Indian School Al Wadi Al Kabir

Assessment – I (2025-2026)

Class: XI ENGINEERING GRAPHICS (046) Max. marks:70
Date:23/09/25 **MARKING SCHEME** 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)

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20 × 1 = 20

SECTION – A

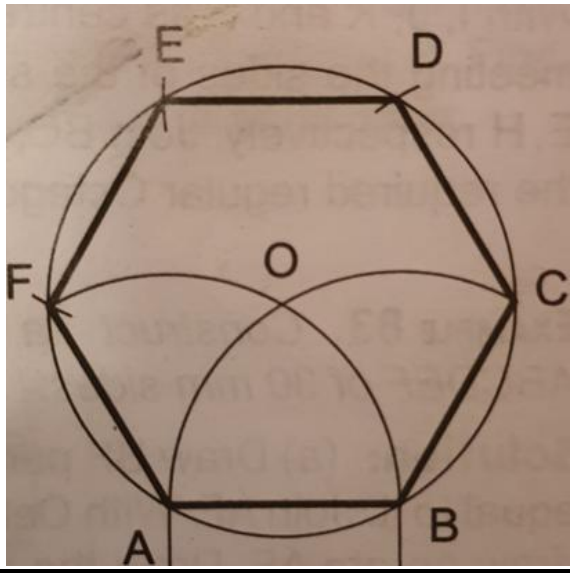
Q.NO	ANSWERS
1	(c) length measures
2	(d)Pentagonal prism
3	(c) Cone
4	(d)
5	(c) Triangular prism and axis parallel to both HP and VP.
6	(a) Vertical section plane
7	(b)
8	(d) 1-iv, 2-i, 3-ii, 4-iii

9	(b) (i) and (iv) only
10	(a) 1-iii, 2-iv, 3-i, 4-ii
11	(c) Side view
12	(d) Orthographic
13	(c) Make internal details clearly visible
14	(c) Top view
15	(b) Shows true shape and size of all surfaces
16	(a) Parallel to both HP and VP
17	(b) Rectangle of 120 mm × 80 mm
18	(a) Length and height
19	(b) Below the front view
20	(b) Dashed lines in both views

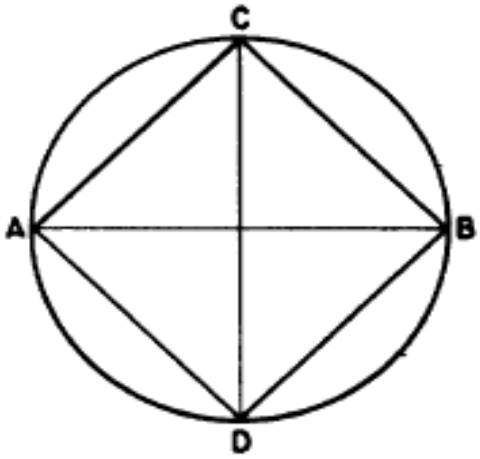
2 × 3=6

SECTION B

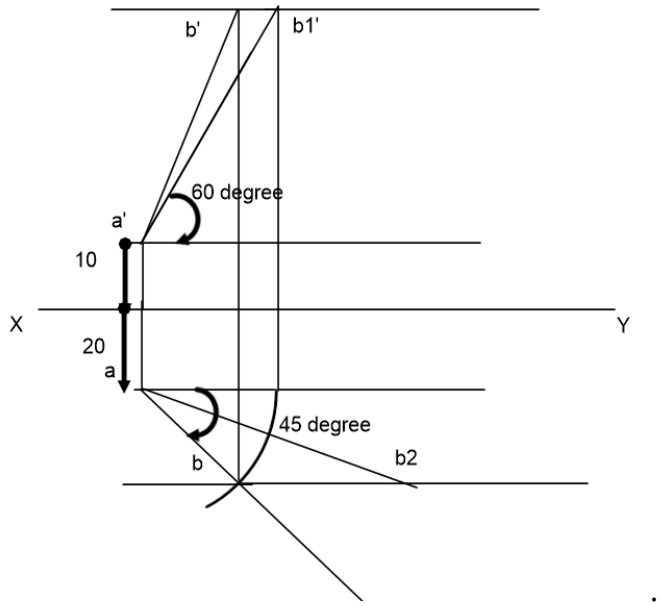
21. On a base AB = 30 mm long, to construct a regular hexagon with the compasses.



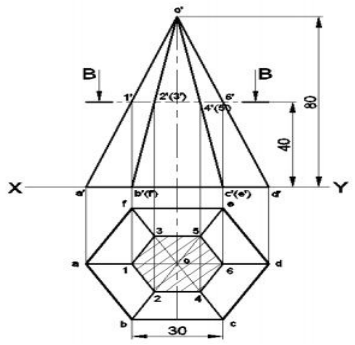
22. Draw a given square whose diagonal is 60 mm. Circumscribe a circle about it.



23. A line AB, 75mm long makes an angle of 60 degree with the HP and its top view makes an angle of 45 degree with VP. Its end A is 10 mm above HP and 20 mm in front of VP. Draw its front view and top view. Also find the true angle of inclination with the VP using **line rotation method.**

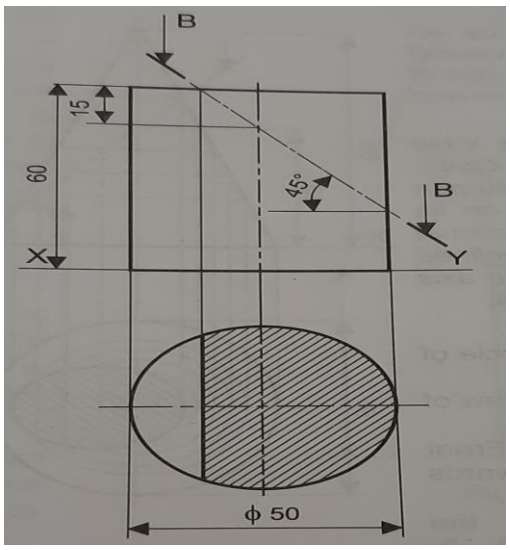


24. A hexagonal pyramid is resting on its base on the ground with two of its base edges of length 30 mm, parallel to HP. A horizontal section plane, bisects the 80 mm long axis. The axis is perpendicular to H.P. Draw the Front View and sectional Top View.

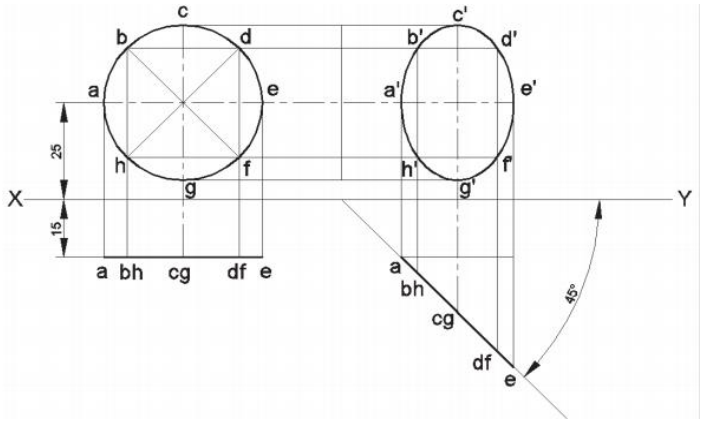


2 × 7 = 14

25. A cylinder of 50 mm base diameter and 60 mm axis rests vertically on HP on its base. It is sectioned by a plane perpendicular to VP, inclined at 45 degree to HP. And intersecting the axis at a point 15 mm below its top end. Project its front view and sectional top view.

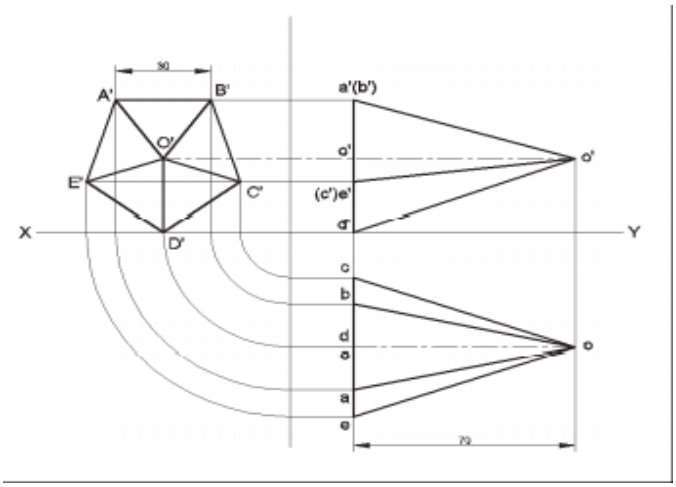


26. Draw the projections of a circular lamina of 30 mm dia. The lamina is inclined at an angle of 45° to V.P. The center of the circle is 25 mm from HP and 15 mm from VP.

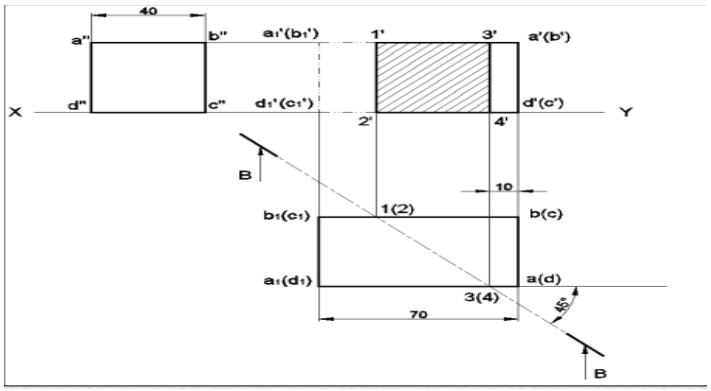


2 × 10 = 20

27. Project the Front View and Top View of a pentagonal pyramid of 30 mm base edges and 70 mm long horizontal axis, parallel to both HP and VP., when it is resting on one corner of its base with one edge of its base on top, parallel to H.P.



28. A square prism of base side 40 mm and height 70 mm is resting on its rectangular face on the ground such that its axis is parallel to HP & VP. It is cut by a section plane perpendicular to HP & inclined to VP at an angle of 45° and passing through a point 10 mm from one of its ends. Draw the sectional Front View and Top View.



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