PROJECTION OF LINE

Stage –I (General Questions)

Q.1) Draw the projection of a line AB 80 mm long which is parallel to HP & 25 mm above HP , parallel to VP & 40 mm in front of VP ?

Q.2) Draw the projection of a line AB 80 mm long which is parallel to HP & 40 mm below HP , parallel to VP & 25 mm behind VP ?

Q.3) Draw the projection of a line AB 75 mm long inclined at 30º to HP. One of its end A is 10 mm above HP. The line is parallel to & 25 mm in front VP ?

Q.4) Draw the projection of a line AB 80 mm long inclined at 45º to HP . One end of the line A is in the HP. The line is parallel to & 40 mm in front VP.

Q.5) A line AB is 75 mm long inclined at 30º to VP. One end of the line A is 10 mm in front of VP. The line is parallel to & 25 mm above HP ?

Q.6) The front view of a line inclined at 30º to VP , is 65 mm long, Draw the projection of line when it is parallel to & 40 mm above HP , Its one end being 30 mm infront of VP?

Q.7) Draw the projection of a line AB 50 mm long which is perpendicular to HP, one of its end A is 10 mm above HP & 20 mm infront of VP ?

Q.8) Draw the projection of a line PQ 45 mm long & perpendicular to VP. One of its end P is 20 mm from both the planes?

Q.9) A vertical line AB 75 mm long & perpendicular to HP , one of its end A is in the HP & 20 mm in front VP. A line AC 100 mm long parallel to & in the HP & parallel to VP. Draw the projection of line joining B & C & determine the inclination of line with the HP ?

Q.10) Two pags fixed on a wall are 4.5 meter apart. The distance between the pags measure parallel to floor is 3.6 meters. If one pag is 1.5 m above the floor, Find the height of the second pag & determine its inclination with the floor ?

Stage – II (Special Questions to be asked in the exam)

Q.11) A line AB 75 mm long inclined at 30º to HP & 45º to VP . One end of the line A is 10 mm above HP & 30 mm in front of VP, Draw its projection & determine its traces also ?

Q.12) A line AB 80 mm long, is inclined at 30º to HP & 45º to VP. One of its end A is in the HP & 40 mm in front of VP . Draw its projection & show its traces also ?

Q.13) A line AB 80 mm long inclined at 45º to HP & 30º to VP. One of its end A is in the VP & 40 mm above HP. Draw its projection & determine its traces also ?

Q.14)A line AB is 65 mm long , inclined at 55º to HP & 25º to VP. One of its end A is in the HP & 15mm infront of VP. Draw its projection & determine its traces also ?

Q.15) A line AB 70 mm long inclined at 30º to HP & 45º to VP. One of its end A is in both HP & in the VP . Draw its projection & determine its traces also?

Q.16)A line AB 80 mm long inclined at 45º to HP & 30º to VP. One of its end A is 20 mm from HP & 30 mm from VP. ? Draw its projection & determine its traces also ?

Q.17) A line AB 75 mm long inclined at 30º to HP & 45º to VP. One of its end A is 25 mm below HP & 40 mm behind VP. Draw its projection & determine its traces also?

Q.18) A line AB 65 mm long is inclined at 30º to HP & 60º to VP. One end of line A is 25mm above HP & 25 mm in front of VP. Draw its projection & determine its traces also?

Q.19) A line line AB 75 mm long is inclined at 45º to HP & 30º to VP. One end of the line B is in the HP & 40 mm in front of VP. Draw its projection & determine its traces also ?

Q.20) The end projector of line AB is 40 mm, One of its end A is 10 mm above HP & 15mm in front VP while its other end B is 60 mm above HP & 70 mm in front of VP. Draw the projection of AB & determine the true length & angle with two planes by using both method of rotation & trapezoidal ?

Stage III (Always asked in the Exam)

Q.21) Draw the projection of a line AB 90 mm long whose mid point M being 50 mm above HP & 40 mm in front of VP. The end A of line is 20 mm above the HP & 10 mm in front of VP . Show the traces & also determine the inclination of line with the HP & the VP ?

Q.22) A line AB 65 mm long inclined at 30º to HP & 45º to VP . One of its end A is the HP 15mm in front of VP while its other end B is in the third quadrant . Draw its projection?

Q.23) A line AB 65 mm long is inclined at 30º HP & 60º to VP, one end of the line A is in the HP & 15mm in front VP , while its other end B is in the third quadrant. Draw its projection ?

Q.24) Top view of a 75 mm long line is 65 mm while the length of its front view is 50 mm . One end of the line A is in the HP & 15 mm in front of VP. Draw the projection of line & also determine its inclination with HP & VP

Q.25) The top view of 72 mm long line PQ measures 62.4, while the length of its front view is 49.2 mm. One of its end P is in the VP & 12 mm above HP. Draw its projection & determine its inclination with two planes ?

Q.26) A line AB 90 mm long inclined at 45º to HP. One of its end A is in the HP & 15 mm in front of VP, its top view makes an angle of 60º with the VP. Determine its true inclination with VP ?

Q.27) A line AB 90 mm long inclined at 30º to HP. One end of the line A is 12 mm above HP & 20 mm in front VP. Its front view measures 65 mm. Draw its top view & determine its inclination with VP ?

Q.28)A line AB 65 mm long has its end A 20 mm above HP & 25 mm in front VP.The end B is 40 mm above HP & 60 mm in front. Draw the projection of AB & show its inclination with HP & VP ?

Q.29)The top view of a 75 mm long line AB measures 50 mm. One end of the line A is 15 mm above HP & 50mm in front of VP, while its other end is B is 20 mm in front of VP & is above HP. Draw the projection of AB & determine its angle with two planes ?

Q.30)The top view of the 75 mm long line CD measures 50 mm. C is 50 mm in front of VP & 15 mm below HP. D is 20 mm in front of VP & is above the HP. Draw the front view of CD & find its inclination with HP & VP.

Stage-IV (Miscellaneous problems, very important)

Q.31) The end projectors of the line AB are 50 mm apart , one end of the line A is 10 mm above HP & 20 mm in front of VP while its other end B is 40 mm behind VP & 50 mm below HP. Draw the projection of AB determine its true length , traces & angle with HP & VP ?

Q.32) End projector of line AB are 5cm apart. One end of the line A is 2 cm above HP & 3 cm in front of VP , while its other end B is 1 cm below & 4 cm behind VP. Draw the projection of AB & determine true length , traces & angle with HP & VP ?

Q.33)The end A of line AB is in the HP & 25 mm behind VP , End B is in the VP & 50 mm above HP. The distance between end projector is 75 mm. Draw the projection of AB . Determine its true length , traces & angle with both planes ?

Q.34) TV & FV of a line is equally inclined to both the planes. If end A of line AB is in front of VP & 20 mm above HP & end B is behind VP & 40 mm below HP. Any point on this line is in the VP & 10 mm below HP. If distance between end projector is given to be 60 mm .Draw the projection of line. Find the True length of line & its inclination with both HP & VP?

Q.35) The end projector of line AB is 90 mm apart. A is 20 mm above HP while B is 45 mm behind VP. The HT & VT of line coincide with each other on X-Y line between the two projectors & 35 mm away from the end A. Draw the projection of AB. Determine its true length & inclination with two planes ?

Q.36) The distance between the end projector of line AB is 70 mm & projector through the traces are 110 mm apart. The end A of line is 10 mm above HP, If the top view & front view of line makes an angle of 30º & 60º with X-Y line respectively. Draw the projection of line AB & determine traces , angle with HP & VP & true length of line?

Q.37)The projectors drawn from HT & VT of a straight line AB are 80 mm apart while those drawn from its end are 50 mm apart. If the HT is 35 mm in front of VP & the VT is 55 mm above HP & end A is 10 mm above HP. Draw the projection of line AB. Determine its true length & angle with two plane?

Q.38) The front view of a line AB makes an angle of 30º with X-Y.The HT of line is 45 mm in front of VP while its VP is 30 mm below HP. One end of line A is 10 mm above HP & its other end B is 100 mm in front of VP. Draw the projection of line & determine true length & inclination with HP & VP ?

Stage-V (Brain Twister- To sharpen your brain)

Q.39) The front view of a line AB measures 65 mm & makes an angle of 45º with X-Y. A is in the HP & the VT of the line is 15 mm below HP. The line is incline at 30º to VP .Draw the projection of AB , Find its true length & inclination line with HP ,Also locate its HT?

Q.40) The End A of line AB is 25 mm behind VP & is below the HP. The end B is 12 mm in front of VP & is above the HP. The distance between the end projector is 65 mm. The line is inclined at 40º to HP Its HT is 20 mm behind the VP. Draw the projection of line ,also determine its true length & VT?

Q.41)The straight line AB is inclined at 30º to HP while its Top view is inclined at 45º to X-Y line. The end A is 20 mm in front of VP & it is below the HP. The end B is 75 mm behind the VP & is above the HP. Draw the projection of the line when its VT is 40 mm below. Find the true length of the portion of straight line which is in the second quadrant & locate its HT ?

Q.42)A line AB measures 100 mm, The projector through its VT & the end A are 40 mm apart. Point A is 30 mm below HP & 20 mm behind VP. The VT is 10 mm above HP. Draw the projection of line & determine its HT & inclination with HP & VP ?

Q.43)A line PQ 100 mm long inclined at 30º to HP & 45º to VP ,Its mid point M is in the VP & 20 mm above HP & 45º to VP , its mid point M is in the VP & 20 mm above HP. Draw its projection if its end P is in the 3rd quadrant & Q is in the 1st quadrant?

Q.44) The front view of a 125 mm long line PQ measures 75mm & its TOP view measures 100 mm. Its end Q & mid point M are in the 1st quadrant. M is 20 mm from both the planes. Draw the projection of PQ ?

Q.45) Two lines AB & AC both of length 60mm are 20mm from both HP & VP and they are making an angle of 120º between them in their front view & Top view.AB is parallel to both HP & VP. Determine the real angle between AB & AC ?