

B.TECH SEM – IV (2007 COURSE) (PRODUCTION ENGG.) :

WINTER - 2017

SUBJECT: MANUFACTURING PROCESSES-II

Day : **Tuesday**
Date : **21/11/2017**

Time : **02.30 PM TO 05.30 PM**
Max. Marks : **80.**

W-2017-2430

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt **TWO** questions from Section
 - 2) Both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the **RIGHT** indicate full marks.
 - 4) Draw neat labeled diagrams **WHEREVER** necessary.
 - 5) Assume suitable data if necessary
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SECTION-I

- Q.1**
- a) Explain with neat sketch geometry of single point cutting tool.
 - b) Describe with sketch any two operations perform on milling machine
 - c) Explain principle of centreless grinding machine. State it merits and demerits over other types of grinding machines.
- Q.2**
- a) What is a lathe carriage? Explain its various parts with the help of neat sketch
 - b) Explain with sketch thread cutting operation performed on lathe machine
- Q.3**
- a) Calculate compound indexing for 87 divisions. the hole circles available are
Plate I: 15,16,17,18,19,20
Plate II: 21,23,27,29,31,33
Plate III: 37,39,41,43,47,49
 - b) Draw block diagram of multispindle drilling machine and state how it differs from gang drilling machine.
- Q.4**
- a) With the aid of neat sketch explain construction and working of tool and cutter grinder and state its applications.
 - b) Explain with neat sketch Mounting of grinding wheel.

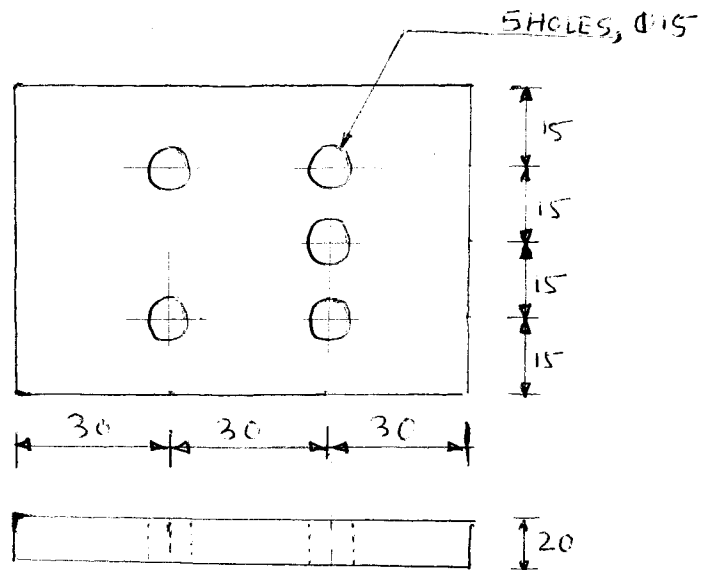
SECTION -II

- Q.5**
- a) Compare “Gear hobbing and Gear shaping process”.
 - b) Describe the basic mechanism of spark erosion (Electric Discharge Machining)
 - c) What is the role of miscellaneous and preparatory functions in a CNC program?
- Q.6**
- a) Discuss the action of gear shaping cutters; describe the kinematics of gear shaper.

b) Explain with neat sketch Thread rolling process. State its merits and demerits.

Q.7 a) Classify broaching machines, Explain continues type of broaching machine

b) Prepare CNC program for drilling holes on the component as shown



Q.8 a) Describe the principle and applications of plasma arc machining/cutting

b) How does on Ultrasonic drilling machine remove material? Describe the applications of USM.

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