

Name:

E.No.:

Gp No:

MEP201 Machine Drawing

Major – December 2, 2006

MAX MARKS: 180

MAX TIME: 3Hours

Important Notes:

1. Section A is a closed book test and you are supposed to solve everything on the question paper at the designated locations. The time given for this section is **1 hour**, after which you are supposed to submit the section back.
2. For section B, you are allowed to refer to the ND Bhatt's Machine drawing book, the BIS standard and schematic symbol sheets. However there should be no notes on either of the two. **CLASS NOTES & OTHER MATERIAL ARE STRICTLY PROHIBITED.** Each question of Section B is to be attempted on a separate sheet
3. **ENTER THE NAME / E.No. / Gp. No ON EVERY SHEET OF THE QUESTION PAPER IMMEDIATELY ON READING THIS.**
4. **YOU MUST SIT & DRAW. DO NOT STAND DURING THE EXAM.**
5. **In all questions show calculations wherever needed.**

SECTION A (CLOSED BOOK)

**Q. 1 Answer the following questions ONLY in the space provided below every question.
(3x10=30 marks)**

1. What are studs used for in machine members? How do they differ in application from the bolts?
2. What is the purpose of using washers?
3. List key advantages and disadvantages of bush bearing.
4. In a rolling element bearing, what kind of fit is provided for inner race and outer race relative to their respective mating members?

Name:

E.No.:

Gp No:

5. What is the advantage of conical roller bearing over cylindrical roller bearing?

6. The sole of sliding bearing (such as foot step or split bearing) is generally recessed (base with an open space on underside). Why is that done?

7. Why is knurling done on some machine elements?

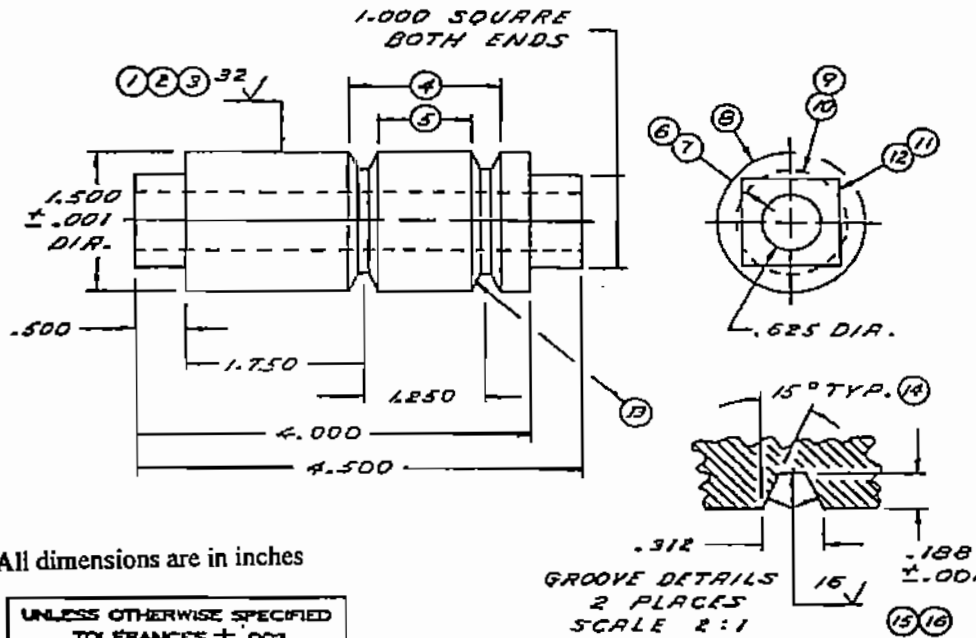
8. Where are wing nuts mostly used?

9. Bevel gears are used in differential mechanism in automobiles to transmit power between two shafts at 90° . How you will show the gear pair in top and front view?

10. A threaded portion in the drawing is represented by $\frac{1}{4}\text{-}20\text{ UNF}\text{-}2\text{B}$. Elaborate all the details of the thread. What does *UN* stand for?

Q. 3. WorkSheet 1: Attempt the following worksheet

(2x16=32 marks).



All dimensions are in inches

UNLESS OTHERWISE SPECIFIED
 TOLERANCES ± .003
 ANGLES ± 1°
 ALL CORNERS .020 R.
 SURFACE TEXTURE 125

MATERIAL	303 STAINLESS STEEL	NAME	STEM
FINISH	NONE	NO.	1-7-1

Add the Correct Answer
 Answer

Calculations

1. _____ Symbol for
2. _____ 32 indicates
3. _____ Is 32 a max. or min. figure?
4. _____ Dimension _____
5. _____ Dimension _____
6. _____ Maximum dimension _____
7. _____ Minimum dimension _____
8. _____ Microinches
9. _____ Microinches
10. _____ Is 16 smoother than 32?
11. _____ Microinches
12. _____ Is 125 smoother than 32?
13. _____ Microinches
14. _____ Typ. of an abbreviation for
15. _____ Type of section view
16. _____ Scale of section view

Name:

E.No.:

Gp No:

Q. 2. A piping in isometric is shown below. Draw its top and front view **just below the figure on this sheet (Direction of viewing is shown)**. The figure is not to scale and the numbers indicate the actual length of the pipe sections. Dimensions are in meters. The views should be *approximately* to scale (use 3rd angle method of projection) **(8 Marks)**

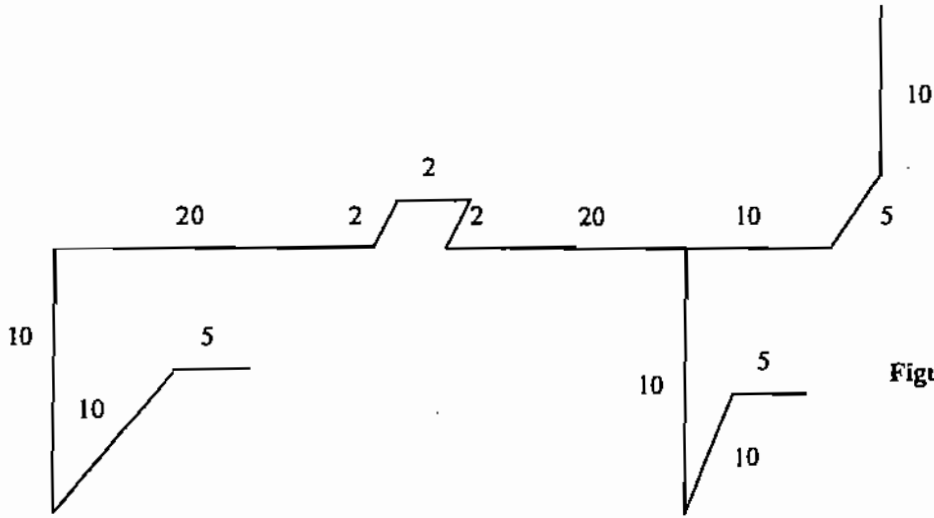


Figure Q.2

