

**B.TECH SEM – VIII (2007 COURSE) (PRODUCTION ENGG.)**

**: WINTER - 2017**

**SUBJECT : PROCESS PLANNING & TOOL SELECTION**

Day : Tuesday  
Date : 21/11/2017

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

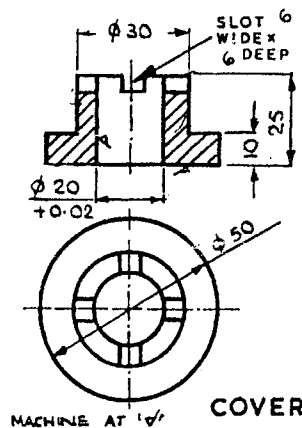
**W-2017-2696**

**N.B.:**

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

**SECTION – I**

- Q.1** Prepare a detailed process plan for the component shown in figure 1. Process plan should consist of process sheet, operation description sheets and process pictures. [14]



- Q.2** a) Explain the importance of communication in the process and product engineering department. [07]
- b) Discuss the effect of originating operation on the process planning with suitable examples. [06]
- Q.3** a) Explain why it is necessary to balance a tolerance chart. Where is the most logical place to start when balancing the chart? [06]
- b) Explain with neat sketches the following geometry of forms: [07]
- i) Straightness
  - ii) Squareness
  - iii) Parallelism
  - iv) Angularity
- Q.4** a) Define mechanical control. When good mechanical control is said to exist and how is it obtained? [07]
- b) Explain the following in detail: [06]
- i) Principal process operations
  - ii) Major operations
  - iii) Auxiliary process operations

**P.T.O.**

## SECTION – II

- Q.5** a) Discuss the economic factors concerning the use of available equipment as against new equipment. [06]
- b) State the advantages of using commercial or purchased toolings. [04]
- c) List the types of toolings which may be used for operation on the work piece. [04]
- Q.6** a) What are the sources of information usually available to the engineers to assist him in making machine selection? [06]
- b) Compare the general purpose machines and special purpose machines. [07]
- Q.7** a) Explain the conventional steps in computers aided process planning. [07]
- b) Discuss the influence of process engineering on product design. [06]
- Q.8** a) Discuss the various factors affecting operation sequence. [07]
- b) What information does the process picture provide? List some of the possible uses of the process picture. [06]

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