

GOVERNMENT OF KARNATAKA  
DEPARTMENT OF FACTORIES, BOILERS, INDUSTRIAL SAFETY AND HEALTH  
BOILER OPERATION ENGINEERS EXAMINATION -2023





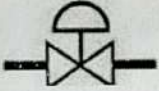




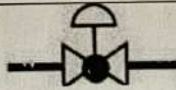

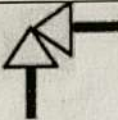
Subject: DRAWING PAPER-3  
Maximum Marks: 100

REGISTER NUMBER: 2380E ~~XXXXXXXXXX~~  
Duration: 3 Hours

Q1. Name the below given Piping and Instrumentation Diagram Valve symbols.

a)

(12 Marks)

1)		globe valve	7)		motorized valve
2)		globe valve	8)		stop check valve
3)		<del>Controlled</del> pneumatic (Diaphragm)	9)		3 way valve
4)		Ball valve	10)		manual globe valve
5)		plug valve	11)		pneumatic globe valve
6)		Butterfly valve	12)		Angle valve

b) Draw any 8 welding symbols.

(8X1= 8 Marks)

Q2. Draw first angle projection orthographic views for any 01 isometric view of an object is given below.

(12 Marks)



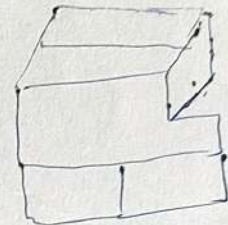
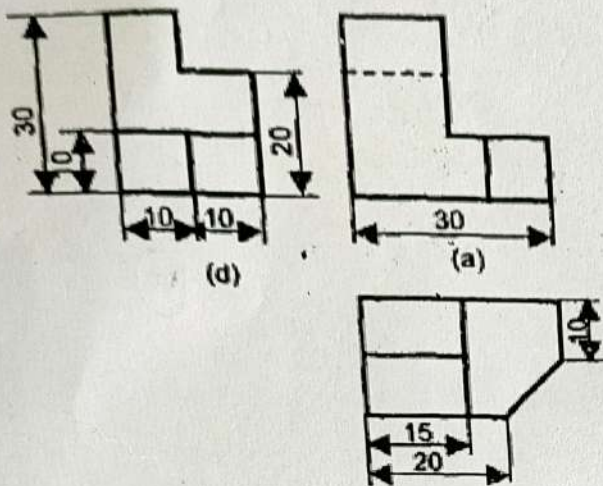




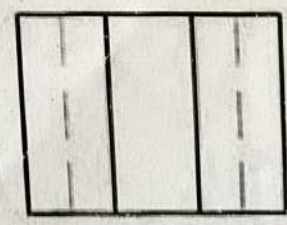
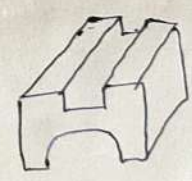
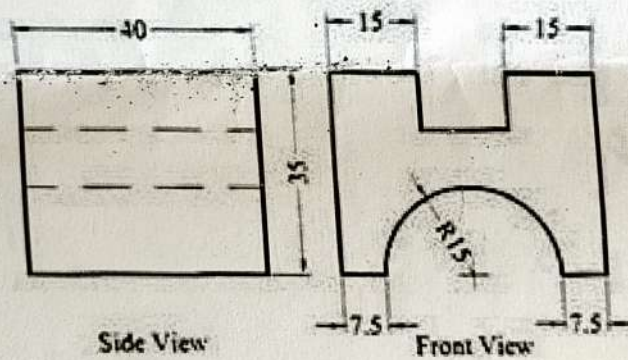
Q3. Draw an isometric view from the any 01 set of orthographic views shown below.

(18 Marks)

a) Orthographic view set – 1 (Third angle projection)



b) Orthographic views set – 2 (First angle projection)



15

Handwritten notes and calculations.

Q4. Draw neat free hand sketches with labels for any 2 of the following systems:

(2X10= 20 Marks)

a) Longitudinal section drawing of Attenuator.

8



- b) Draw neat sketch of gauge glass, showing its internals.  
c) Details of the Natural circulation of boiler circuit from Boiler Feed Pump to saturated steam outlet tubes. (8)

Q5. Draw neat free hand sketch of the Main steam stop valve and label the important parts. (10 Marks) (8)

Q6. Draw general arrangement single line drawing of a water and steam system of the PF fired boiler showing Economizer inlet valve to main steam stop valve all main systems. (20 Marks) (10)

///END///

8  
8  
1.9.6  
80