Seat No. _____ Enrolment No.: _____

Gujarat Technological University

Diploma Engineering C to D Bridge Course Examination

Subject Code: C300007 **Date: 22 / 12 /2014**

Subject Name: Basic Engineering Drawing

Time: 10:30am to 12:00pm **Total Marks: 70**

Instructions:

1. Attempt all questions.
2. Make suitable assumption wherever necessary.
3. Each question is of 1 mark.
4. Use of SIMPLE CALCULATOR is permissible. (Scientific/Higher Version not allowed)
5. English version is authentic.

No. Question Text and Option

1. Hidden lines are drawn as
   - A. dashed narrow lines
   - B. dashed wide lines
   - C. long-dashed dotted wide line
   - D. long-dashed double dotted wide line
2. Centre lines are drawn as
   - A. Continuous narrow lines
   - B. Dashed narrow line
   - C. Long-dashed dotted narrow line
   - D. Long-dashed double dotted narrow line
3. The inclination of letters as recommended by BIS is
   - A. 75º
   - B. 70º
   - C. 65º
   - D. 60º
4. The length to height ratio of an Closed filled arrow head is
   - A. 1:3
   - B. 3:1
   - C. 1:2
   - D. 2:1
5. The two recommended systems of placing the dimensions are
   - A. Unidirectional and Aligned systems
   - B. Upright and inclined systems
   - C. Linear and oblique systems
   - D. Linear and inclined systems
6. The dimension figure for diameter of a circle should be:
   - A. Preceded by the symbol 'Ø'
   - B. Suffixed by the symbol 'Ø'
   - C. Preceded by the symbol 'D'
   - D. Suffixed by the symbol 'D'
7. Which of the following is not a specified method for dimensioning?
   - A. Parallel dimensioning
   - B. Perpendicular dimensioning
   - C. Continuous Dimensioning
   - D. Dimensioning by coordinates
8. In the engineering system of paper sizes, which of the following is “A2” size?
   - A. 841 mm × 1189 mm
   - B. 594 mm × 841 mm
   - C. 420 mm × 594 mm
   - D. 210 mm × 297 mm
9. Which of the following pencil leads is hardest?
   - A. HB
   - B. H
   - C. B
   - D. F
10. Parallel lines can be drawn with the help of
    - A. Mini-drafter
    - B. T-square
    - C. Pair of set squares
    - D. All of these
11. Grid References on a drawing sheet provide the following information
    - A. Location of details, additions, modifications, revisions, etc. of drawing
    - B. To facilitate the positioning of the drawing when reproduced
    - C. To facilitate trimming
    - D. To facilitate brief record and initials of the person responsible
12. Revision tables on a drawing sheet provide the following information
    - A. Designation of revision
    - B. Date of revision
    - C. Initials of the person responsible
    - D. All the above

13. Which of the following is preferred containing the statement "All dimensions are in millimetres unless otherwise specified"
    A. Frames and Borders B. Title block
    C. Item List D. Revision Table
14. When two graphic entities are at a constant distance apart along the length is commonly referred as
    A. Concentricity B. Parallelism
    C. Perpendicularity D. Chordality
15. If a line intersects a circle at two points, not passing through the center, the line segment inside the circle is referred as
    A. Radial line B. Chord
    C. Quadrant D. Sequent
16. If an octagon is circumscribed around the perimeter of a circle, which of the following statements is true?
    A. The diameter of the circle is equal to the across-the-corners measurement. B. The radius of the circle is equal to the across-the-flats measurement.
    C. The diameter of the circle is equal to the across-the-flats measurement. D. The radius of the circle is equal to the across-the-corners measurement.
17. Line XY is to be divided into 12 equal parts by geometric construction. Which of the following statements concerning this procedure is correct?
    A. Ray line PY, drawn from Y, is the same length as XY B. A compass should be set to spread equal to one twelfth of the length of XY
    C. A line should be drawn from X to the 12th interval on ray line PY D. The acute angle formed by XY and ray line PY should be 30° or less
18. The included angle of a pentagon is
    A. 68º B. 72º
    C. 108º D. 112º
19. If a point moves in a plane in such a way that the sum of its distances from two fixed points is constant the curve so traced is called
    A. Ellipse B. Parabola
    C. Hyperbola D. None of these
20. Name the curve traced out by a point moving in a plane such that the difference between its distances from two fixed points is constant
    A. Ellipse B. Parabola
    C. Hyperbola D. Any of these
21. When a bullet is shot in air the path traversed by the bullet is called
    A. Cycloid B. Semicircle
    C. Parabola D. Hyperbola
22. A right circular cone when cut by a plane parallel to its generator, the curve obtained is a
    A. Ellipse B. Parabola
    C. Hyperbola D. Circle
23. When a right circular cone is cut by a plane passing through its apex, the curve obtained is
    A. Ellipse B. Parabola
    C. Hyperbola D. Triangle
24. When a right circular cone is cut which meets its axis at an angle greater than the semi-apex angle, the curve obtained is
    A. Ellipse B. Parabola
    C. Hyperbola D. Triangle
25. When a right circular cone is cut which meets its axis at an angle less than the semi-apex angle, the curve obtained is
    A. Ellipse B. Parabola
    C. Hyperbola D. Triangle

26. Name the curve which has zero eccentricity
    A. Ellipse B. Parabola
    C. Hyperbola D. Circle
27. Which of the following applications hyperbolic curve is used?
    A. Solar collector B. Cooling tower
    C. Lamp reflectors D. Monuments
28. The major and minor axes of an ellipse are 100 mm and 60 mm respectively. What will be the distance of its foci from the end of the minor axis?
    A. 30 mm B. 40 mm
    C. 50 mm D. 60 mm
29. The locus of a point lying on the circumference of the circle which rolls on a straight line is known as
    A. Cycloid B. Hypocycloid
    C. Epicycloid D. Circle
30. Name the curve traced out by a point on the circumference of a circle, which rolls on another circle of larger diameter
    A. Epicycloid B. Involute
    C. Spiral D. None of these
31. When a circle rolls inside another circle of twice its diameter, the curve traced out by a point on the circumference of the rolling circle will be
    A. Straight line B. Epicycloid
    C. Spiral D. None of these
32. The curve traced by a point on a straight line which rolls on a circle, without slipping is called
    A. Cycloid B. Epicycloid
    C. Hypocycloid D. Involute
33. Involute curve is used in
    A. Chains B. Gears
    C. Cams D. Pulleys
34. When a pendulum oscillates, name the locus of a point moving along its string at a constant speed
    A. Cycloid B. Involute
    C. Spiral D. Helix
35. Which of the following methods is not used for drawing elliptical curves?
    A. Intersecting arcs method B. Concentric circles method
    C. Oblong method D. Tangent method
36. Projection of an object shown by three views is known as
    A. Perspective B. Isometric
    C. Oblique D. Orthographic
37. Which of the following describes the theory of orthographic projection?
    A. Projectors parallel to each other and perpendicular to the plane of projection
    B. Projectors parallel to each other and parallel to the plane of projection
    C. Projectors parallel to each other and oblique to the plane of projection
    D. Projectors perpendicular to each other and parallel to the plane of projection
38. In orthographic projection, the elevation is obtained on a plane called
    A. Horizontal B. Vertical
    C. Profile D. Auxiliary
39. In multi view projections, the XY line is also known as
    A. Horizontal line B. Horizontal trace
    C. Reference line D. All of these
40. In first angle projection method, the relative positions of the object, plane and observers are
    A. Object is placed in between B. Plane is placed in between
    C. Observer is placed in between D. May be placed in any order

41. In first angle projection system, the right hand side view of an object is drawn
    A. Above of the elevation B. Below of the elevation
    C. Left of the elevation D. Right of the elevation
42. If the front view of an object exhibits width and height, then what dimensions of an object are exhibited by a right side view?
    A. Length and width B. Length and height
    C. Height and width D. Length and breadth
43. For orthographic projections, B.I.S. recommends the following
    A. First angle projection B. Third angle projection
    C. Second angle projection D. Fourth angle projection
44. The recommended symbol for indicating the angle of projection shows two views of the frustum of a
    A. Square Pyramid B. Triangular pyramid
    C. Cone D. Any of these
45. The line joining the front and top views of a point is called
    A. Reference line B. Projector
    C. Connector D. Locus
46. A point lying in the HP, has its top view above XY line. Its front view will be
    A. On XY line B. Above XY line
    C. Below XY line D. Any of these
47. A point whose elevation and plan are above XY, is situated in
    A. First Quadrant B. Second Quadrant
    C. Third Quadrant D. Fourth Quadrant
48. A point whose elevation is above XY line may be situated in
    A. First Quadrant B. Second Quadrant
    C. Vertical plane D. Any of these
49. A point is 20 mm below HP and 30 mm behind VP. Its top view will be
    A. 20 mm below XY B. 30 mm below XY
    C. 20 mm above XY D. 30 mm above XY
50. The front view of a point is 50 mm above xy line and the top view is 20 mm below the front view. The point lies in
    A. First angle B. Second angle
    C. Third angle D. Fourth angle
51. If both the front and the top views of a point lie on the opposite side of the reference line the point may be situated in following angles
    A. First or second B. First or third
    C. Second or fourth D. Third or fourth
52. If both the front and the top views of a point lie on the same side of the reference line the point may be situated in following angles
    A. First or second B. First or third
    C. Second or fourth D. Third or fourth
53. If top view of a point is situated 60 mm below the reference line and its front view is 20 mm above the top view, the point lies in
    A. First angle B. Second angle
    C. Third angle D. Fourth angle
54. The front view of a point is 40 mm above xy and the top view is 50 mm below xy, the position of point is
    A. 40 mm above HP B. 40 mm below HP
    C. 50 mm above HP D. 50 mm below HP
55. State the position of a point the front view of which lies on the reference line and the top view is 40 mm above it.
    A. 40 mm above HP and in the VP B. 40 mm behind VP and in the HP
    C. 40 mm below HP and in the VP D. 40 mm in front of VP and in the HP

56. State the position of a point the top view of which lies on the reference line and the front view is 30 mm below it.
A. 30 mm above HP and in the VP B. 30 mm behind VP and in the HP
C. 30 mm below HP and in the VP D. 30 mm in front of VP and in the HP

57. If a line is parallel to both HP and VP, its true length will be seen in
A. Front View B. Top View
C. Side view D. Both front and top views
58. If the apparent and the true inclinations of a line with HP are equal, the line is
A. Parallel to horizontal plane B. Parallel to vertical plane
C. Parallel to profile plane D. Inclined to both reference planes
59. If the front view of a line is parallel to the xy line its true length is shown in
A. Front View B. Top View
C. Side view D. Both front and top views
60. If top view of a line is a point, its front view is
A. Parallel to xy line and of true length B. Parallel to xy line and of apparent length
C. Perpendicular to xy line and of true length D. Perpendicular to xy line and of apparent length
61. If a line is inclined at 45º to the HP and 30º to the VP, its front view is inclined at
A. 30º to xy B. 45º to xy
C. Between 30º and 45º D. Greater than 45º

62. A 90 mm long line PQ, inclined at 30º to the HP and 45º to the VP has end P 15 mm above HP and 25 mm in front of VP. The other end Q will lie in
A. First angle B. Third angle
C. Second or fourth angle D. Any of these
63. If the front and top views of a line are inclined at 30º and 45º to the reference line, the true inclination of the line with HP will be
A. 30º B. 45º
C. Less than 30º D. Greater than 45º
64. A right circular cone resting on a point of its base circle in the HP having the axis inclined at 30º to the HP and 45º to the VP. The angle between the reference line and top view of the axis will be
A. 30º B. Between 30º and 45º
C. 45º D. More than 45º
65. If both front and top views of a plane are straight lines the true shape will lie on
A. Profile plane B. Horizontal plane
C. Vertical plane D. Any of these
66. If a circular plane is inclined at 30º with the HP and 60º with the VP its side view will be
A. An ellipse B. A straight line
C. A circle D. True shape
67. If the top view of a plane is a rhombus the object may be
A. A square B. A rhombus
C. Either (A) or (B) D. Neither (A) nor (B)
68. An orthographic view of a hemisphere may appear as
A. Circle B. Ellipse
C. Parabola D. hyperbola
69. The number of stages that are necessary to get the orthographic views of a solid having its axis inclined to both the reference planes
A. One B. Two
C. Three D. Four
70. A cube is resting on HP with a solid diagonal perpendicular to it. The top view will appear as (a) (b) (c) (d)
A. Square B. Rectangle
C. Irregular hexagon D. Regular hexagon