Roll Number		

SET B

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION
ENGINEERING GRAPHICS

CLASS: XI | Sub. Code: 046 | Time Allotted: 3 Hrs

24.09.2019 | Max. Marks: 70

General Instructions:

1. Attempt all questions.
2. Follow SP-46-1988 Codes. Use first angle method of projection.
3. Missing and mismatching dimensions should be assumed suitably.
4. All dimensions are in millimeters.
5. Use both sides of the drawing sheet.

1.	Construct a rhomboid given the diagonals = 80 mm and 50 mm. Angle between the diagonals = 60°.	4
2.	Construct an triangle given the altitude = 30 mm, median from vertex A = 36 mm. Median from vertex B = 51 mm.	4
3.	Construct an Octagon of side 35 mm using set-square.	4
4.	Draw an arc of radius 70 mm tangentially externally to a circle of radius 20 mm and internally to another circle of radius 30 mm. The centers of two circles are 60 mm apart. Also mark the point of tangency.	8
5.	Inscribe 5 equal circles in a pentagon of side 30 mm, each circle touching two sides of the pentagon	8
6.	Draw a single start helix of 80mm pitch on a vertical cylinder of diameter 50 mm and develop the helix.	12
7.	Construct a parabola by intersecting lines method. Given base = 80 mm and axis = 70 mm.	12
8.	Draw the projections of the following points. a) Point 'T' 25 mm above the HP and 30 mm in front of VP. b) Point 'V' 35 mm below the HP and 30 mm behind the VP. c) Point 'W' 30 mm above the HP and 35 mm behind the VP.	6
9.	A pentagonal lamina of edge 30mm rests on HP on one of its edges. Its plane is parallel to VP and 40 mm away from it. Draw its orthographic projections.	6
10.	A Hexagonal lamina of edge 40 mm is parallel to HP and 50 mm above it. One of its edges is parallel and nearer to VP. This parallel edge is 25 mm away from VP. Draw its orthographic projections.	6

End of the Question Paper

Roll Number		

SET C

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION
ENGINEERING GRAPHICS

CLASS: XI | Sub. Code: 046 | Time Allotted: 3 Hrs.

24.09.2019 | Max. Marks: 70

General Instructions:

a. Attempt all questions.
b. Follow SP-46-1988 Codes. Use first angle method of projection.
c. Missing and mismatching dimensions should be assumed suitably.
d. All dimensions are in millimeters.
e. Use both sides of the drawing sheet.

1. Construct any two polygon upon a common side of 30 mm. 4
2. Construct a triangle given the perimeter = 70 mm and the base angles are 60° and 45°. 4
3. Construct a square ABCD having EF, the sum of the diagonal and one side equal to 100mm. 4
4. Center lines of two meter gauge railway tracks are at a distance of 50mm. It is required to connect them by a reverse curve (Ogee Curve) starting from point A on the track to a point B on the second track such that the straight line distance AB is equal to 140mm. The point of tangency of the two curves is 60mm from A. Draw the center line of the curve. 8
5. Inscribe 5 equal semicircles in a pentagon of side 30 mm, each semicircle touching sides of the pentagon. 8
6. Draw a single start helix of 80mm pitch on a vertical cylinder of diameter 50 mm and develop the helix. 12
7. A circle of diameter 50 mm rolls along a straight line without slipping. Draw the curve traced by a point 'P' on the circumference for one complete revolution of the circle. 12
8. Draw the projections of the following points. 6
   a) Point 'X' 25 mm above the HP and 30 mm in front of VP.
   b) Point 'Y' 35 mm below the HP and 30 mm behind the VP.
   c) Point 'Z' 30 mm above the HP and 35 mm behind the VP.
9. A square lamina of edge 30mm rests on HP on one of its edges. Its plane is parallel to VP and 40 mm away from it. Draw its orthographic projections. 6
10. A rectangular lamina of edge 40*60 mm is parallel to HP and 50 mm above it. One of its edges is parallel and nearer to VP. This parallel edge is 25 mm away from VP. Draw its orthographic projections. 6

End of the Question Paper