(b) Enlist different advanced machining processes. Explain any one. *7*

3. (a) A grinding wheel carries the following masking : 39-C-120-K-4-V. What does this signify ? *4*

(b) Explain the bonding materials used in a grinding wheel. *5*

(c) What do you understand by dressing of a grinding wheel ? Also explain truing and balancing of a grinding wheel. *5*

4. (a) What are the factors responsible for producing better surface finish in lapping as compared to honing ? Explain in brief. *7*

(b) Define the term 'burr', and sketch it along with the finished surface of part. *7*

5. (a) Briefly explain the special features of creep-feed grinding. *7*

(b) What is centreless grinding ? Write some applications of centreless external grinding. *7*

6. (a) Explain the Electron Beam Machining (EBM) with the help of suitable schematic diagram. *7*

(b) Explain the mechanics of metal removal in EDM with the help of a neat sketch. *7*

7. Write short notes on any ***two*** of the following : *2×7=14*

(a) Ultrasonic Machining

(b) Abrasive Flow Machining

(c) Wire Electric Discharge Machining