



Indian School Al Wadi Al Kabir

Assessment – I (2026-2027)

Class: XI
Date: 27/09/26

ENGINEERING GRAPHICS (046)
MARKING SCHEME

Max. marks: 70
Time: 3 hrs.

General Instructions:

- (i) Attempt all the questions.
- (ii) Use both sides of the drawing sheet, if necessary.
- (iii) All dimensions are in millimeters.
- (iv) Missing and mismatching dimensions, if any, may be suitably assumed.
- (v) Follow the SP: 46 – 2003 revised codes. (with first angle method of projection)

20 × 1 = 20

SECTION – A

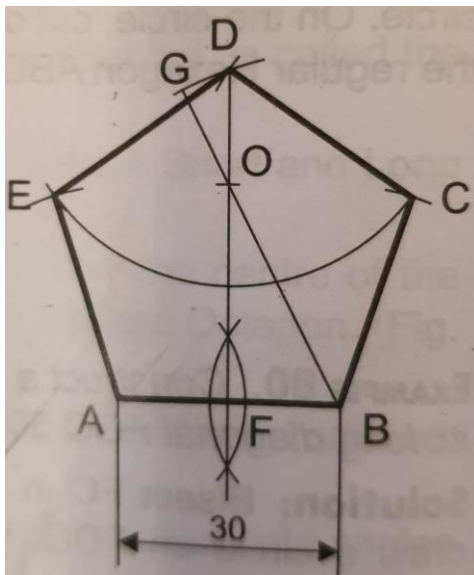
Q.NO	ANSWERS
1	(b) Hidden lines
2	(c) Concentric circles
3	(b) Different two-dimensional views
4	(c)
5	(b) Cone and axis perpendicular to HP
6	(b) Horizontal section plane
7	(a)
8	(d) 1-(iii), 2-(i), 3-(iv), 4-(ii)
9	(d) (ii) and (iii) only

10	(c) 1-(iv), 2-(i), 3-(iii), 4-(ii)
11	(b) 45°
12	(b) Show the internal details clearly
13	(a) The true shape of its base
14	(b) Below the front view
15	(c) Circumscribed circle
16	(a) A hexagon
17	(c) Incorrect, because the sectional shape depends on the orientation and position of the cutting plane
18	(c) Chain line with thick line at ends
19	(b) Hatching lines
20	(b) Hatch only the areas actually intersected by the cutting plane

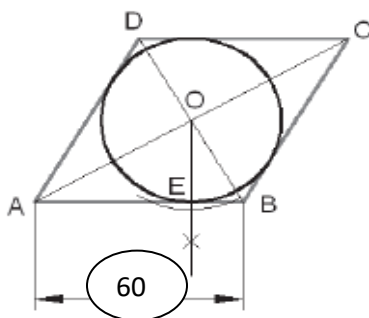
$$2 \times 3 = 6$$

SECTION B

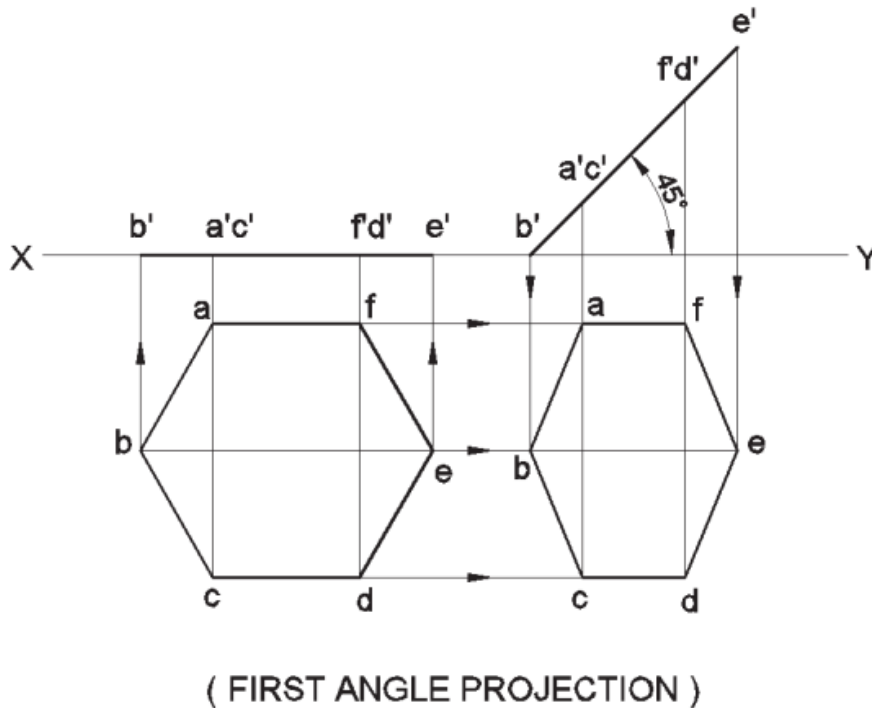
21. Construct a regular pentagon ABCDE of 30 mm sides using compasses.



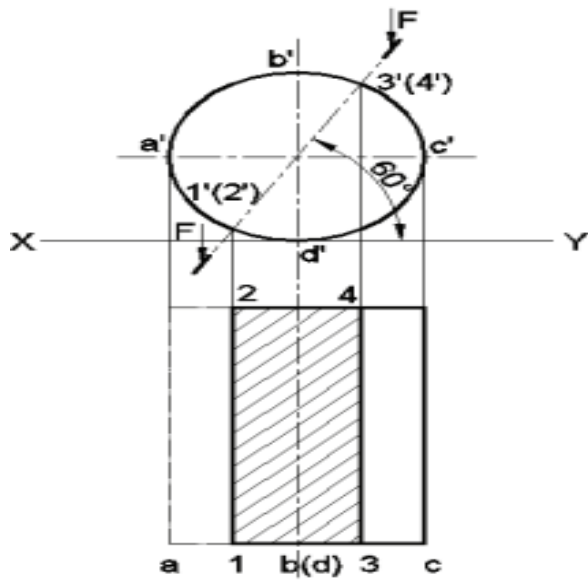
22. Draw a given rhombus whose each side = 60 mm and inscribe a circle in it.



23. A thin horizontal hexagonal plate of 20 mm sides is inclined at 45° to the H.P. and perpendicular to V.P. two of its parallel edges is parallel to V.P. The plate is 10 mm above H.P. and 15 mm in front of V.P. Draw the projections of the plate.

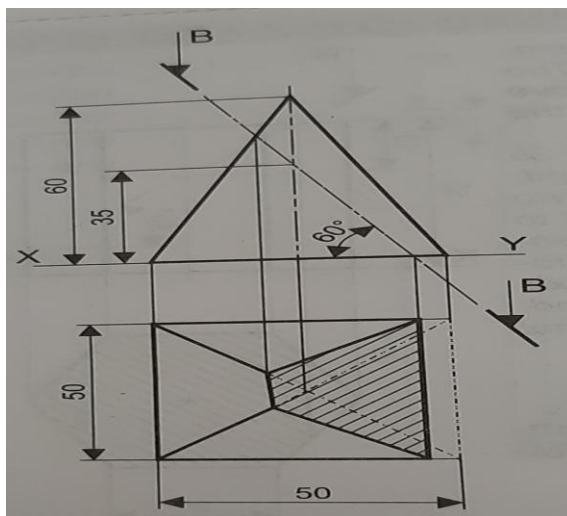


24. A cylinder of base diameter 50 mm and height 70 mm is resting on its curved surface on HP such that the axis is normal to VP. A section plane inclined to HP at an angle of 60° , passes through the axis and cuts the solid into two halves. Draw the Front View and sectional Top View.

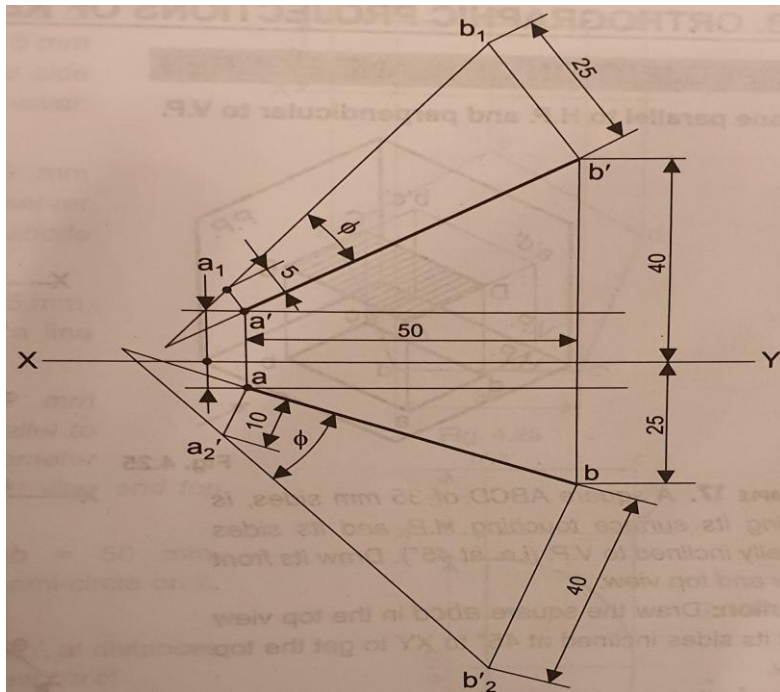


$$2 \times 7 = 14$$

25. Project the front view and sectional top view of a square pyramid 50 mm base edges and 60 mm high axis, resting vertically on HP on its base, with two edges of its base parallel to VP, sectioned by a plane perpendicular to VP and inclined to HP at 60 degree and intersecting the axis at a point 35 mm above its base.

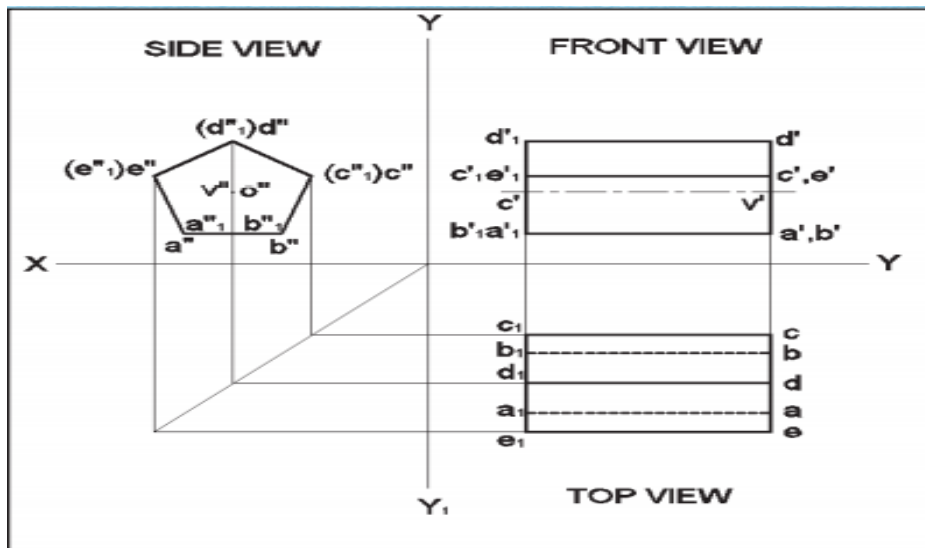


26. A line AB has its end A, 5mm from VP and 10 mm from HP, and B is 40mm from HP and 25mm from VP. The distance between its end projectors is 50mm. Draw its front view and top view. Also find its true length and true length of inclination with HP and VP using trapezoid method. Follow the first angle method of projection.



$$2 \times 10 = 20$$

27. A pentagonal prism having a 30 mm edge of its base and an axis of 60 mm length is resting on one of its rectangular faces with the axis perpendicular to the side plane. Draw the projections of the prism.



28. A hexagonal pyramid of 25 mm base edges and 60 mm long horizontal axis, is resting one corner of its base, on HP with two opposite base edges parallel to VP. It is sectioned by a vertical plane parallel to VP and 10 mm from its axis. Project its top view and sectional front view.

