INDIAN SCHOOL AL WADI AL KABIR

Class: XII	**Department: SCIENCE**	
MARKS: 35	**SAMPLE PAPER - 2** **ENGINEERING GRAPHICS (046)**	**DURATION :90 mins**

SECTION – A

MULTIPLE CHOICE QUESTIONS

S.NO	QUESTIONS	MARKS ALLOTED
1.	----------thread is also called as unified thread. a. Square thread b. BSW thread c. Metric thread d. Knuckle thread	1
2.	Isometric, diametric, trimetric projections are classifications of which type of projections? a. Perspective b. Axonometric c. Orthographic d. Oblique	1
3.	Which type of projection needs a single scale to measure along each of the three axes? a. Orthographic projection b. Isometric projection c. Oblique projection d. Perspective projection	1
4.	Screw threads are widely used for ----------from one machine parts to another. a. Power transmission b. Transmitting load c. Transmitting light d. Transmitting wind	1
5.	---------- is used to measure the foreshortened length of dimensions of any object to draw the isometric projection.	1

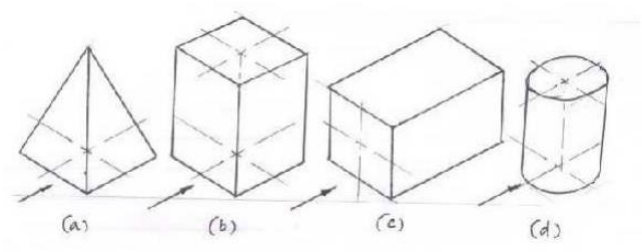
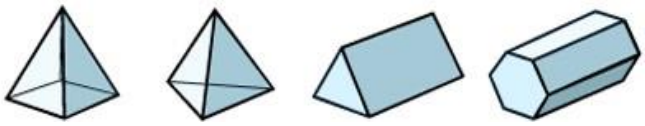
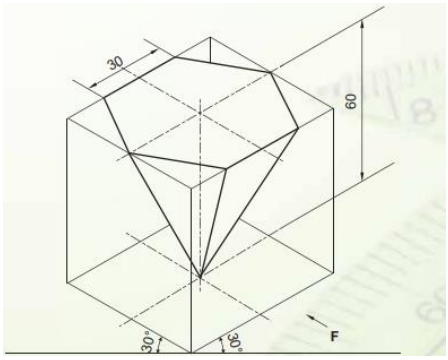
	a. True scale b Vernier scale c. Isometric scale d. T scale	
6.	The figure with true scale as per specified condition with respect to VP and HP as per the rules of orthographic projection (two-dimensional figure) is called as ---------- a. Helping figure b. Isometric view c. Diametric figure d. Trimetric figure	1
7.	The thread which is formed on the surface of cylinder is called as? a. Parallel thread b. Taper thread c. Internal thread d. Square thread	1
8.	The angle difference between true length and isometric length is ---------- a. 30 degree b. 45 degree c. 15 degree d. 90 degree	1
9.	The solids with two bases and rectangular faces are called as ------- a. Prisms b Pyramids c. Triangles d. Circles	1
10.	Name the thread which is used in railway carriage coupling screws and on the neck of glass bottles? a. BSW thread b. Metric thread internal c. Metric thread external d. Knuckle thread	1
11.	Mechanisms of machine tools, valves, spindles, vice screws etc are generally provided with ----------threads. a. Square thread b. Knuckle thread c. BSW thread d. Metric thread	1

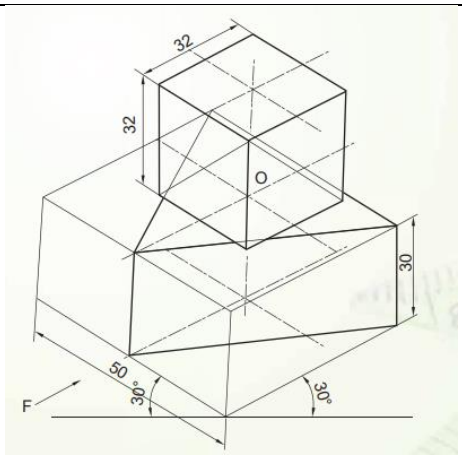
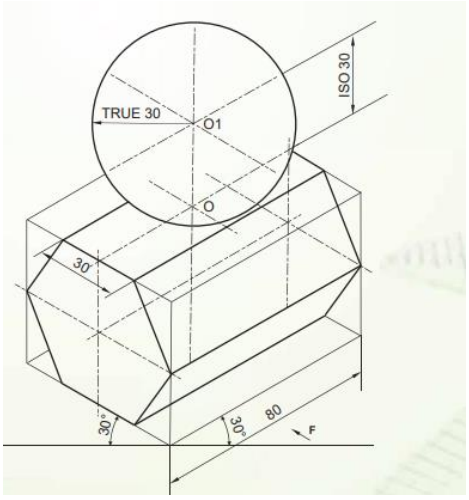
12.	Formula for calculating the minor diameter ‘d’ in metric thread internal is? a. d = 0.54P b. d = 0.61P c. d= 0.64P d. d = 0.86P	1
13.	The angle between the flanks of BSW thread is ---------- a. 45 degree b. 60 degree c. 30 degree d. 55 degree	1
14.	---------- is the distance between the corresponding points on the adjacent threads, measured parallel to the axis. a. Pitch b. Lead c. Crest d. Root	1
15.	In which type of threads, the crests are flat and roots are round? a. Metric thread external b. Metric thread internal c. BSW thread d. Square thread	1

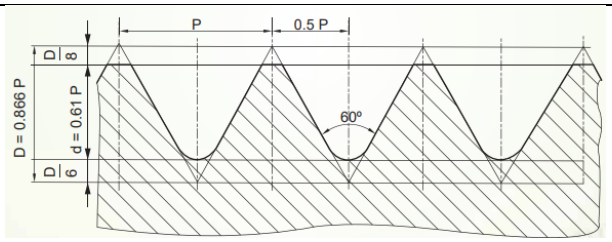
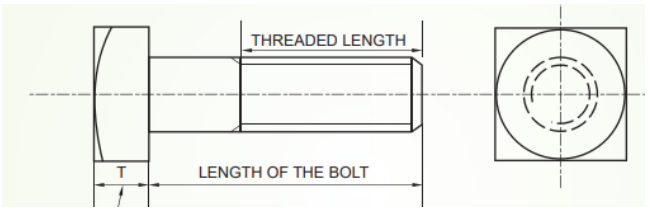
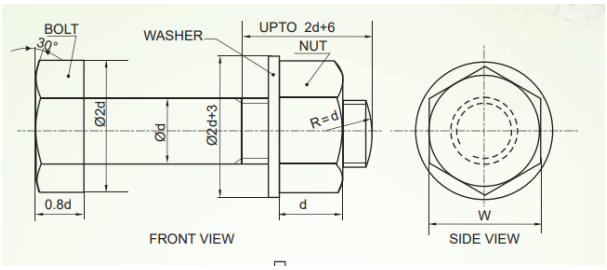
SECTION – B

DIAGRAM BASED QUESTIONS

16.	A vertical square prism with its axis perpendicular to HP.	1

		
17	A Vertical triangular pyramid  (a) (b) (c) (d)	1
18	 a) The axis is inclined to H.P. b) The axis is inclined to V.P. c) The axis is perpendicular to H.P. and parallel to V.P. d) The axis is perpendicular to V.P. and parallel to H.P	1
19		1

	 a) The top solid is square prism and the bottom solid is triangular prism. b) The top solid is cube and the bottom solid is triangular prism c) Both the solids are square prisms. d) Both the solids are triangular prisms.	
20	 a) A hemisphere is kept centrally on the top hexagonal surface of a hexagonal prism with its curved surface on it. b) A sphere is kept centrally on the top hexagonal surface of a hexagonal prism with its curved surface on it. c) A sphere is kept centrally on the top rectangular face of a hexagonal prism with its curved surface on it. d) A hemisphere is kept centrally on the top rectangular face of a hexagonal prism with its curved surface on it.	1
21	Identify the type of thread from the given figure	1

	 a. BSW thread b. Metric thread external c. Knuckle thread d. Metric thread internal	
22	Identify the type of bolt from the given figure  a. Hexagonal headed bolt b. Tee headed bolt c. Hook bolt d. Square headed bolt	1
23	 The above figure represents: a. Combination of hexagonal nut bolt and washer b. Combination of square nut bolt and washer c. Combination of hexagonal nut and bolt only d. Combination of square nut and bolt only	1

ASSERTION & REASONING TYPE QUESTIONS

TWO STATEMENTS ARE GIVEN – ONE LABELLED ASSERTION (A) AND THE OTHER LABELLED REASON (R). SELECT THE CORRECT ANSWER TO THE FOLLOWING QUESTIONS FROM THE CODES (a), (b), (c) AND (d) AS GIVEN BELOW:

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true and R is not the correct explanation of A.

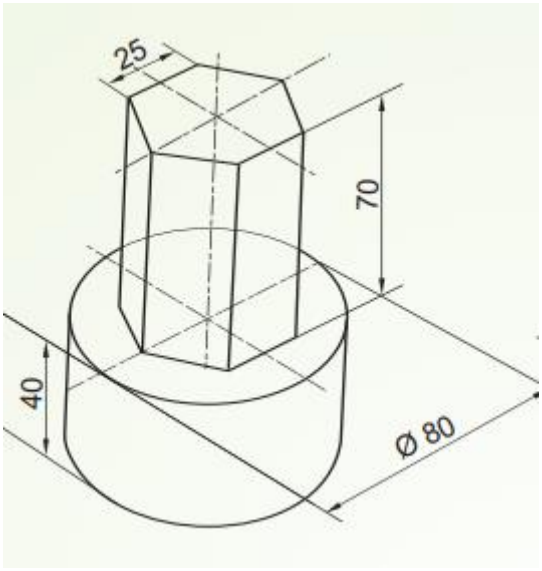
c) A is true but R is false.

d) A is false and R is also false

24	A: All types of V threads have inclined flanks making an angle between them. R: square thread is an example for V threads	1
25	A: Mechanisms of machine tools, valves, spindles, vice screws etc. are generally provided with square threads. R: Square threads are used in the neck of glass bottles.	1
26	A: A nut consists of a cylindrical body with one end threaded and the other end converted into a head. R: Nut has external threads	1
27	A: The machine parts which are used to connect two pieces together are called as fasteners. R: Welding is an example for permanent fastening.	1
28	A: The isometric scale is used to measure the true length of dimensions of any object to draw the isometric projection. R: Isometric length is measured at an angle of 45 degree in isometric scale.	1
29	A: The surface connecting crest and root is called as flank. R: The angle between the flanks of a Metric thread is 55 degree.	1
30	A: Chamfering on a nut is the process of removing sharp corners by rounding off the corners. R: Chamfering is done on a nut to ensure the safety of the user.	1

SECTION C

ANSWER THE FOLLOWING QUESTIONS AFTER READING THE GIVEN PASSAGE:

31.	Varun is very good in drawing, he drew a 3 D drawing in a paper and he made the model of the same drawing using chart paper. He is aspiring to win the Inter-School Model making competition this year.  What is the orientation of the common axis of these two solids? a) Axis parallel to HP and VP b) Axis perpendicular to HP c) Axis perpendicular to VP d) None of the above	1
32	According to his drawing, identify the position of solids? a) A hexagonal prism is kept centrally on the top of a cylinder. b) A hexagonal pyramid is kept centrally on the top of a hemisphere c) A cylinder is kept centrally on the top of hexagonal prism d) A hemisphere is kept centrally on the top of a cylinder	1
33	If he has used isometric projection method to obtain the 3 – D model, then the size of the drawing will be? a) Same b) Foreshortened c) Double d) Halved	1

34	If he has used isometric projection method, then the scale used for drawing: a) Vernier scale b) True scale c) Isometric scale d) T scale	1
35	If he has used true scale to obtain the 3 D figure, then it is called as: a) Isometric projection b) Orthographic projection c) Isometric view d) Perspective view	1

ANSWER KEY

1	2	3	4	5
c	b	b	a	c
6	7	8	9	10
a	a	c	a	d
11	12	13	14	15
a	a	d	a	a
16	17	18	19	20
b	b	c	b	c
21	22	23	24	25
b	d	a	c	c
26	27	28	29	30
d	b	d	c	a
31	32	33	34	35
b	a	b	c	c