Code No. : **11125 N/O**

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. I-Semester Main & Backlog Examinations, Jan./Feb.-2024

Engineering Drawing-I

(Common for Civil & Mech.)

Time: **3 hours**   Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Sketch the following lines: (a) Visible edges and Outlines. (b) Lines for hidden edges.	2	1	1	1
2.	Write the following statement, using single stroke vertical capital letters of 8mm size: **"Engineering graphics is the universal language of engineers."**	2	1	1	1
3.	List any four types of conics sections obtained by cutting a right circular cone.	2	1	2	2
4.	Distinguish between the curves epicycloid and hypocycloid	2	1	2	1
5.	Sketch the symbol used for indicating the first angle method of projection adopted in engineering drawing.	2	1	3	1
6.	Draw the projections and state the quadrants of the following points: i) A is 35mm below HP and 15mm in front of VP. ii) B in VP and 40mm above HP.	2	2	3	2
7.	Define trace of a plane surface?	2	1	4	1
8.	A square plane of 30mm side has one of its edges inclined 30⁰ to VP. Surface of the plane is 20mm above and parallel to HP. Draw its projections.	2	2	4	2
9.	Sketch and describe about following solids i) prism and ii) pyramid	2	1	5	1
10.	Draw the projections of the inverted vertical cone, diameter 40mm and axis 50mm with apex on HP.	2	2	5	2
	Part-B (5×8 = 40 Marks)				
11. a)	Construct a regular pentagon of side 30mm.	2	2	1	2
b)	Construct a diagonal scale of R.F. = 1: 32,00,000 to show kilometers and long enough to measure up to 400km. show the distances of 257km and 333km on the scale.	6	3	1	2

		M	L	CO	PO
12. a)	Construct a conic when the distance of its focus from its directrix is equal to 50mm and eccentricity is 2/3. Name the curve.	6	2	2	2
b)	Draw normal and tangent on the above curve at 40mm distance from directrix.	2	3	2	1
13. a)	Define trace of a line?	2	1	3	1
b)	A line AB, 60mm long has its end A in HP and 20mm in front of VP. If the line is inclined at 45^0 to H.P and 30^0 to V.P, draw its projections and mark traces.	6	3	3	2
14. a)	Draw the projections of a circle of 40 mm diameter having its plane vertical and parallel to the V.P. Its centre is 30 mm above the H.P. and 20 mm in front of the V.P.	2	3	4	2
b)	A square ABCD of 50 mm side has its corner A in the H.P., its diagonal AC inclined at 30° to the H.P. and the diagonal BD inclined at 45° to the V.P. and parallel to the H.P. Draw its projections.	6	3	4	2
15. a)	A cylinder with axis perpendicular to the V.P. and 40 mm above the H.P., its one end is 20 mm in front of the V.P. draw its projections.	2	2	5	2
b)	A pentagonal pyramid, base 25 mm side and axis 50 mm long has one of its triangular faces in the H.P. and the edge of the base contained by that face makes an angle of 30° with the V.P. Draw its projections.	6	3	5	2
16. a)	Construct a plane scale of R.F. = 1:40 to show metres and decimeters and long enough to measure up to 5 metres. Mark a distance of 3.7 metres on the scale.	4	3	1	2
b)	Draw an involute curve of a circle of diameter 40mm.	4	2	2	2
17.	Answer any *two* of the following:				
a)	A line AB of length 60mm is parallel to VP and 30mm in front of it. If the point A is 15mm above and point B is 50mm above HP respectively. Draw its projections and mark traces.	4	2	3	2
b)	A hexagonal plane, side 30mm has its one edge on H.P. If surface of the plane is 40^0 inclined to H.P, draw its projections.	4	3	4	2
c)	A pentagonal pyramid, base in the V.P. and an edge of the base in the H.P. draw its projections.	4	3	5	2

M : Marks;   L: Bloom's Taxonomy Level;   CO; Course Outcome;   PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	30%
iii)	Blooms Taxonomy Level – 3 & 4	50%

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