Fourth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Manufacturing Process – II

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting*
at least TWO full questions from each part.

PART – A

1   a. Differentiate between orthogonal and oblique cutting with sketches. **(06 Marks)**
     b. With a neat sketch, give the nomenclature of single point cutting tool. **(07 Marks)**
     c. What are the factors that affect tool-life? Briefly describe their influences. **(07 Marks)**

2   a. Briefly explain the desirable properties and purposes of cutting fluids. **(07 Marks)**
     b. With a neat sketch, explain different heat affected zones during orthogonal cutting. **(07 Marks)**
     c. Discuss the salient features of the following cutting tool materials:
       i) CBN   ii) Ceramics. **(06 Marks)**

3   a. Differentiate between a capstan and a turret lathe. **(06 Marks)**
     b. With the help of neat sketch, explain Whitworth quick return mechanism of a shaper. **(08 Marks)**
     c. Give the comparision between shaper and planner. **(06 Marks)**

4   a. Explain with a neat sketch of radial drilling machine. **(08 Marks)**
     b. Sketch and explain the nomenclature of a twist drill. **(04 Marks)**
     c. Explain with a neat sketch of basic components of CNC. **(08 Marks)**

PART – B

5   a. What is indexing? Name different methods of indexing. Briefly explain compound indexing. **(10 Marks)**
     b. Explain the following:
       i)   Upmilling and down milling
       ii)   Face milling and end milling. **(10 Marks)**

6   a. Explain with a neat sketch the principle of working of a centre type cylindrical grinding machine. **(08 Marks)**
     b. Explain the following grinding wheel parameters: i) Grit ii) Grade iii) Structure. **(06 Marks)**
     c. Explain the factors to be considered for selection of grinding wheels. **(06 Marks)**

7   a. Explain briefly the honing process with a neat sketch. State its advantages and disadvantages. **(10 Marks)**
     b. With a neat sketch, explain the lapping process. State its advantages and disadvantages. **(10 Marks)**

8   a. Explain AJM with a neat sketch. **(10 Marks)**
     b. List out limitations and applications:
       i)   Laser beam machine
       ii)   Plasma arc machine. **(10 Marks)**

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