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Code No. : 11117 S N/O

VASAVI COLLEGE OF ENGINEERING (*AUTONOMOUS*), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. I-Semester Supplementary Examinations, August-2023

Engineering Drawing-I

(Common to 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.	Give one example each of enlarging scale, reduced scale and full scale.	2	1	1	1
2.	Draw a regular Pentagon of side 25mm.	2	1	1	1
3.	Distinguish between Epicycloid and hypocycloid.	2	1	2	1
4.	Show various conic sections obtained from a Right circular cone with a sketch.	2	1	2	1
5.	Define trace of a straight line. How many traces will be there for a line if the line is (a) parallel to both HP and VP (b) Inclined to HP (c) Inclined to both HP and VP?	2	1	3	1
6.	Show the symbol used for first and third angle projection methods.	2	1	3	1
7.	What are the various orientations of a perpendicular plane?	2	1	4	1
8.	A square plane of sides 40mm is resting on a corner on the HP with all sides equally inclined to the HP. If the square plane is 25mm in front of VP, draw its projections.	2	1	4	1
9.	Distinguish between truncated cone and frustum of a cone.	2	1	5	1
10.	What are solids of revolution? Give examples.	2	1	5	1
Part-B (5×8 = 40 Marks)					
11. a)	Mention two rules used for dimensioning.	2	1	1	1
b)	Construct a diagonal scale of RF= 3/100 showing meters, decimeters and centimeters and to measure up to 5 meters. Show a length of 3.69 meters on it.	6	2	1	2
12. a)	Give two applications where ellipse, parabola and hyperbola are used.	2	1	2	1
b)	A circle of 50mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference, for one complete revolution of the circle. Draw a normal and tangent to the above curve at a distance of 30mm from the fixed straight line.	6	3	2	2

Contd... 2

13. a)	Write the differences between first and third angle projection methods.	2	1	3	1
b)	The front view of a line AB measures 65mm and makes an angle of 45° with xy. A is in the HP and the VT of the line is 15 below the HP. The line is inclined at 30° to the VP. Draw the projections of AB and find out its true length and inclination with the HP. Also locate the HT.	6	3	3	2
14. a)	Differentiate an oblique plane from a profile plane?	2	2	4	1
b)	A regular hexagonal lamina ABCDEF of side 25 has one of its corners (Say D) on the HP with the surface inclined at 45° to the HP and the top view of the diagonal through that corner is perpendicular to the VP. Draw its projections.	6	3	4	2
15. a)	Classify different types of solids with examples.	2	2	5	1
b)	A hexagonal prism, base 40mm side and height 65mm, has its axis inclined at 45° to the HP and has an edge of its base on the HP. Draw its projections.	6	3	5	2
16. a)	The distance between two points on a map is 5cm. the real distance between them is 20m. draw a diagonal scale to measure up to 60m and show on it a distance of 43.6m on it.	4	2	1	1
b)	Draw the involute of a circle of 50mm diameter.	4	2	2	2
17.	Answer any <i>two</i> of the following:				
a)	A straight line AB of 70 mm long is inclined at 30 degrees with HP and 60 degrees with VP. The point A is 20mm above the HP and 15mm in front of the VP. Draw its projections.	4	3	3	2
b)	A circle of 40 mm diameter is resting on the HP on a point with its plane inclined at 30 degrees to the HP. Draw the projections of the circle.	4	3	4	2
c)	A triangular prism of base 30mm side and axis 55mm long lies on one of its rectangular faces in HP, with its axis perpendicular to the VP. Draw its projections.	4	3	5	2

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

i)	Blooms Taxonomy Level - 1	21%
ii)	Blooms Taxonomy Level - 2	24%
iii)	Blooms Taxonomy Level - 3 & 4	55%
