

Total No. of Printed Pages:2

**SUBJECT CODE NO:- H-1052**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**S.Y.B.Tech. (Mech) CBC & Grading System (Sem-IV)**  
**Manufacturing Process – II**  
**(Revised)**

**[Time: Three Hours]****[Max.Marks:80]**

N.B

Please check whether you have got the right question paper.

- 1) Question Q. No.01 from section A and Q. No.6 section B is compulsory
- 2) Attempt any two questions from remaining questions of each section.
- 3) Figure to the right indicates full marks.

## Section A

- |     |   |              |
|-----|---|--------------|
| Q.1 | Solve any Five question from the following  | 10           |
|     | <ol style="list-style-type: none"> <li>1) Classify machine tool?</li> <li>2) Compare advantages and disadvantages of flat and V-guideways?</li> <li>3) Define the term Conicity”?</li> <li>4) What is swing diameter?</li> <li>5) Write down any four operations performed by a drilling machine?</li> <li>6) What is meant by “Sensitive hand feed”?</li> </ol>  |              |
| Q.2 | <ol style="list-style-type: none"> <li>1) Explain the Mechanism of chip formation and state the factor affecting the types of chip produced?</li> <li>2) Explain the tooling layout to produce a Hexagonal bolt in a turret lathe?</li> </ol>   | <br>08<br>07 |
| Q.3 | <ol style="list-style-type: none"> <li>1) Explain the Working principle of a Jig boring machine with a neat sketch?</li> <li>2) Explain the twist drill nomenclature and define various elements of twist drill?</li> </ol>   | <br>08<br>07 |
| Q.4 | <ol style="list-style-type: none"> <li>1) The following equation for tool life is given for a turning operation <math>VT^{0.13} f^{0.77} d^{0.37} = C</math>, A 70 minute tool life was obtained while cutting as <math>V=30\text{m/min}</math>, <math>f=0.3\text{mm/rev}</math> &amp; <math>d=2.5\text{ mm}</math>. Determine the change in tool life if the cutting Speed, feed and depth of cut are increased by 30% individually and taken together?</li> <li>2) With a neat sketch, Explain the construction, working and application of capstan lathe?</li> </ol> | <br>08<br>07 |
| Q.5 | Write short note on   | 15           |
|     | <ol style="list-style-type: none"> <li>1) Power and Energy Relationships in Machining?</li> <li>2) Cutting parameters in Turning?</li> <li>3) Machining time calculation in Drilling?</li> </ol>  |              |

## SECTION B

- Q.6 Solve any Five question from the following 10
- 1) Define "Face milling?
  - 2) What is meant by dressing and truing
  - 3) Define the terms abrasive grains
  - 4) How non-traditional machining processes are classified?
  - 5) Enlist the requirement that demands the use of advanced machining process.
  - 6) What is meant by indexing?
- Q.7 1. Explain the operations of horizontal broaching machine with neat sketch? 08  
2. Explain Surface Grinding with neat Sketch? 07
- Q.8 1. Explain Compound indexing and Write down the rule for Compound indexing with example? 08  
2. Explain the principle of LBM with neat sketch? 07
- Q.9 1. Explain simple indexing in detail and Write down the rule for simple indexing? 08  
2. Explain the principle of quick return motion mechanism of a shaper. What is need of this mechanism? 07
- Q.10 Write short note 15
- 1) Universal planer
  - 2) Specifications of Grinding Machines
  - 3) Benefits of Non-Conventional Machining Processes.