	INDIAN SCHOOL AL WADI AL KABIR	
Class: XII	Department: SCIENCE 2020 -2021 SUBJECT : Engineering Graphics	Date of submission: 16.04.2020
Worksheet No:1	Topic: Engineering Graphics - **ISOMETRIC PROJECTION**	Note: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC.	ROLL NO.

MULTIPLE CHOICE QUESTIONS

1. The isometric projection of a sphere is --------

a) Ellipse

b) Circle

c) Sphere

d) None of the above

2.Which of the projection is mainly used in engineering practice ------

a) Perspective projection

b) Isometric projection

c) Orthographic projection

d) Axonometric projection

3. Isometric projection comes under which category of projections----------

a)Axonometric projection

b)Perspective projection

c) Oblique projection

d)None of the above

4.In isometric projection all the three principal axes are inclined at an angle of -------

a)120 degree

b)45 degree

c)30 degree

d) 60 degree

5.The angle difference between true scale and isometric scale is -------

a)30 degree

b) 15 degree

c)45 degree

d) None of the above

6. The isometric length is measured in isometric scale at an angle of -----------

a) 90 degree

b)45 degree

c) 30 degree

d) 20 degree

7. The true scale is measured in isometric scale at an angle of -----------

a) 15 degree

b) 90 degree

c) 45 degree

d) 30 degree

8.The isometric projection of a circle is --------

a) Circle

b) Sphere

c) Ellipse

d) None of the above

9.The isometric view is the drawings with -----

a)Reduced scale

b) Actual scale

c) Vernier scale

d) Isometric scale

10.Isometric projection is smaller than actual drawings upto the value --------

a) 82 %

b) 90 %

c) 75%

d) None of the above

WORKSHEET PRACTICE QUESTIONS

1.A square prism of base edge 80 mm and height of 30 mm is resting on H.P. with its square base on it. One of the base edges of the prism is parallel to V.P.,A hexagonal pyramid of base edge 30 mm and height of 70 mm is placed centrally on its top square face, with its hexagonal base on it. One of the base edges of the pyramid, is parallel to V.P. Draw the isometric projection of the solids placed together to isometric scale. Draw the common axis and show the direction of viewing. Give all dimensions.

2.Draw the isometric projection to isometric scale, of the frustum of a regular pentagonal pyramid of base edge 50 mm and top edge 30 mm, with its pentagonal end resting on the H.P. The height of the solid is 70 mm with its axis perpendicular to the H.P. One of the base edge ,which is nearer the observer is parallel to the V.P. Draw the axis and indicate the direction of viewing.

3.A vertical hexagonal prism of base edge 20 mm and height of 70 mm is placed centrally on the top circular face of a hemisphere of diameter 80 mm. Two base edges of the prism are perpendicular to V.P. The common axis is perpendicular to H.P. Draw the isometric projection of the combination of solids. Show the common axis and indicate the direction of viewing. Give all dimensions.

4.A hemisphere of diameter 60 mm is placed centrally with its circular face upwards, on a pentagonal prism of base edge 50 mm and height 20 mm. One of the base edges of the pentagonal prism is perpendicular to the V.P. The common axis is perpendicular to the H.P. Draw the isometric projection of the combination of solids and give all the dimensions. Indicate the direction of viewing.

5.Draw the isometric projection to isometric scale of an inverted cone of diameter 70 mm and height of 75 mm with its circular face on top and its axis perpendicular to the H.P. Give all the dimensions and direction of viewing.

6.A frustum of triangular pyramid of base edge 40 mm and top edge 30 mm and height of 60 mm is kept with its axis perpendicular to H.P. One of the base edges is nearer to the observer and is parallel to V.P. Draw its isometric projection and show the axis and indicate the direction of viewing ,Give all the dimensions

7. Construct the isometric projection of a hemisphere of diameter 80 mm, resting on H.P., with its curved surface on it and top circular face, parallel to H.P. The axis is perpendicular to H.P. Draw the axis, marking the center of its circular face and its height from H.P. Give dimensions.

8.A hexagonal pyramid of base edge 25 mm and height 50 mm, is placed centrally on the top face of a square prism of base side 80 mm and height 20 mm. Two of the opposite edges of the hexagonal base of the pyramid are perpendicular to the V.P. The common axis is perpendicular to the H.P. Draw the isometric projection of the combination to isometric scale and give all the dimensions and indicate the direction of viewing.

9.Construct an isometric projection of a frustum of a hexagonal pyramid of base side 30 mm and top side of 25 mm and axis height is 50 mm. when resting on H.P. on its base, one of the base sides is parallel to V.P. and the axis is perpendicular to H.P. Give all the dimensions.

10.A frustum of square pyramid of base edge 60 mm and top edge 50 mm, height of 70 mm keeping it erect and its axis perpendicular to H.P. Two of its base edges are perpendicular to V.P.Draw its isometric projection and give all dimensions and direction of viewing.

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