

**SUBJECT CODE NO: E-226**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**S.E.(Mechanical) (CGPA) Examination Nov/Dec 2017**  
**Machine Drawing**  
**(REVISED)**

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i. Q.1 and Q.4 are compulsory.
  - ii. Assume suitable data if necessary.
  - iii. All dimensions are in mm

**Section A**

- Q.1 A cone 70 mm base diameter and 90mm axis is completely penetrated by a square prism from top with its axis parallel to cone axis and 5 mm away from it. A vertical plane containing both axes in parallel to V.P. take all faces of 89. Prism equally inclined to V.P. Base side of prism is 30mm and axis is 100mm long. Draw projections showing curves of intersection. 14
- Q.2 Draw the semicircle of 100mm dia and inscribe in it a largest circle of the semicircle in development of a 13 cone and inscribed circle is some curve on it, then draw the projection of cone showing that curve. 13

OR

Elevation of the three-pieces 'A', 'B' & 'C' cylindrical elbow pipe is given in fig 1 draw the development of all pieces. 13

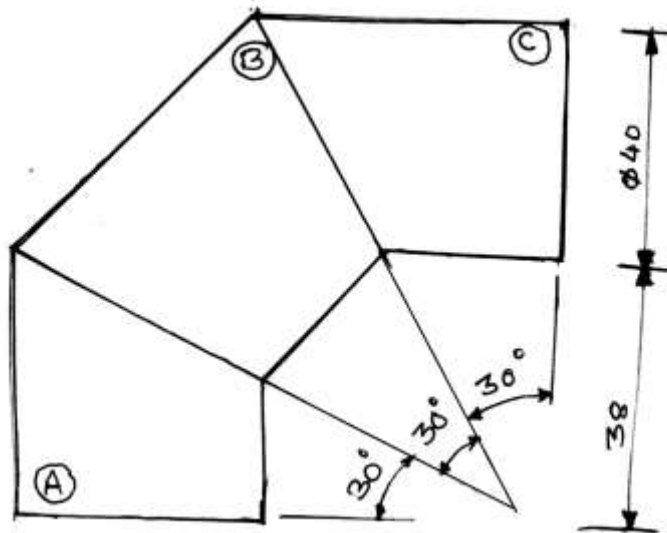


Fig.1

Q.3 Fig 2 shows front view, incomplete top view and auxiliary view of an object. Redraw the front view and complete the top view. 13

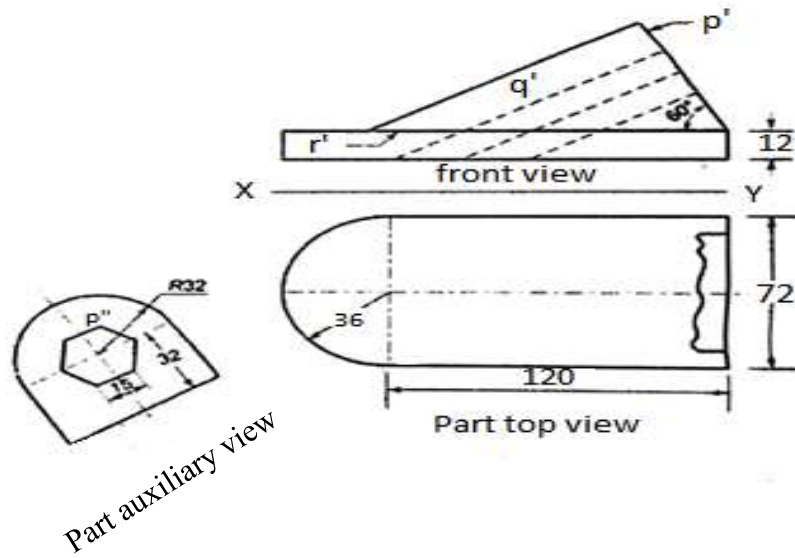
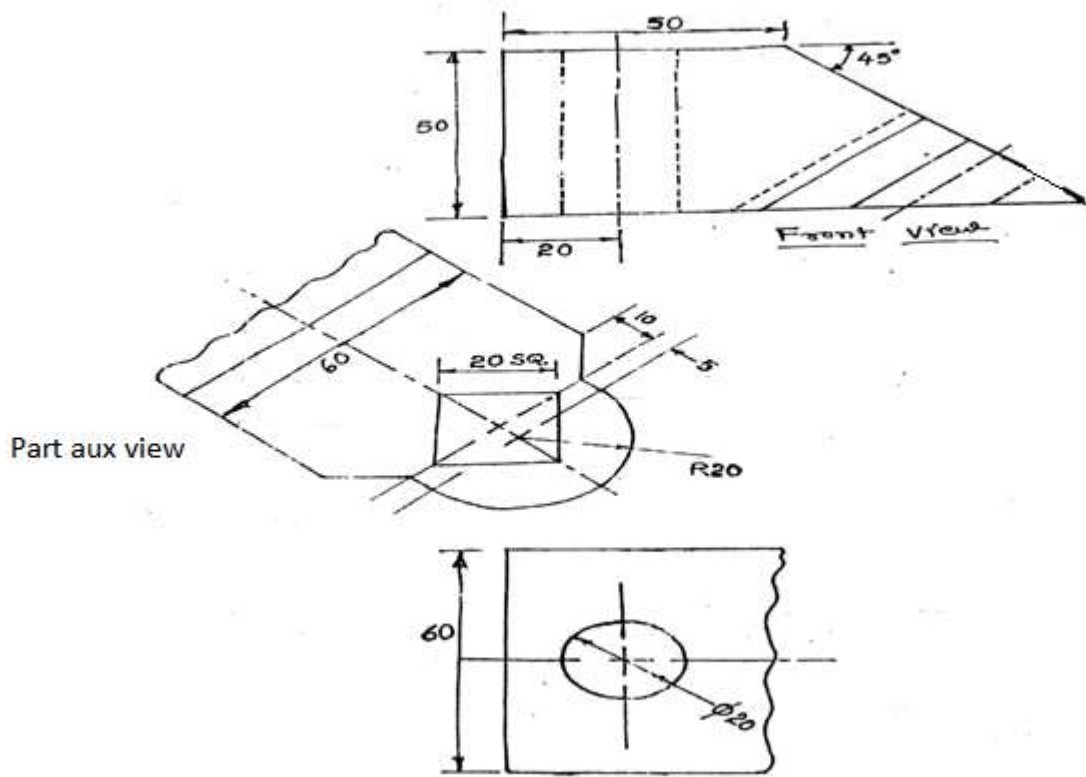


Fig.2

**OR**

Fig.3 shows front view, in complete top view and auxiliary view of an object. Redraw the front view and complete the top view. 13



Incomplete top view

Fig.3

**Section B**

Q.4 Solve any five question from the following :

- a) Draw the material conversions of :
  - i) Rubber
  - ii) Wood
  - iii) Copper and its alloys
- b) Eye foundation bolt
- c) Socket and spigot pipe joint
- d) Single riveted double strap butt joint
- e) Give the symbols of following welded joints
  - i) Square butt joint
  - ii) Spot welding
  - iii) Fillet joint
- f) Give surface roughness values and symbol for:
  - i) N3
  - ii) N7
  - iii) N11

Q.5 Figure 4 shows details of the screw jack. Assemble all the parts, tabulate the bill of material and draw: 25

- Sectional front view
- Top view

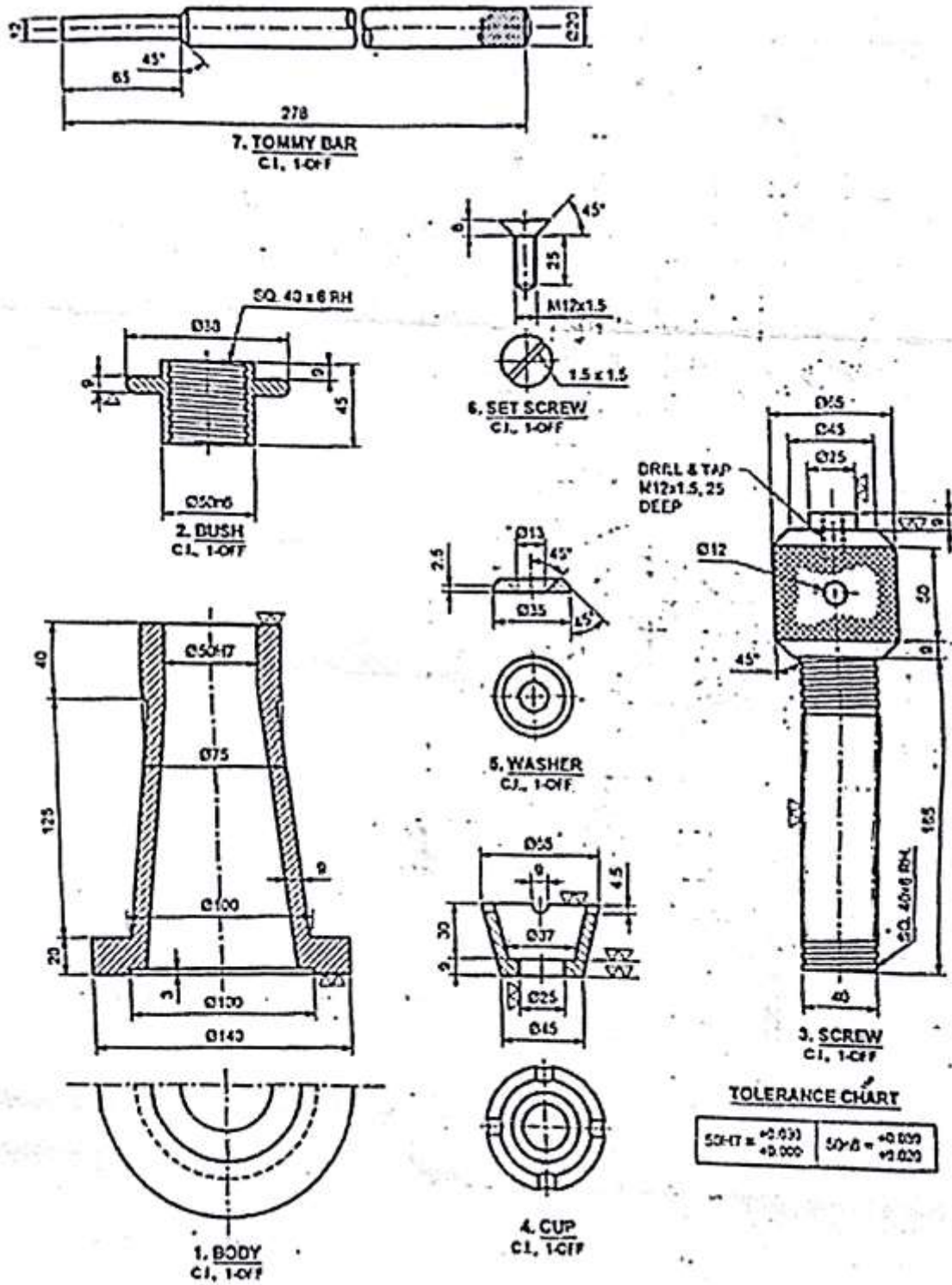


Fig.4

OR

Figure 5 shows assembly of petrol engine piston and connecting rod along with part list. Draw the details 25 in front view and side view.

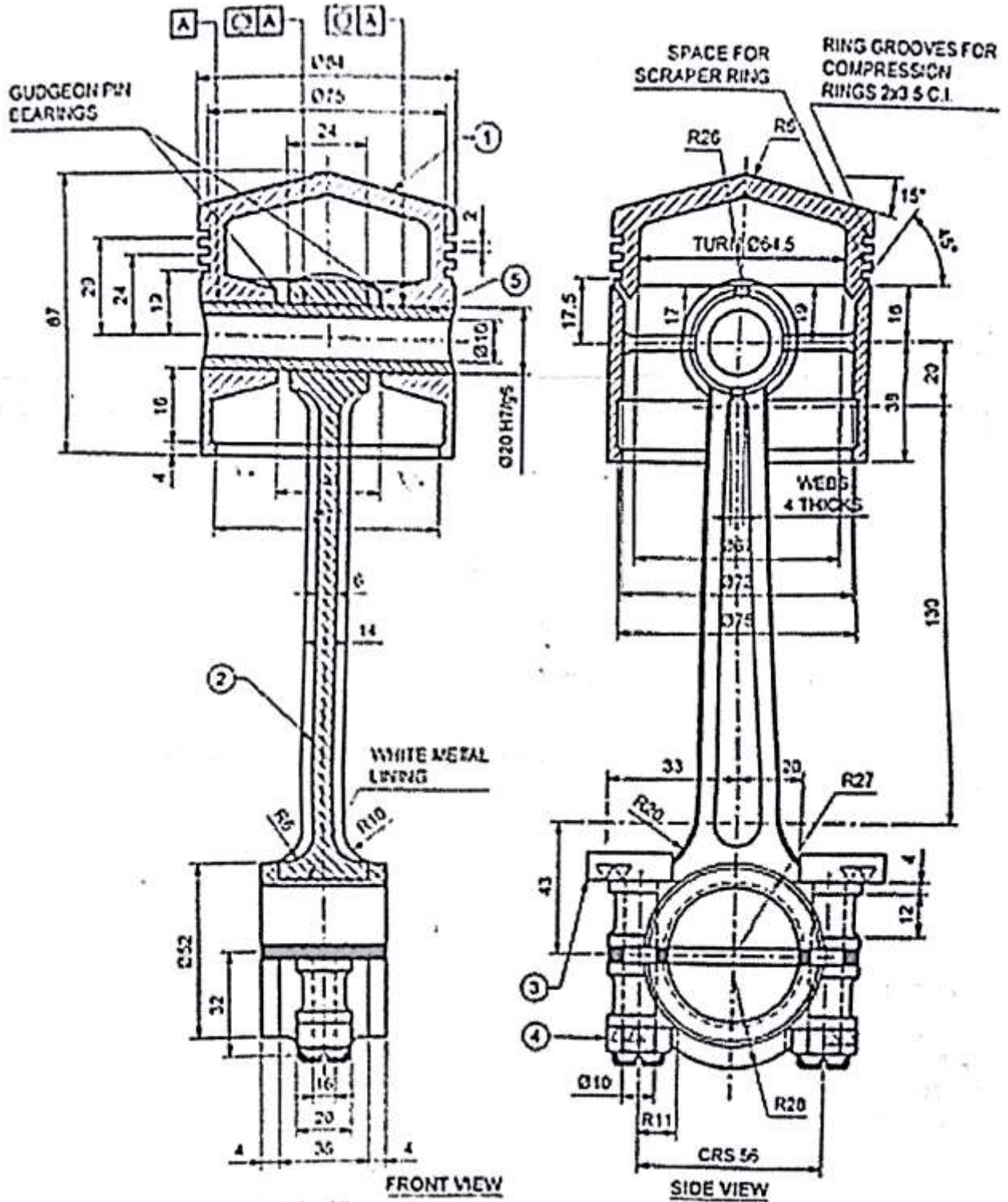


Fig.5

**PART LIST**

<b>PART NO.</b>	<b>PART NAME</b>	<b>MATL</b>	<b>QTY.</b>
1	PISTON	ALLOYALLOY	1
2	CONNECTING ROD	ALLOY STEEL	1
3	BIG-END BOLT	M.S.	2
4	CASTLE NUT	M.S.	2
5	GUDGEON PIN	HARDENED STEEL	1

**FIT CHART**

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