## INDIAN SCHOOL AL WADI AL KABIR

DEPARTMENT OF SCIENCE 2021-22
CLASS 12- UNIT TEST 1 -ENGINEERING GRAPHICS - 2021
[QUESTIONPAPER \& ANSWER KEY]

| Class: XII |  | Department: SCIENCE | Date: 30/05/2021 |  |
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| MARKS: 30 |  | UNIT TEST $1-\mathrm{QP}+\mathrm{MS}$ ENGINEERING GRAPHICS (046) | DURATION :1 HOUR |  |
| S.NO | QUESTIONS |  |  | MARKS ALLOTED |
| 1. | The projection that extensively used in mechanical engineering is --- <br> a. Oblique projection <br> b. Axonometric projection <br> c. Perspective projection <br> d. Orthographic projection |  |  | 1 |
| 2. | Isometric, diametric, trimetric projections are classifications of which type of projections? <br> a. Perspective <br> b. Axonometric <br> c. Orthographic <br> d. Oblique |  |  | 1 |
| 3. | Which type of projection needs a single scale to measure along each of the three axes? <br> a. Orthographic projection <br> b. Isometric projection <br> c. Oblique projection <br> d. Perspective projection |  |  | 1 |
| 4. | In isometric projection all the three principal axes appear to be inclined to each other at an angle of $\qquad$ <br> a. 120 degree <br> b. 30 degree <br> c. 90 degree <br> d. 45 degree |  |  | 1 |


| 5. | ----------------- is used to measure the foreshortened length of <br> dimensions of any object to draw the isometric projection. <br> a. True scale <br> b Vernier scale <br> c. Isometric scale <br> d. T scale | 1 |
| :--- | :--- | :--- |
| 6. | The figure with true scale as per specified condition with respect to <br> VP and HP as per the rules of orthographic projection (two- <br> dimensional figure) is called as --------- <br> a. Helping figure <br> b. Isometric view <br> c. Diametric figure <br> d. Trimetric figure | 1 |
| 7. | The true length is measured in isometric scale with an angle of ------- <br> a. 30 degree <br> b 45 degree <br> c. 90 degree <br> d. 120 degree | 1 |
| 8. | The angle difference between true length and isometric length is ----- <br> ---- <br> a. 30 degree <br> b. 45 degree <br> c. 15 degree <br> d. 90 degree | 1 |
| 9. | The solids with two bases and rectangular faces are called as -------- <br> a. Prisms <br> b Pyramids <br> c. Triangles <br> d. Circles | 1 |
| 12. | The faces of the pyramid will meet at a point, and that point is <br> called as ----- <br> a. Apex of pyramid <br> b. Side of pyramid <br> c. Face of pyramid <br> d. Base of pyramid | 1 |
| 11. | How many helping figures are required to draw combination of <br> solids? <br> a. 2 the truncated lower portion of the solid is called as ----------- <br> a. Prism <br> b. Pyramid <br> c. Frustum <br> d. Cylinder | 1 |


|  | $\begin{aligned} & \hline \text { b. } 4 \\ & \text { c. } 3 \\ & \text { d. } 1 \end{aligned}$ |  |
| :---: | :---: | :---: |
| 13. | Which solid is having only one point of contact with the plane of rest? <br> a. Sphere <br> b. Hemisphere <br> c. Cone <br> d. Cylinder | 1 |
| 14. | Bolts and nuts are examples of which type of fastener? <br> a. Permanent fastener <br> b. Temporary fastener <br> c. Unthreaded fastener <br> d. None of the above | 1 |
| 15. | Identify and name the thread represented in the given below figure? <br> a. BSW thread <br> b. Knuckle thread <br> c. Metric thread internal <br> d. Metric thread external | 1 |
| 16. | Screw threads are widely used for $\qquad$ -from one machine parts to another. <br> a. Power transmission <br> b. Transmitting load <br> c. Transmitting light <br> d. Transmitting wind | 1 |
| 17. | The thread which is formed on the surface of cone is called as? <br> a. Parallel thread <br> b. Taper thread <br> c. Internal thread <br> d. External thread | 1 |
| 18. | The surface connecting crest and root is called as a. Root | 1 |


|  | b. Flank <br> c. Crest <br> d. Lead |  |
| :---: | :---: | :---: |
| 19. | Name the thread which is used in railway carriage coupling screws and on the neck of glass bottles? <br> a. BSW thread <br> b. Metric thread internal <br> c. Metric thread external <br> d. Knuckle thread | 1 |
| 20. | Mechanisms of machine tools, valves, spindles, vice screws etc are generally provided with $\qquad$ -threads. <br> a. Square thread <br> b. Knuckle thread <br> c. BSW thread <br> d. Metric thread | 1 |
| 21. | A square thread of nominal diameter of 40 mm and pitch of 4 mm is designated as $\qquad$ <br> a. SQ $4 \times 40$ <br> b. SQ $40 \times 4$ <br> c. SQ 40 <br> d. SQ 4 | 1 |
| 22. | Formula for calculating the minor diameter 'd' in metric thread internal is? <br> a. $\mathrm{d}=0.54 \mathrm{P}$ <br> b. $\mathrm{d}=0.61 \mathrm{P}$ <br> c. $\mathrm{d}=0.64 \mathrm{P}$ <br> d. $\mathrm{d}=0.86 \mathrm{P}$ | 1 |
| 23. | The angle between the flanks of BSW thread is $\qquad$ <br> a. 45 degree <br> b. 60 degree <br> c. 30 degree <br> d. 55 degree | 1 |
| 24. | $\qquad$ -thread is also called as unified thread. <br> a. Square thread <br> b. BSW thread <br> c. Metric thread <br> d. Knuckle thread | 1 |
| 25. | Formula for calculating the major diameter ' $D$ ' in metric thread external is? | 1 |


|  | a. D $=0.86 \mathrm{P}$ <br> b. D $=0.96 \mathrm{P}$ <br> c. D $=0.64 \mathrm{P}$ <br> d. $\mathrm{D}=0.61 \mathrm{P}$ |  |
| :--- | :--- | :--- |
| 26. | In knuckle thread the tangential semicircles should be drawn with a <br> radius of -------- <br> a. R $=0.5 \mathrm{P}$ <br> b. R $=0.25 \mathrm{P}$ <br> c. R $=0.15 \mathrm{P}$ <br> d. R $=0.45 \mathrm{P}$ | 1 |
| 27. | In which type of threads, the crests are flat and roots are round? <br> a. Metric thread external <br> b. Metric thread internal <br> c. BSW thread <br> d. Square thread | 1 |
| 28. | In which type of thread, the clearance space is equally provided as <br> D/6 on both sides. <br> a. Metric thread external <br> b. BSW thread <br> c. Metric thread internal <br> d. Knuckle thread | 1 |
| 29. | --------------- is the distance between the corresponding points on <br> the adjacent threads, measured parallel to the axis. | 1 |
| 30. | The isometric projection of a sphere will be-------- <br> a. Circle <br> b. Sphere <br> c. Ellipse <br> d. Parabola | a. Pitch <br> b. Lead <br> c. Crest <br> d. Root |

ANSWER KEY

| $\mathbf{1 .}$ | $\mathbf{2 .}$ | $\mathbf{3 .}$ | $\mathbf{4 .}$ | $\mathbf{5 .}$ | $\mathbf{6 .}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| b | b | b | a | c | a |
| $\mathbf{7 .}$ | $\mathbf{8 .}$ | $\mathbf{9 .}$ | $\mathbf{1 0 .}$ | $\mathbf{1 1 .}$ | $\mathbf{1 2 .}$ |
| b | c | a | a | c | a |
| $\mathbf{1 3 .}$ | $\mathbf{1 4 .}$ | $\mathbf{1 5 .}$ | $\mathbf{1 6 .}$ | $\mathbf{1 7 .}$ | $\mathbf{1 8 .}$ |
| a | b | c | a | b | b |
| $\mathbf{1 9 .}$ | $\mathbf{2 0 .}$ | $\mathbf{2 1 .}$ | $\mathbf{2 2 .}$ | $\mathbf{2 3 .}$ | $\mathbf{2 4 .}$ |
| d | a | b | a | d | c |
| $\mathbf{2 5 .}$ | $\mathbf{2 6 .}$ | $\mathbf{2 7 .}$ | $\mathbf{2 8 .}$ | $\mathbf{2 9 .}$ | $\mathbf{3 0 .}$ |
| a | b | a | b | a | a |

