

**B. Tech. 5th Semester (F) Scheme (ME)
Examination, December-2018**

MANUFACTURING TECHNOLOGY-II

Paper-ME-309-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Students are required to attempt any five questions. The students have to attempt first common question, which is compulsory and one question from each of the four sections.

- 1. (a) Built-up edges.
- (b) Principle of abrasive jet machining
- (c) Classification of NC system
- (d) Concept of group and family 5×4=20

Section-A

- 2. Explain Merchant cutting force circle and shear angle relationship in orthogonal cutting. 20
- 3. (a) Write about various types of tool wear. 10
- (b) Discuss effect of cutting fluid on tool life. 10

Section-B

- 4. Discuss the process of Ultrasonic machining. 20

- 5. (a) What factors influence the design of jigs and fixtures ? 10
- (b) Write about Location and Location devices. 10

Section-C

- 6. What are the different components of Direct Numerical Control (DNC) system ? Explain its principle functions also. 20
- 7. Write about :
 - (a) Two axes part programming for milling operations with examples. 10
 - (b) Manual Part Programming. 10

Section-D

- 8. Discuss about :
 - (a) Group Technology and its concept. 10
 - (b) Working of Group Technology and its advantages. 10
- 9. Explain classification and coding of parts group technology (GT) Layout. Also give some benefits of using GT principles in production plants. 20