

**B.TECH SEM – IV (2007 COURSE) (PRODUCTION ENGG.) :**  
**SUMMER - 2018**  
**SUBJECT: MANUFACTURING PROCESSES - II**

Day : **Tuesday**  
Date : **05/06/2018**

**S-2018-2635**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : 80

**N.B.:**

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** questions from Section – I and Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data, if necessary.

**SECTION - I**

- Q. 1**
- a) What are various job holding devices used on lathe machine. (05)
  - b) Sketch and explain different parts of Radial drilling machine. (05)
  - c) Explain glazing and loaded of grinding wheels? Explain the remedies to deal with glazed and loaded grinding wheel. (04)
- Q. 2**
- a) A job of 70 mm diameter is to be reduced to 40 mm. feed rate is 0.2 mm/rev. Rotational speed is 500 rpm. Find out the machining time for this reduction if depth of cut is 2mm. Length of job to be turned is 120 mm. (07)
  - b) Sketch and explain method of taper turning using taper turning attachment. State its merits. (06)
- Q. 3**
- a) Sketch dividing head attachment and calculate indexing for 77 divisions using compound indexing. Available plates are : (07)
    - i) 15, 16, 17, 18, 19, 20
    - ii) 21, 23, 27, 29, 31, 33
    - iii) 37, 39, 41, 43, 47, 49
  - b) Write differentiate between Profile Milling and Face Milling (06)
- Q. 4**
- a) Classify grinding machines. Explain with sketch the principle of internal centre-less grinding. (07)
  - b) Sketch and explain: (06)
    - i) Honing
    - ii) Lapping

**P. T. O.**

**SECTION - II**

- Q. 5** a) What are different methods of gear manufacturing? Give a brief account of any two. (05)
- b) What is NC and CNC machine tool system? What are main elements? (05)
- c) Sketch and explain electrochemical machining processes. (04)
- Q. 6** a) Classify thread manufacturing process. Explain internal thread manufacturing methods. (07)
- b) With neat sketch, explain gear shaving process. (06)
- Q. 7** a) Explain how broaches are classified? Discuss in detail vertical broaching machine (07)
- b) What is M & G code in CNC programming? Explain it with suitable example. (06)
- Q. 8** a) With the help of neat labeled diagram, explain the process of Abrasive Jet Machining (AJM). (07)
- b) Compare Ion Beam Machining (IBM) with Laser Beam Machining (LBM). (06)

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