SHORT ANSWER TYPE QUESTIONS

Q.1. ***What is representative fraction ?***

Ans. Representative Fraction = $\frac{\text{Length of a line in the drawing}}{\text{Actual length of line on the object}}$.

Q.2. ***Give different steps of construction of scale.***

Ans. For constructing a scale :

1. Calculate Representative Fraction if not given.
2. Calculate length of scale by using formula : L = RF maximum length.
3. Draw a straight line of length *l* and divide it into equal parts as required
4. Place zero at the end of the first main unit.
5. Print the names of the units and sub-units below the corresponding leng
6. Mention the Representative Fraction.

Q.3. ***Name different types of scales.***

Ans. Different types of scales are :

1. Vernier scale
2. Plain scale
3. Diagonal scale
4. Isometric scale
5. Comparative scale.

to reference line xy. In other words, the apparent inclinations of the line with H.P. and V.P. are 90°, *i.e.*, $\alpha = \beta = 90°$.

SHORT ANSWER TYPE QUESTIONS

Q.1. *What is a straight line ?*

Ans. A straight line is the shortest distance between two point.

Q.2. *What is inclination of the line ?*

Ans. Inclination to the straight line to a reference plane is defined as the angle which the line makes with the plane or with its own projection on the plane. Inclinations to a line with HP. is represented by angle θ. Inclination of a line with VP is represented by angle ϕ.

Q.3. *What is a trace ?*

Ans. The point of intersection of given line is, produced if necessary, with the reference planes are called its traces. The point at which the given straight line meets VP is called is vertical trace and the point at which the given straight line meets HP is called its horizontal trace.

Q.4. *What is the different positions to represent a line ?*

Ans. Different positions to represent a line are as follows :

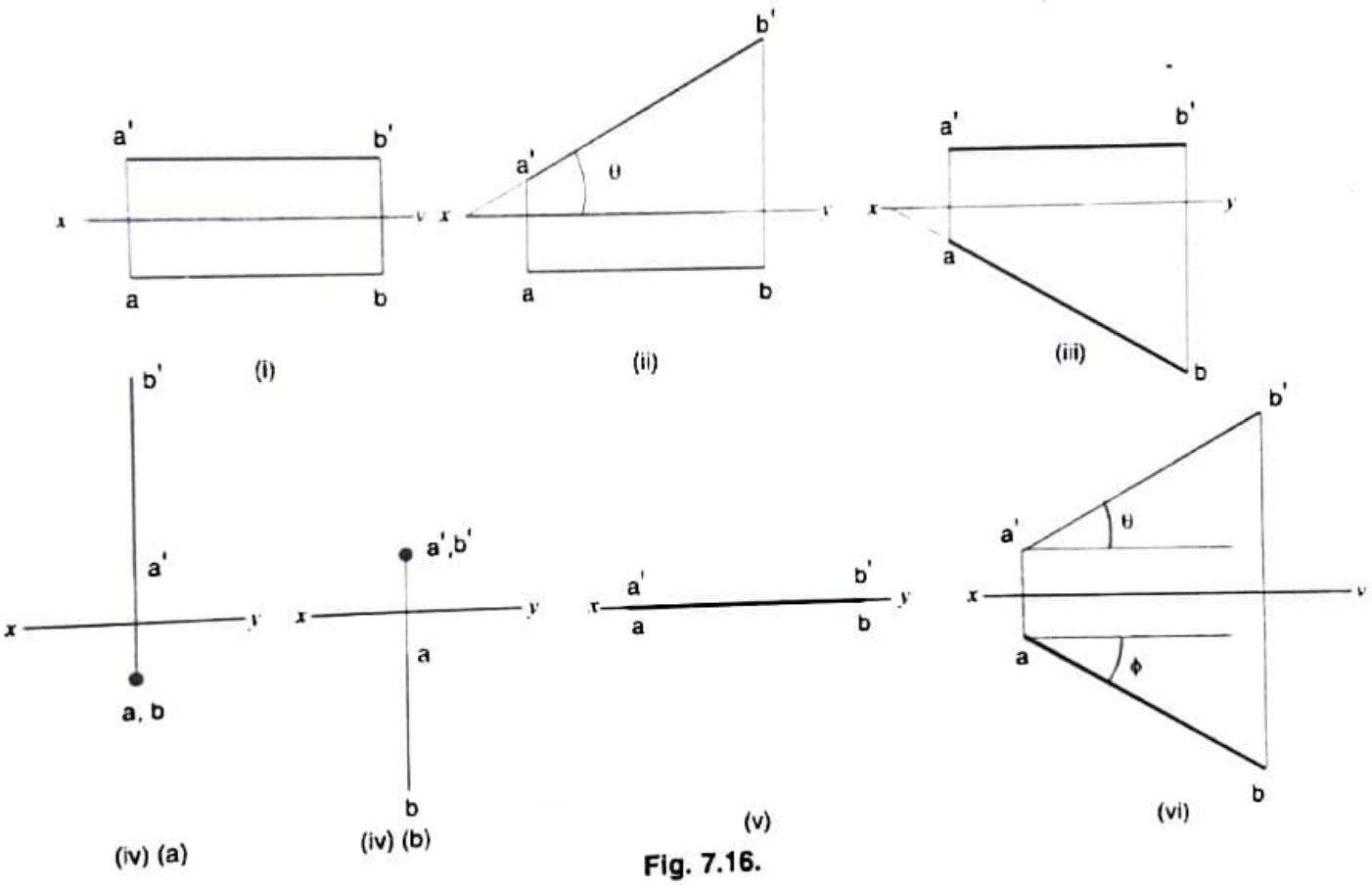

Fig. 7.16.

(*a*) Line parallel to both the reference to both the reference planes.

(*b*) Line parallel to VP and inclined to HP.

(*c*) Line parallel to HP and inclined to VP.

(*d*) Line perpendicular to a reference plane

(*i*) Perpendicular to HP and

(*ii*) Perpendicular to VP

(*e*) Line continued by one or both the reference planes.

(*f*) Line inclined to both the reference planes.

Q.5. *Show projection of a line that is parallel to both HP and VP.*

Ans.

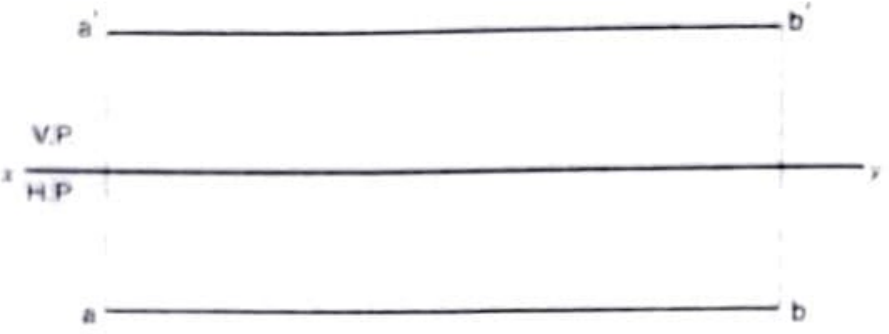

Fig. 7.17.

Q.6. *Show the projection of a line which is inclined to HP and parallel to VP.*

Ans.

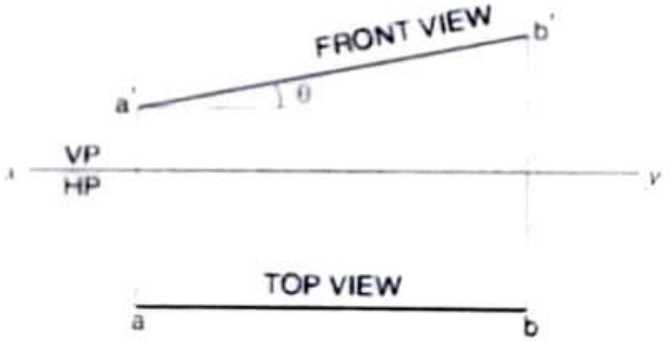

Fig. 7.18.

Q.7. *How may be line situated in a quadrant ?*

Ans. A line may be situated in a quadrant in the following ways.

1. Parallel to both the planes.
2. Inclined to one plane and parallel to the other.
3. Inclined to both the planes.
4. Perpendicular to one plane and parallel to the other.

Q.8. If a line is parallel to both. H.P. and V.P., what will be the position of its elevation and plan?

Ans. *Its elevation and plan both will be parallel to xy line.*

Q.9. If a line, situated in first angle, is inclined to H.P. and parallel to V.P., what will be the position of its elevation and plan ?