Code No:RR-210305

Set No: 1

II. B.Tech I-Semester Supplementary Examination, April/May 2005

MACHINE DRAWING
(Mechanical Engineering)

Time: 3 hours **Max.Marks:80**

Answer all Questions

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1. Draw any two of the following: (2 x15 = 30 Marks)

   a) Sleeve type cotter joint to connect two shafts of 30 mm diameter
   b) Flange coupling to connect two shafts of 25 mm diameter.
   c) Foot step bearing for a shaft of 100 mm diameter.
   d) Double riveted lap joint of zig-zag type to join 20 mm plates.

2. The details of 50 mm stop valve is shown in figure and details of the parts are shown in table. Draw the following views: (50 Marks)

   a) Sectional elevation.
   b) Plan with top half in section through the center of branch pipe and the bottom half removing the hand wheel.

Table

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Reference	Description	Material	Number Required
1.	Body	C.I.	1
2.	Cover	C.I.	1
3.	Cover Nut	M.S.	1
4.	Gland	G.M.	1
5.	Vane spindle with Nut and Taper pin	G.M.	1
6.	Hand Wheel	C.I.	1
7.	Collar	G.M.	1
8.	Valve	G.M.	1
9.	Valve Seat	G.M.	1
10.	Studs and Nuts	M.S.	4

Contd……. 2

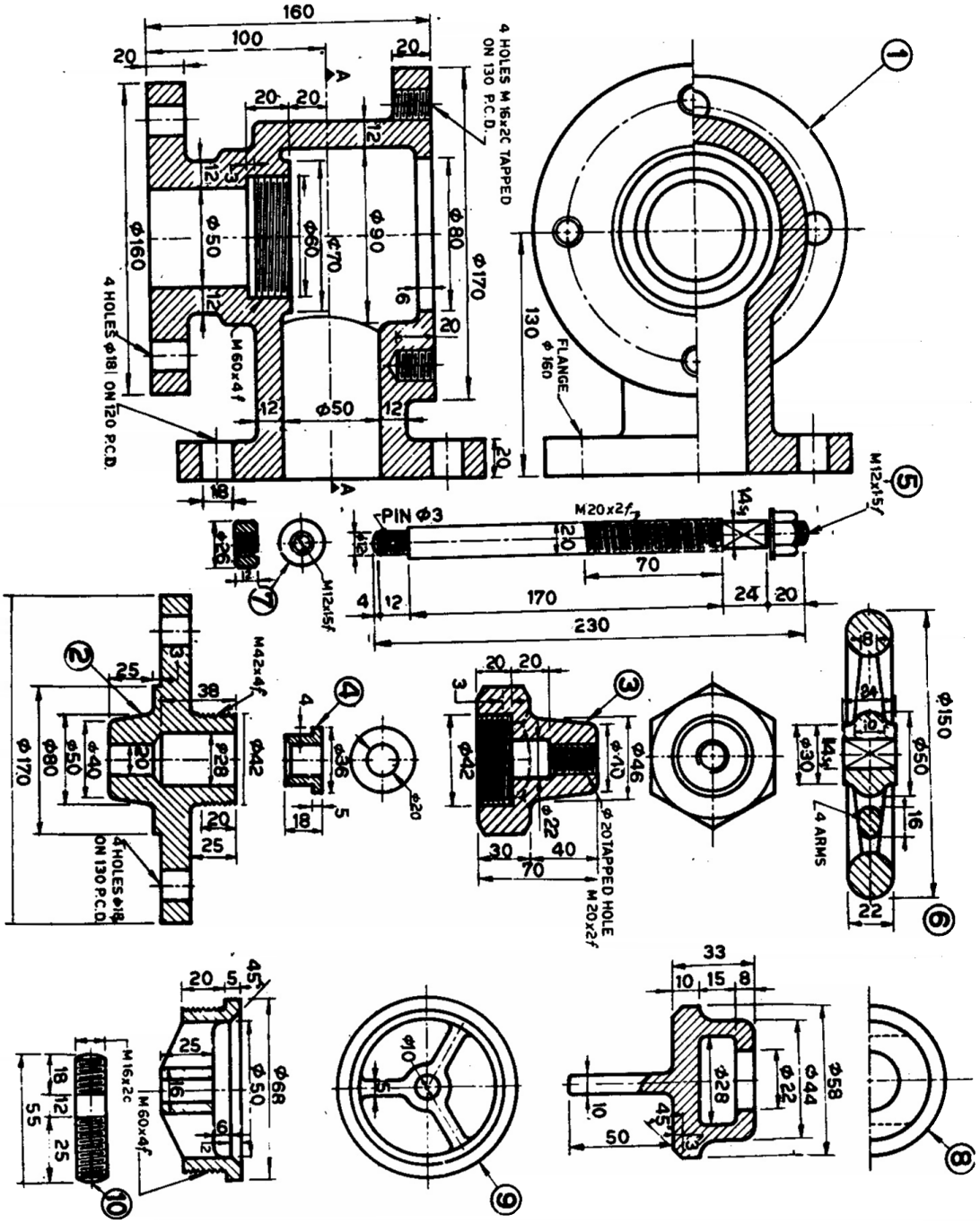

Fig. STOP VALVE

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Code No:RR-210305

Set No: 2

II. B.Tech I-Semester Supplementary Examination, April/May 2005
MACHINE DRAWING
(Mechanical Engineering)

Time: 3 hours **Max.Marks:80**

Answer all Questions

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1. Draw any two of the following: (2 x15 = 30 Marks)

   a) Draw the two views of Knuckle joint with proportions to connect two shafts of 30 mm diameter.
   b) Socket and spigot cotter joint to join two shafts of 40 mm diameter.
   c) Tripple riveted single strap zig-zag butt joint to connect two plates of 18 mm thick.
   d) Journal bearing for a shaft of 45 mm diameter.

2. A spring loaded safety valve with only one valve is shown in figure. Draw to a suitable elevation: (50 Marks)

   a) Sectional elevation.
   b) Slide elevation, half in section looking from the release screw end.
   c) Outside plan.

The details of the components are shown in the table below.

Reference No.	Description	Material	Number Requied
1.	Body	C.I.	1
2.	Casing	C.I.	1
3.	Cover	C.I.	1
4.	Valve seat	G.M.	1
5.	Valve	G.M.	1
6.	Spindle	G.M	1
7.	Neck bush	G.M.	1
8.	Bottom spring holder	G.M.	1
9.	Top spring holder	G.M.	1
10.	Spring	Spring steel	1
11	Spring compression bolt	Steel	1
12	Nut(compression bolt)	Steel	1
13	Washer	M.S.	1
14	Bush(cover)	G.M.	1
15	Screw with nut	M.S.	1
16	Lever	M.S.	1
17	Pin with two locking pin	M.S.	1
18	Plug	M.S.	1

Contd…….2

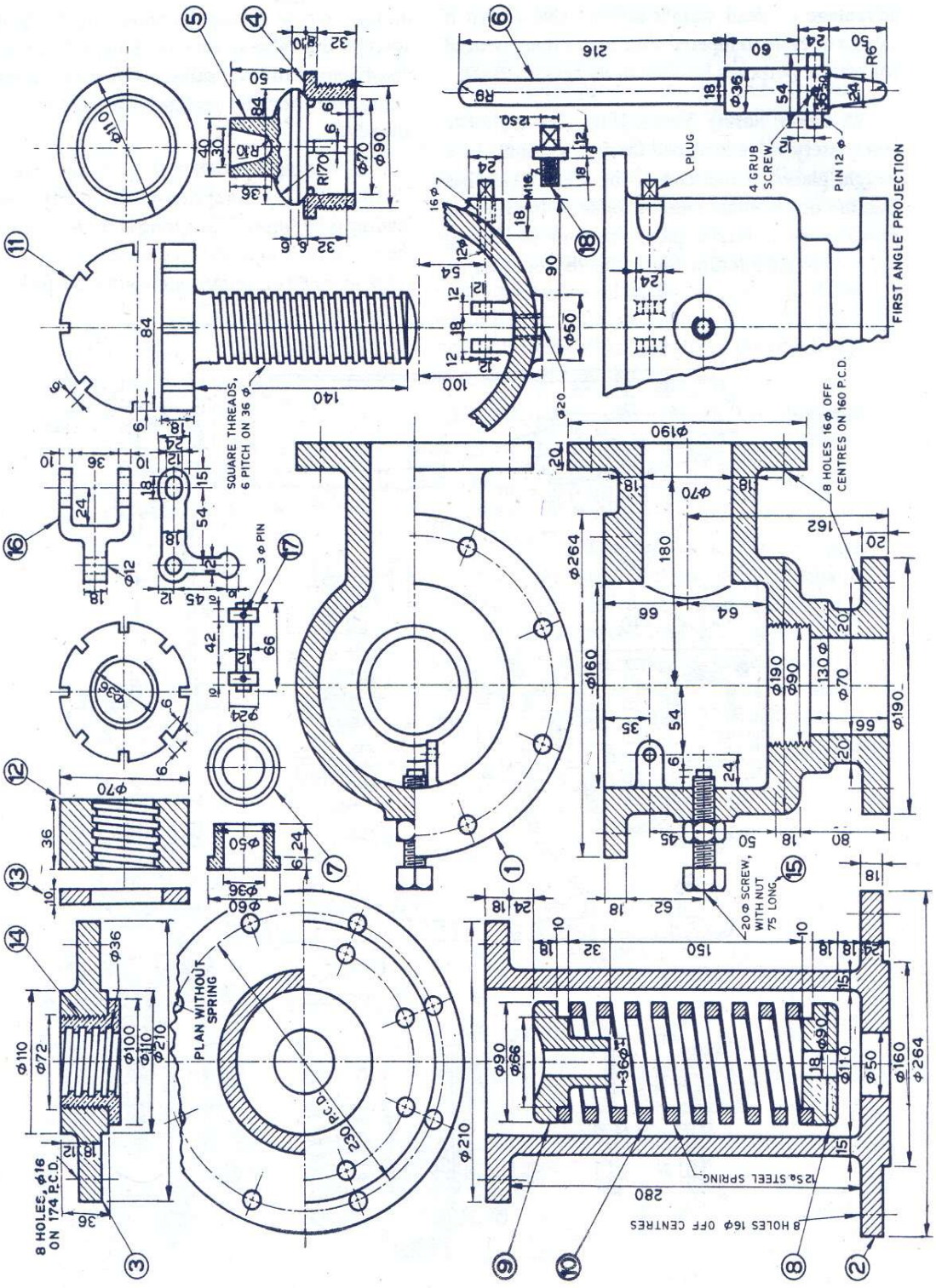

Fig: SPRING LOADED SAFETY VALVE

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Code No:RR-210305

Set No: 3

II. B.Tech I-Semester Supplementary Examination, April/May 2005

MACHINE DRAWING
(Mechanical Engineering)

Time: 3 hours **Max.Marks:80**

Answer all Questions

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1. Draw any two of the following : (2 x15 = 30 Marks)

   a) Solid flange coupling to connect two shafts of 30 mm diameter.
   b) Collar bearing to a shaft of 40 mm diameter.
   c) Double rivetted butt joint to join plates of thickness 18 mm.
   d) Gib and Cotter joint suitable for joining 40 mm square rods.

2. The details of the petrol engine connecting rod are shown in figure. Draw the following assemble views: (50 Marks)

   a) Front elevation
   b) Sectional Plan
   c) Two side views

Contd…….2

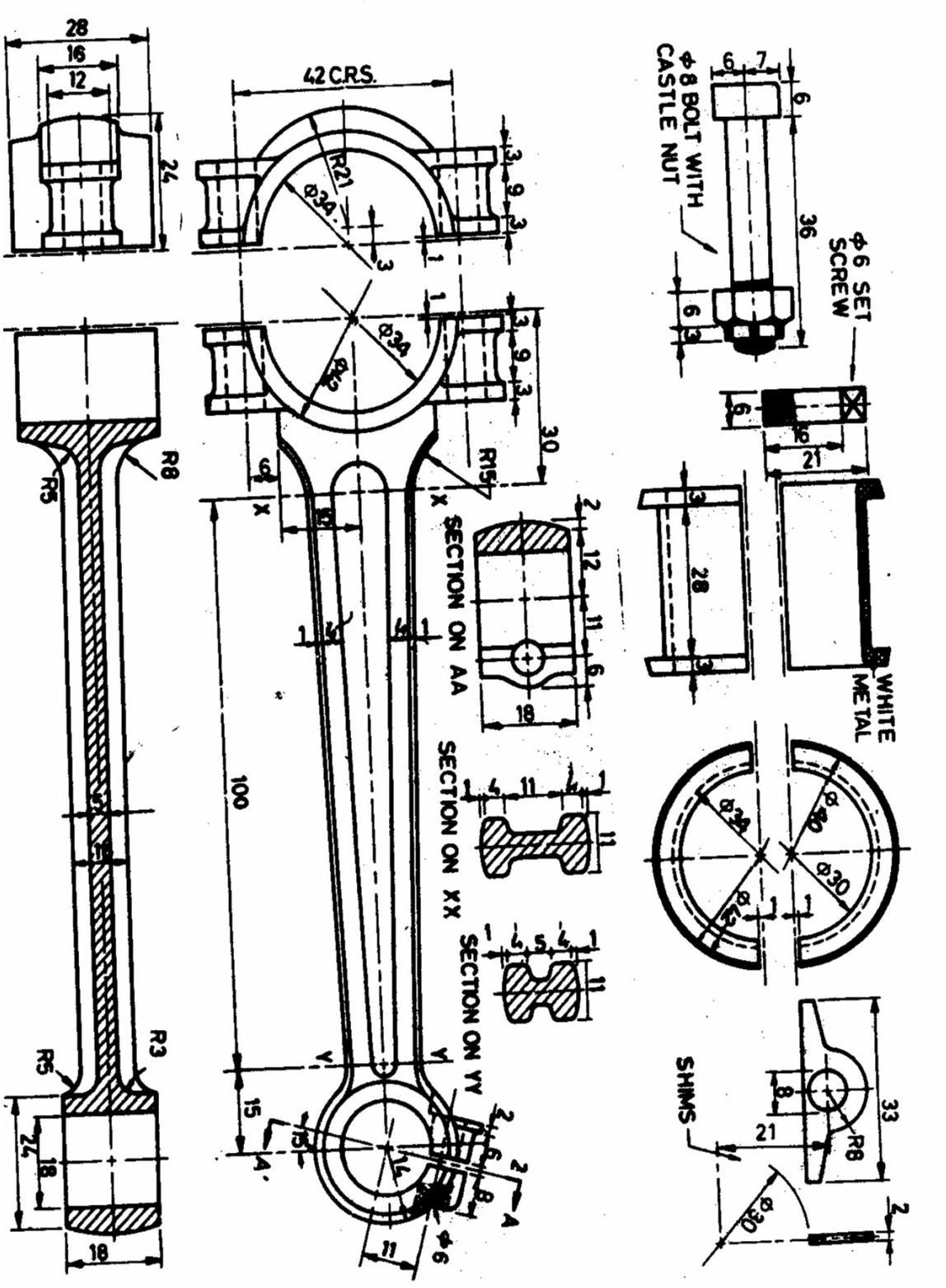

Fig : PETROL ENGINE CONNECTING ROD

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Code No:RR-210305

Set No: 4

II. B.Tech I-Semester Supplementary Examination, April/May 2005

MACHINE DRAWING
(Mechanical Engineering)

Time: 3 hours **Max.Marks:80**

Answer all Questions

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1. Draw any two of the following: (2 x15 = 30 Marks)

   a) Front view of a knuckle joint to join two shafts of 30mm diameter.
   b) Bushed pin type flanged coupling to connect two shafts of 25 mm diameter.
   c) Two views of taper sunk key positioned in a shaft of diameter 30 mm and hub of diameter 60 mm.
   d) Double riveted lap joint of chain type to connect two plates of 12 mm thick.

2. The details of the Reader steam engine crosshead are shown in figure. Draw the following assembled views: (50 Marks)

   a) Half sectional elevation
   b) Plan
   c) Sectional side view looking from right hand side

Contd……. 2

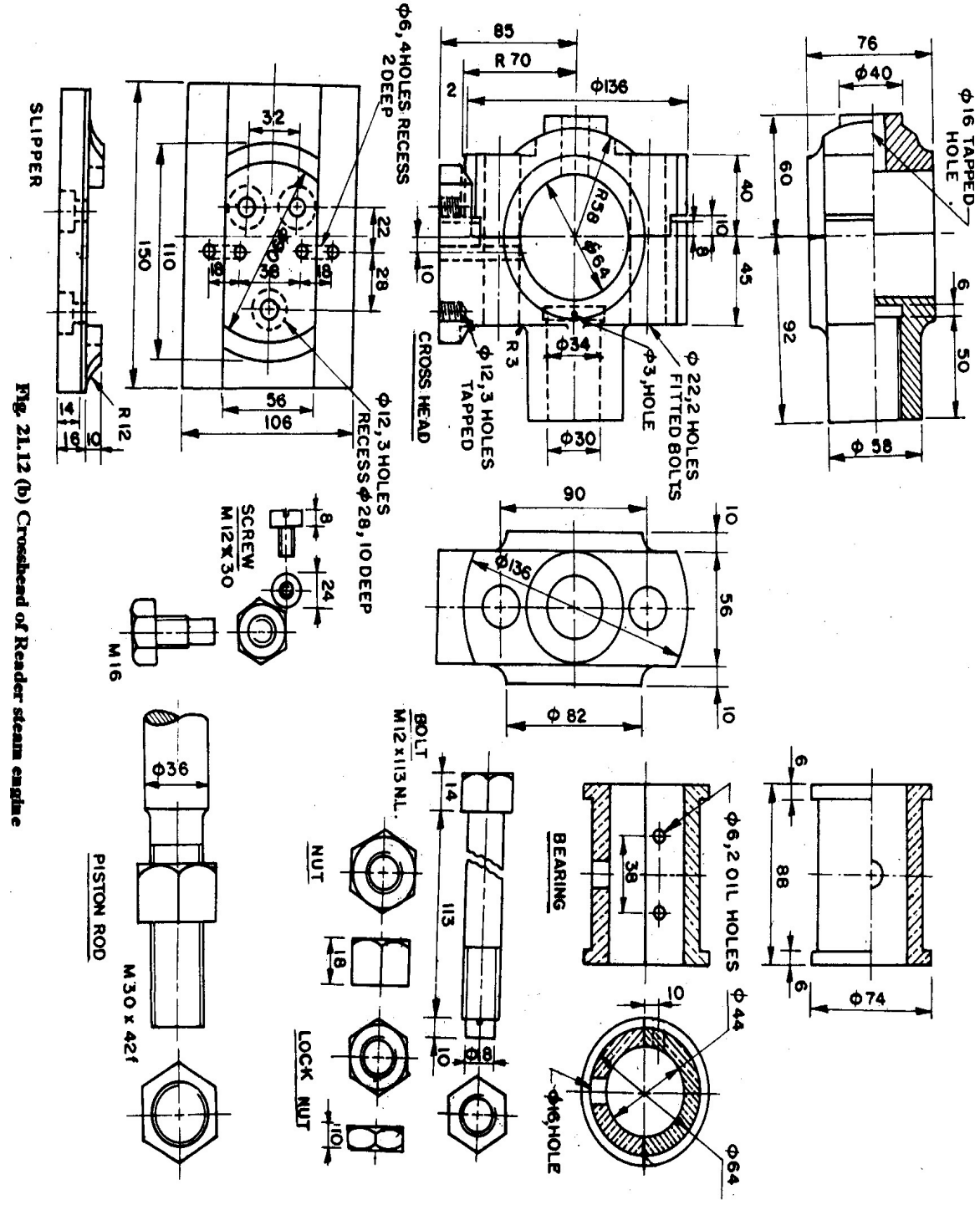

Fig. 21.12 (b) Crosshead of Reader steam engine

Fig: READER STEAM ENGINE CROSSHEAD

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