

**B.Tech. – VIEP – MECHANICAL ENGINEERING
(BTMEVI)**

00641

**Term-End Examination
June, 2016**

BIME-003 : MACHINE DRAWING

Time : 3 hours

Maximum Marks : 70

*Note : Question no. 7 is compulsory. Attempt any three questions from the remaining.
Use of calculator is permitted.*

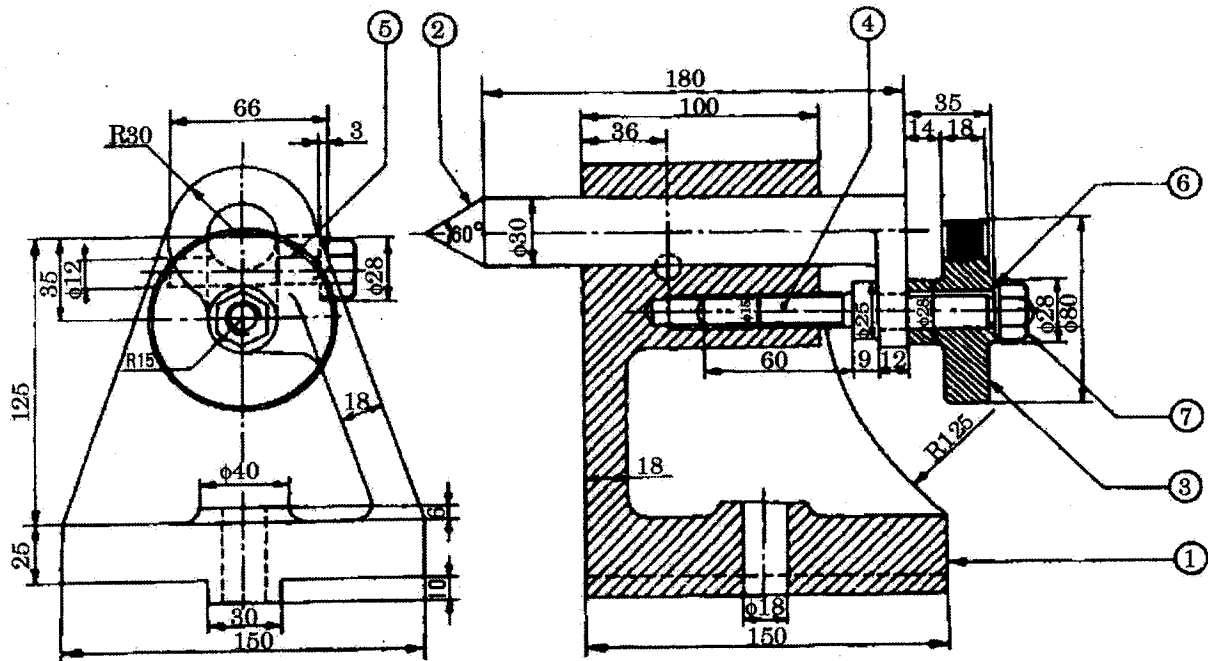
1. Define the following types of drawings and give the applications of each : 14
 - (a) Machine Drawing
 - (b) Production Drawing
 - (c) Part Drawing
 - (d) Assembly Drawing
 - (e) Detailed Assembly Drawing
 - (f) Installation Assembly Drawing
 - (g) Drawing for Instruction Manual

2. Sketch how the following materials are represented conventionally : 14
 - (a) Steels
 - (b) Lead
 - (c) Glass
 - (d) Wood
 - (e) Marble
 - (f) Concrete
 - (g) Rubber

3. (a) Differentiate between the following : 5
- (i) Bolt and Screw
 - (ii) Machine Screw and Set Screw
- (b) Sketch the following thread profiles for a nominal diameter of 25 mm and pitch 3 mm and give their applications : 9
- (i) BSW thread
 - (ii) Buttress thread
 - (iii) Acme thread
4. (a) Where and why are the following keys used ? 4
- (i) Woodruff key
 - (ii) Feather key
- (b) Draw the half-sectional view from the front, and view from the side of a cotter joint with sleeve used to connect two rods of 50 mm diameter each. 10
5. (a) Define the following (in respect of riveted joint) : 2
- (i) Diagonal pitch
 - (ii) Margin
- (b) Differentiate between chain riveting and zig-zag riveting. 3
- (c) Draw the sectional view from the front and view from the top of the following riveted joints, to join plates of thickness 10 mm : 9
- (i) Double riveted chain lap joint
 - (ii) Double riveted zig-zag lap joint
6. (a) A pentagon is to be drawn using AutoCAD with one of its sides vertical. If the length of the side is 10 mm, write down the commands to complete the task. 7
- (b) Draw the conventional representation of Bevel gear. 7

7. Details of a tailstock are given in the figure below. Draw the front view full in section for the assembly.

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Parts list

Part No.	Name	Material	Qty.
1	Body	CI	1
2	Centre	Case hardened alloy steel	1
3	Hand wheel	Cast steel	1
4	Screw	MS	1
5	Screw	MS	1
6	Washer	MS	1
7	Nut	MS	1