Code: 13A03303

**R13**

B.Tech II Year I Semester (R13) Regular & Supplementary Examinations December 2015
## MACHINE DRAWING
(Mechanical Engineering)

Time: 4 hours                                                                 Max. Marks: 70

All answers should be on the drawing sheet only
Answers on the drawing sheet only will be valued
First angle projections to be adopted
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### Section – I
Answer any two of the following ( 2 × 4 = 08 Marks)

1      Draw any four types of lines and mention their names and applications

2      Sketch the convetional representation of the following materials:
   (a)   Aluminium.
   (b)   Zinc.
   (c)   Glass.
   (d)   Porcelain.

3      Draw the convetional representation of the following:
   (a)   Straight knurling.
   (b)   Cylindrical tension spring.

### Section – II
Answer any two of the following ( 2 × 10 = 20 Marks)

4      Draw at least four types of thread profiles taking pitch as 20 mm.

5      Draw the sectional front and top views of a double riveted double strap chain butt joint for plates of 12 mm thickness.

6      Draw half sectional front view and top view of a 25 mm bushed bearing.
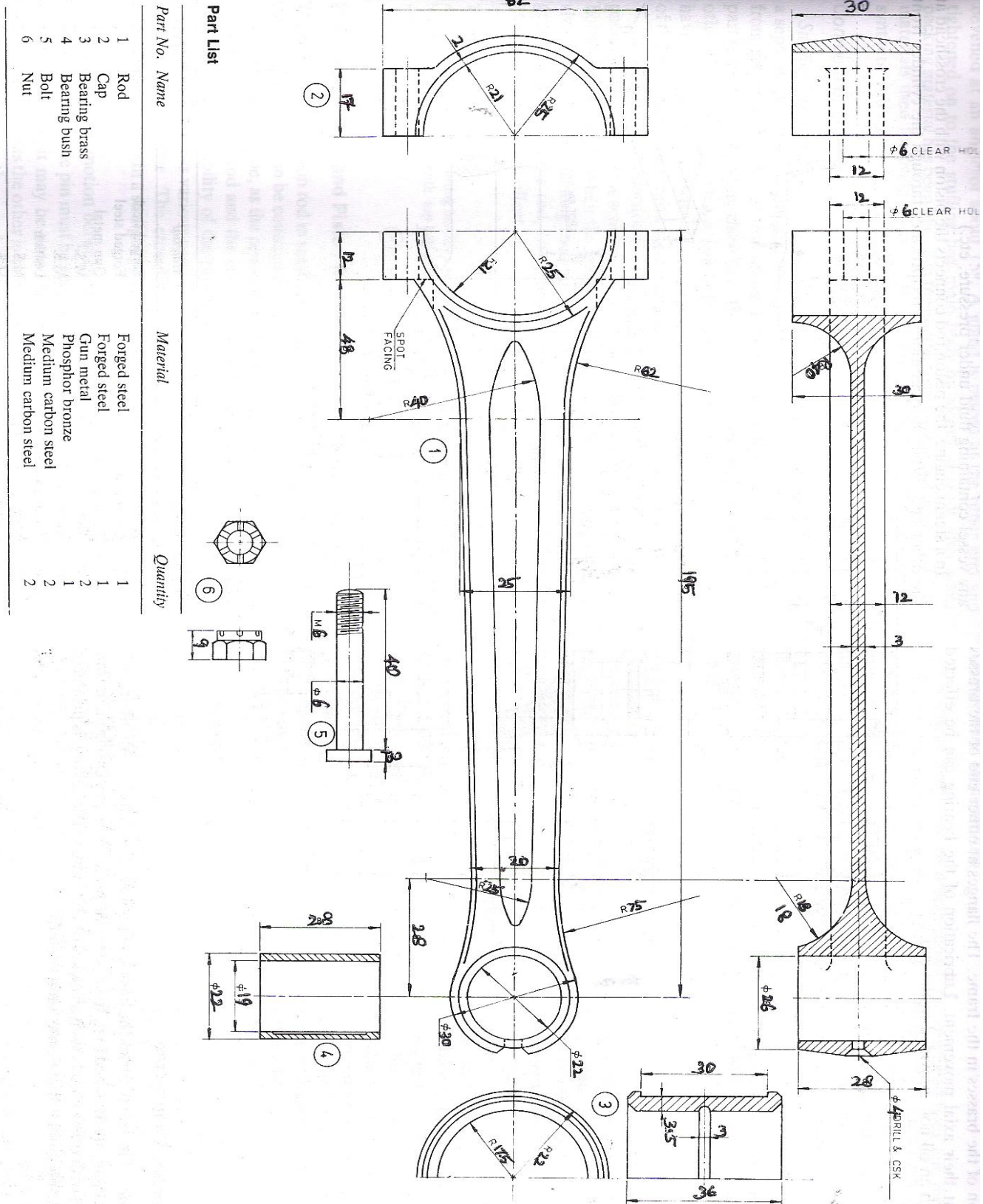
### Section – III
Answer the following (1 × 42 = 42 Marks)

7      Draw the sectional top view and front view of the petrol engine connecting rod for the below figure and part list. The parts of the connecting rod are given in third angle projection.

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| Part No. | Name | Material | Quantity |
|----------|------|----------|----------|
| 1 | Rod | Forged steel | 1 |
| 2 | Cap | Forged steel | 1 |
| 3 | Bearing brass | Gun metal | 2 |
| 4 | Bearing bush | Phosphor bronze | 1 |
| 5 | Bolt | Medium carbon steel | 2 |
| 6 | Nut | Medium carbon steel | 2 |

**Part List**



**Petrol engine connecting rod**

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