Module – 5
Perspective projection

object

observer eye

projectors

Plane of proj
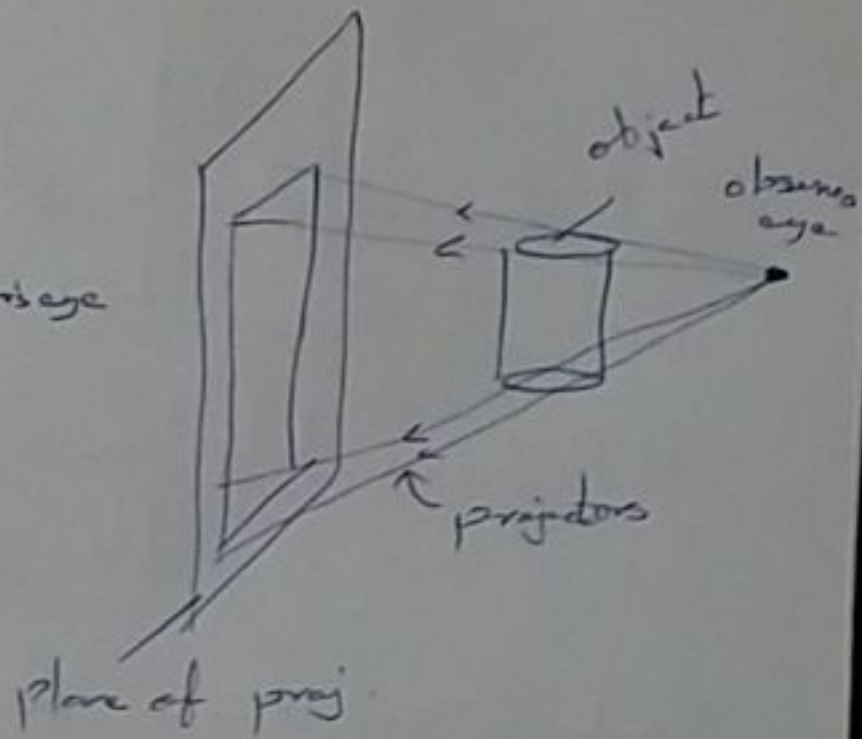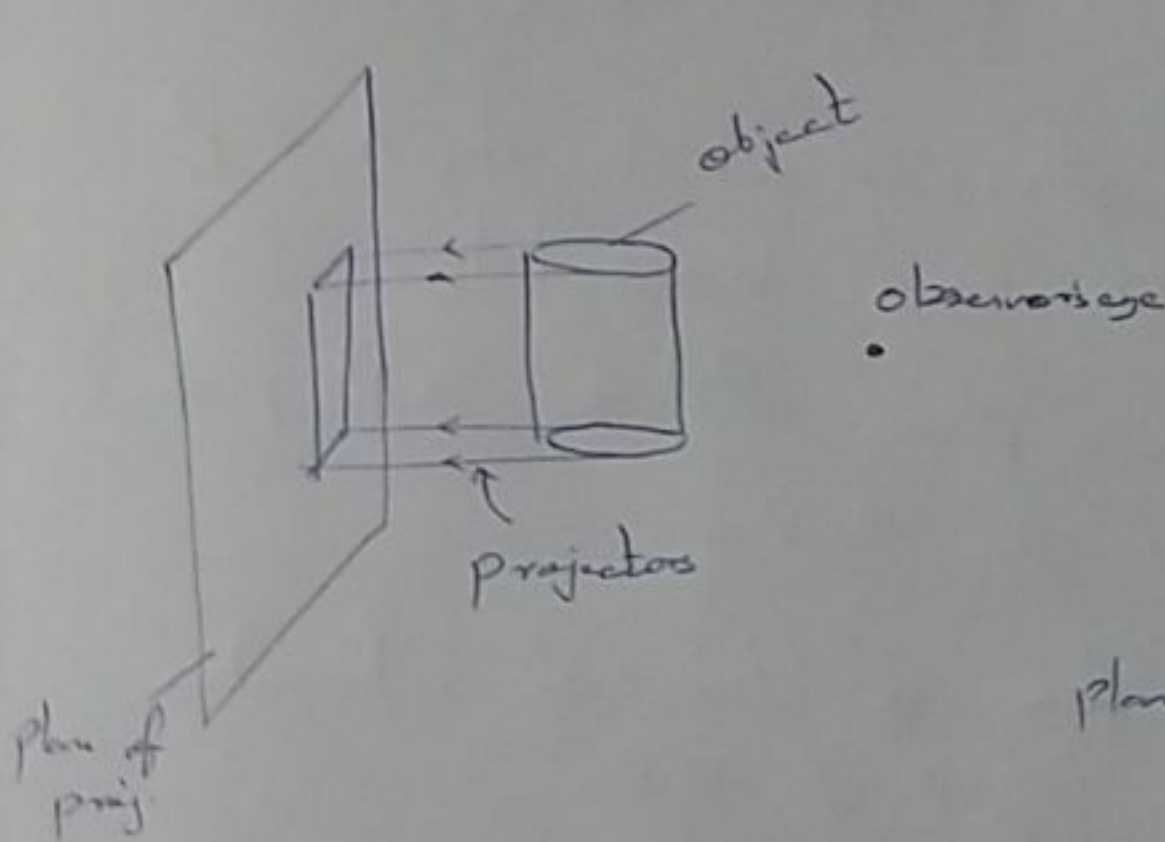
Orthographic projection

Projectors //ᵉˡ to each other

Plane of proj

object

observer eye

projectors

Plane of proj

Convergent projection
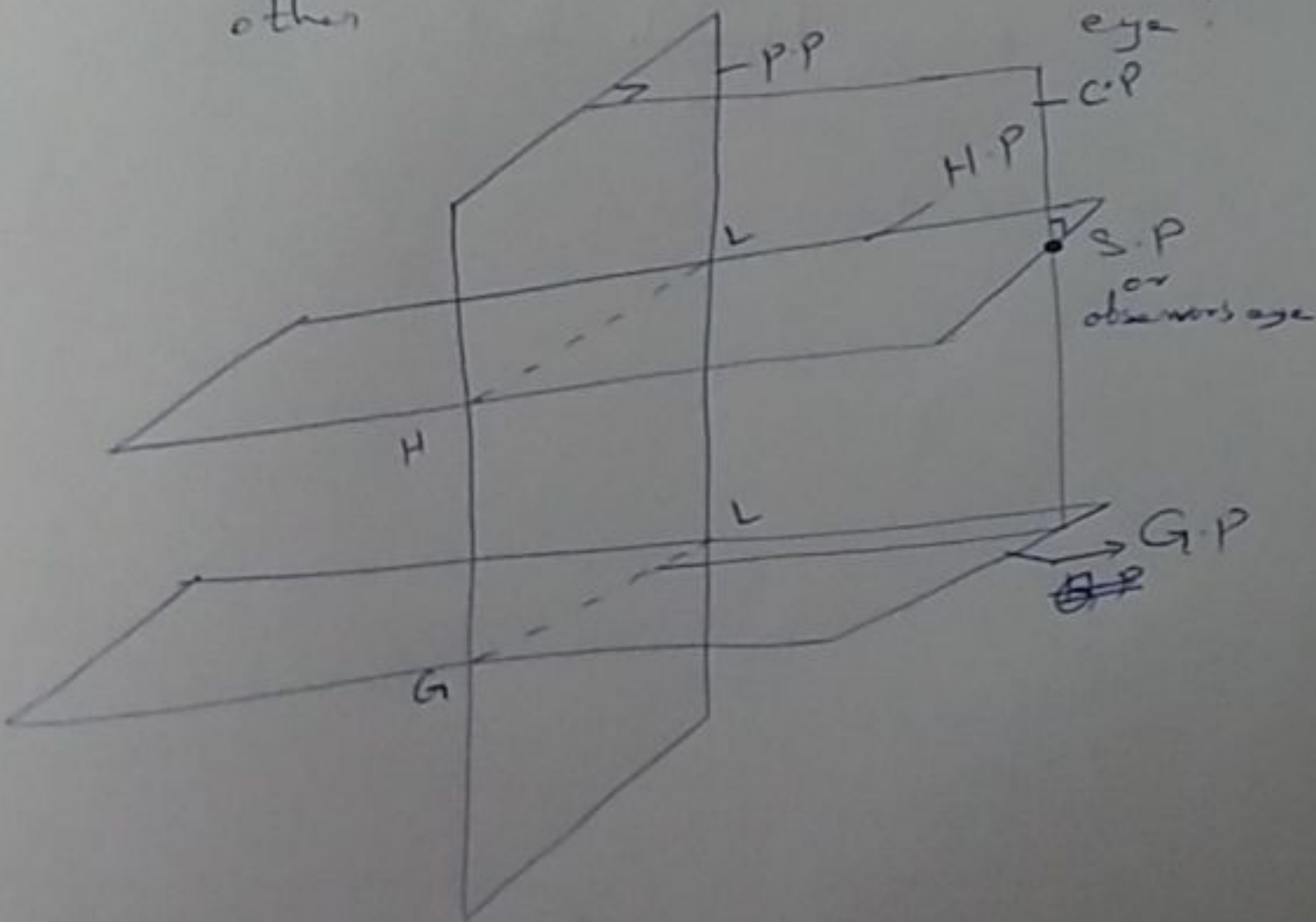**or**
Perspective projection

projectors converge to the human eye.

P.P

C.P

H.P

L

S.P
or
observers eye

H

L

G.P

G

P.P, picture plane — plane which is vertical. Perspective view or perspective proj. is obtained on P.P.

G.P, Ground plane — plane on which object is placed. It is always horizontal

H.P, horizontal plane — plane //el to G.P passing through S.P.

G.L, Ground line — line of line of intersection b/w G.P & P.P.

H.L, horizontal line — line of intersection b/w H.P & P.P

C.P, Centre plane — plane $\perp^r$ to G.P & P.P & Passing through S.P.

Problem:15.9 A square prism of base edge 30 mm and height 60 mm is resting on a face with the axis perpendicular to PP and the nearest base parallel and 20 mm behind the PP. The station point is 80 mm to the right of the axis of the solid and 50 mm above the ground plane, 25mm infront of PP. Draw the perspective view of the prism.
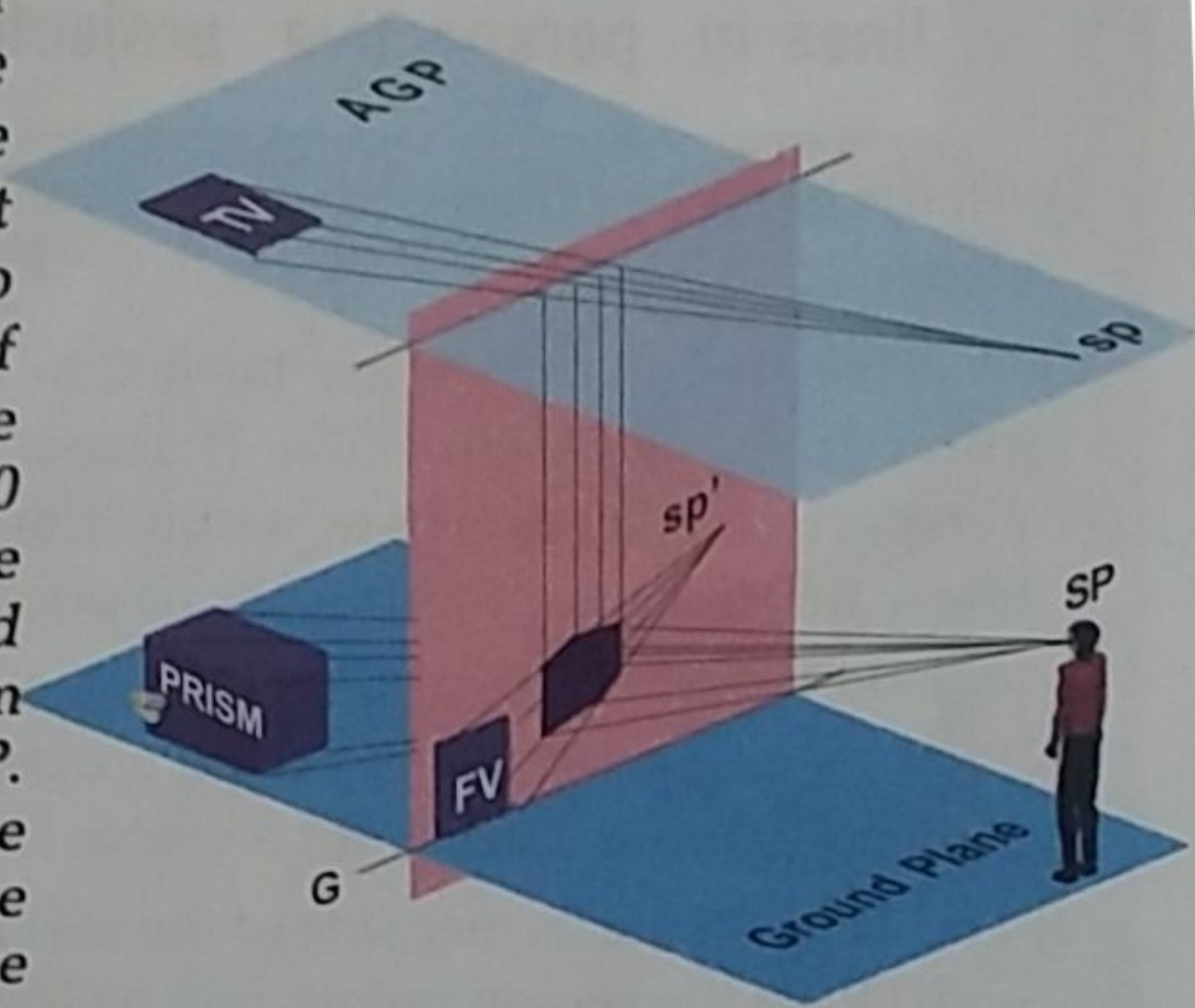
Solution

Fig (15.25) Pictorial view of the prism and SP

T.V

P.P

S.P

25

50

F.V

B

2

A

1

80

3

C

20

G.P

4

60

D

30

30

1(4)   2(3)

60

a(d)   b(c)

20

80

P.P

25

S.P

30

1(4)　　　　2(3)

60

a(d)　　　　b(c)

20

P.P

80

25

S.P

SP'　　　1cm (in common)

50

a'(1')　　　b'(2')

30

d'(4')　　　c'(3')

G.P

30

1(4)   2(3)

60

20 a(d)   b(c)

P.P

80

25

S.P

SP'   1cm (in common)

a'(1')   b'(2')

30

d'(4')   c'(3')

50

G.P

30

1(4)   2(3)

60

a(d)   b(c)

20

P.P

a₁d₁   b₁c₁ 1₁4₁ 2₁3₁

80

25

S.P

SP'   1cm (is common

a'(1')   b'(2')

50

30

d'(4')   c'(3')

G.P

30

1(4)　　　　2(3)

60

a(d)　　　　b(c)

20

a_1d_1　　b_1c_1 1,4, 2,3,

80

P.P

25

S.P

SP'　　↕ 1cm (in common)

50

a'(1')　A.

30　　　　　b'(2')

d'(4')　O.

c'(3')

G.P

30

1(4)   2(3)

60

20   a(d)   b(c)

P.P

a,d,   b,c, 1,4, 2,3,

80

25

S.P

SP'   1cm (in common)

A   B
a'(1')   b'(2')

30   50

d'(4')   0.   c'(3')

G.P

30

1(4)   2(3)

60

a(d)   b(c)

20

P·P

$a_1 d_1$ $b_1 c_1$ 1,4, 2,3,

80

25

S·P

SP'   1cm (in common)

30

a'(1')   A   B   1   2

d'(4')   O   b'(2') 4   3

c'(3')

50

G·P