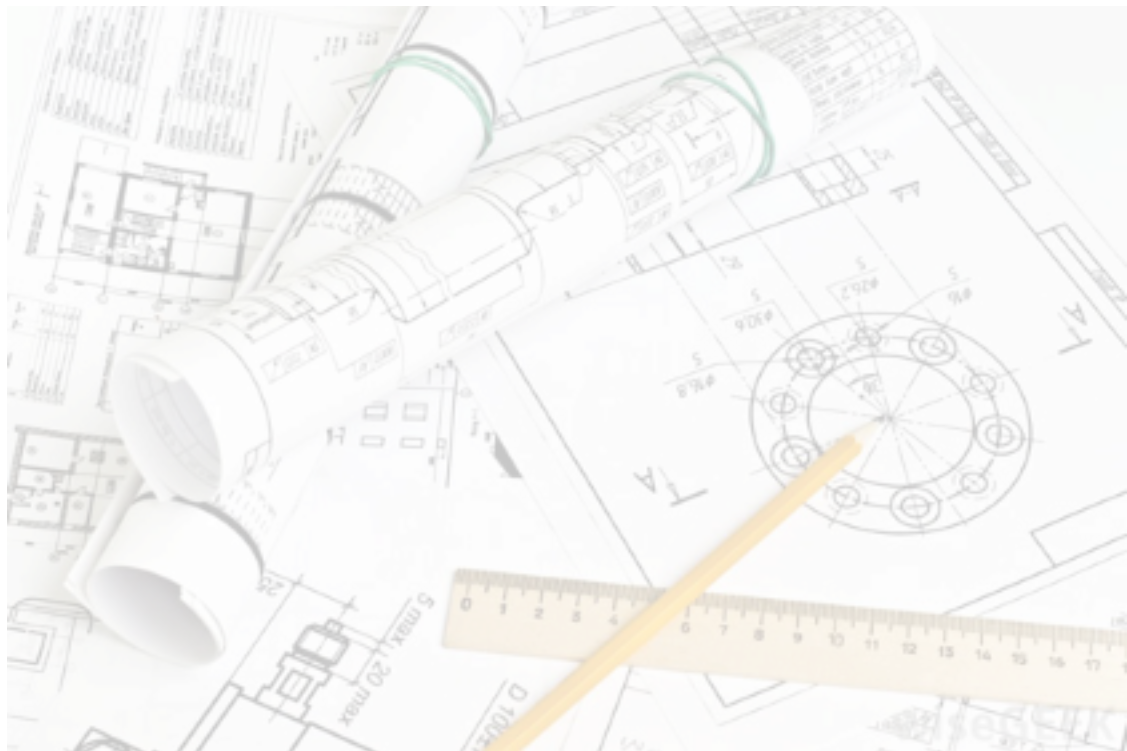


# **DRAFTSMAN (CIVIL) MODEL QUESTION PAPER**



By Team

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1. One cubic metre of Portland cement is
  - (a) 10 bags
  - (b) 20 bags
  - (c) 30 bags
  - (d) 40 bags
  
2. In a simply supported beam shear force is zero when bending moment is
  - (a) Maximum
  - (b) minimum
  - (c) Zero
  - (d) none of the above
  
3. Each term in Bernoulli's equation represents
  - (a) Energy per unit mass
  - (b) energy per unit force
  - (c) Energy per unit area
  - (d) energy per unit weight
  
4. The thickness of base of road should not be more than
  - (a) 20cm
  - (b) 30cm
  - (c) 40cm
  - (d) 50cm
  
5. Stone generally preferred for railway ballast is
  - (a) Basalt or trap granite
  - (b) Marble
  - (c) Sand stone
  - (d) Slate
  
6. The diameter of rivet hole is usually ..... the nominal diameter of the rivet
  - (a) Less than
  - (b) Not equal to

- (c) More than
  - (d) Depends on thickness of plate
7. An object is below HP and behind VP. The object is in
- (a) 1st quadrant
  - (b) 2nd quadrant
  - (c) 3rd quadrant
  - (d) 4th quadrant
8. An underground passage or tunnel to permit the traffic is called
- (a) sub way
  - (b) driveway
  - (c) Right of way
  - (d) highway
9. The value of poissons ratio depends on
- (a) cross section
  - (b) magnitude of load
  - (c) material of test specimen
  - (d) none of the above
10. What is the locus of a point on a thread unwound from a cylinder
- (a) involute
  - (b) helix
  - (c) straight line
  - (d) circle
11. Hellige turbid meter helps to measure turbidity in the range of
- (a) 0 to 50ppm
  - (b) 0 to 100 ppm
  - (c) 50 to 100ppm
  - (d) 100 ppm

12. The settling velocity of inorganic particles in a sedimentation tank is governed by
- (a) Stokes law
  - (b) Darcy's law
  - (c) Chezy's law
  - (d) Dupuit's formula
13. Disinfection power of chlorine increases with
- (a) lower value of pH
  - (b) higher value of pH
  - (c) At neutral pH
  - (d) Remains unaffected
14. A scour valve in water distribution system is provided at
- (a) High points
  - (b) Low points
  - (c) junction points
  - (d) all of these
15. The suitable layout of water distribution system for an irregularly grown town is
- (a) Dead end system
  - (b) Grid iron system
  - (c) Ring system
  - (d) Radial system
16. The valve used for controlling the flow
- (a) Scour valve
  - (b) Check valve
  - (c) Sluice valve
  - (d) Pressure relief valve
17. Which of the following formula is used to find diameter of rivet?
- (a) Unwin's formula

- (b) The French formula
  - (c) The German formula
  - (d) All of these
18. Web Crippling generally occurs at the point where
- (a) bending moment is maximum
  - (b) shearing force is minimum
  - (c) concentrated loads act
  - (d) deflection is maximum
19. The maximum permissible slenderness ratio of a member carrying loads resulting from wind, is
- (a) 250
  - (b) 180
  - (c) 200
  - (d) 300
20. The maximum area of tension reinforcement in beams shall not exceed
- (a) 4%
  - (b) 1%
  - (c) 1.5%
  - (d) 0.15%
21. As the percentage of steel increases
- (a) depth of neutral axis decreases
  - (b) depth of neutral axis increases
  - (c) leverarm increases
  - (d) lever arm decreases
22. the factor of safety against sliding for a retaining wall is
- (a) 1.0
  - (b) 1.25
  - (c) 1.5

(d) 2.0

23. Design of R.C.C. cantilever beams, is based on the resultant force at

- (a) fixed end
- (b) free end
- (c) mid span
- (d) mid span and fixed support

24. If the diameter of longitudinal bars of a square column is 16 mm, the diameter of lateral ties should not be less than

- (a) 4 mm
- (b) 5 mm
- (c) 6 mm
- (d) 8 mm

25. The maximum vacuum created at the summit of a syphon is

- (a) 2.7 m of water
- (b) 7.4 m of water
- (c) 5.5 m of water
- (d) 3.4 m of water

26. Total drag on a sphere is approximately equal to ..... of that of vertical disc

- (a)  $\frac{1}{3}$
- (b)  $\frac{1}{2}$
- (c)  $\frac{1}{4}$
- (d)  $\frac{1}{6}$

27. The body in which its surface does not coincide with streamline is called

- (a) fluidic body
- (b) dynamic body
- (c) bluff body
- (d) streamlined body

28. Reynolds number is the ratio of
- (a) Viscous force to inertia force
  - (b) elastic to pressure force
  - (c) gravity to inertia force
  - (d) none of the above
29. A Kaplan turbine is
- (a) high head axial flow
  - (b) axial flow reaction turbine
  - (c) low head axial flow turbine
  - (d) none of the above
30. The necessary and sufficient condition for a surface to be called as 'free surface' is
- (a) Shear stress acting on it must be zero
  - (b) no stress should be acting on it
  - (c) tensile stress acting on it must be zero
  - (d) no point on it should be under any stress
31. For Froude's number greater than 9, the hydraulic jump is known as
- (a) Undular
  - (b) weak
  - (c) choppy
  - (d) oscillating
32. Which of the following represents least pressure?
- (a) mm of mercury
  - (b) milli bar
  - (c) N/mm<sup>2</sup>
  - (d) kgf/cm<sup>2</sup>
33. The product of tangent of equipotential lines and flow lines is

- (a) -1
- (b) 0
- (c) 1
- (d) 2

34. The fixed mooring does not require

- (a) Mooring post
- (b) bollard
- (c) Anchors
- (d) capstan

35. As metacentric increases, comfort to passengers

- (a) decreases
- (b) increases
- (c) remains unchanged
- (d) uncertain

36. A harbour is a place where

- (a) ships get shelter and protection against destructive forces due to sea waves
- (b) facilities are provided for receiving cargo and passengers
- (c) port buildings are constructed for commercial purposes
- (d) all the above

37. A harbour without any port complex, is called a

- (a) Port harbour
- (b) Fishery harbour
- (c) Refuge harbour
- (d) None of the above

38. Tensile strength of steel used in rail should not be less than

- (a) 450 MPa.
- (b) 500 MPa.



- (c) 700 MPa.
- (d) 750 MPa.

39. Largest percentage of material in the rail is in its
- (a) Head
  - (b) web
  - (c) foot
  - (d) head and foot both
40. Due to battering action of wheels over the end of the rails, the rails get bent down and are deflected at ends. These rails are called
- (a) roaring rails
  - (b) hogged rails
  - (c) corrugated rails
  - (d) buckled rails
41. Design of flexible pavements is based on
- (a) empirical formulae
  - (b) mathematical analysis
  - (c) both of these
  - (d) none of these
42. First operation during the detailed survey of a hill road, is
- (a) derivation of longitudinal and cross-sections
  - (b) adjustment of alignment along with curves
  - (c) hydrological and soil surveys
  - (d) fixation of Bench Marks
43. The minimum Water content at which the soil just begins to crumble when rolled into threads 3 mm in diameter, is known
- (a) Liquid limit
  - (b) plastic limit
  - (c) Shrinkage limit

(d) permeability limit

44. The liquid limit and plastic limit exist in

- (a) sandy soils
- (b) silty soils
- (c) gravel soils
- (d) clay soils

45. The relationship between void ratio ( $e$ ) and porosity ratio ( $n$ ) is

- (a)  $n = (1+e)/(1-e)$
- (b)  $n = (1-e)/(1+e)$
- (c)  $n = e/(1-e)$
- (d)  $e = n/(1-n)$

46. The fathometer is used to measure the depth of

- (a) Lake
- (b) Stream
- (c) River
- (d) Ocean

47. .... Is a perspective projection upon a tangent plane, the projecting line radiating from the centre

- (a) Polyconic projection
- (b) Mercator projection
- (c) Gnomonic projection
- (d) None of the above

48. In plane geometry the sum of angles of a triangle is two right angles, whereas in spherical geometry it is always

- (a) Equal to two right angles
- (b) less than two right angles
- (c) Greater than two right angles
- (d) None of the above

49. The untrimmed size of A2 drawing sheet is
- (a) 450x625 mm
  - (b) 420X594 mm
  - (c) 594X841 mm
  - (d) 625X880mm
50. To observe an included angle with better accuracy with a Vernier theodolite, it is preferred:
- (a) The method of repetition
  - (b) Method of reiteration
  - (c) Method of double observation
  - (d) Method of exactness
51. The contour interval is kept inversely proportional to:
- (a) Time and expense of the work
  - (b) Steepness and configuration of the area
  - (c) Scale of the map
  - (d) All of the above
52. Determining the difference in elevation between two points on the surface of the earth, is known as
- (a) levelling
  - (b) simple leveling
  - (c) differential levelling
  - (d) longitudinal levelling
53. The lens nearer the eye is called eyepiece
- (a) eyepiece
  - (b) chromatic lens
  - (c) telescopic lens
  - (d) none of the above

54. Resolving power of a telescope depends on
- (a) The diameter of the aperture
  - (b) The pupil aperture of the eye
  - (c) The diameter of the object glass
  - (d) all the above
55. Under ordinary conditions, the precision of a theodolite traverse is affected by
- (a) systematic angular errors
  - (b) accidental linear errors
  - (c) Systematic linear errors
  - (d) accidental angular errors
56. Stadia tachometry was discovered
- (a) James Watt
  - (b) Pythagoras
  - (c) Archimedes
  - (d) Euclid
57. The properties of autogenous curve for automobiles are given by
- (a) true spiral
  - (b) Bernoulli's Lemniscate
  - (c) cubic parabola
  - (d) clothoid spiral
58. If deflection angles are measured in a closed traverse, the difference between the sum of the right-hand and that of the left hand angles should be equal to
- (a)  $0^\circ$
  - (b)  $90^\circ$
  - (c)  $180^\circ$
  - (d)  $360^\circ$

59. For indirect ranging, number of ranging rods required, is
- (a) 1
  - (b) 2
  - (c) 3
  - (d) 4
60. Pantagraphis used for
- (a) measuring distances
  - (b) measuring areas
  - (c) Enlarging or reducing plans
  - (d) setting out right angles
61. Mile Stone charts were invented in the year of
- (a) 1920
  - (b) 1820
  - (c) 1580
  - (d) 1940
62. The most popular type of organisation used for Civil Engineering Constructions is
- (a) line organisation
  - (b) line and staff organisation
  - (c) functional organisation
  - (d) efective organisation
63. The difference between the time avail-to do a job and the time required todo the job, is known as
- (a) event
  - (b) float
  - (c) Duration
  - (d) constraint
64. The most reliable estimate is

- (a) Preliminary estimate
- (b) Detailed estimate
- (c) Plinth area estimate
- (d) Cuberate estimate

65. The damp proof course (D.P.C.) is measured in

- (a) Cub.m
- (b) Sqm
- (c) Metres
- (d) None of these

66. The assumption on which the trapezoidal formula for volumes is based, is

- (a) The end sections are parallel planes
- (b) The mid-area of a pyramid is half the average area of the ends
- (c) The volume of the prismoidal is over-estimated and hence a prismoidal correction is applied
- (d) All the above

67. The area is measured correct to the nearest

- (a) 0.01 sqm
- (b) 0.02 sqm
- (c) 0.03 sqm
- (d) 0.04 sqm

68. Two-point perspective is also known as

- (a) Two-view perspective
- (b) Regular perspective
- (c) Parallel perspective
- (d) Angular perspective

69. This type of projection is when projectors are parallel to each other, but are at an angle other than 90 degrees to the plane of projection:

- (a) Oblique projection
  - (b) Perpendicular projection
  - (c) Aesthetic projection
  - (d) Angular projection
70. These drawings are given to contractors to perform work or manufacture individual parts
- (a) Assembly details
  - (b) 3D drawings
  - (c) Working drawings
  - (d) Skeleton assemblies
71. The kiln which may work regularly throughout the year
- (a) Bull's trench kiln
  - (b) Stay-down kiln
  - (c) Refractory kiln
  - (d) Hoffman's kiln
72. Wall thickness of hollow bricks about
- (a) 20mm to 25mm
  - (b) 20cm to 25cm
  - (c) 10mm to 15mm
  - (d) 10cm to 15cm
73. The red colour obtained for the brick is due to the presence of
- (a) Alumina
  - (b) Silica
  - (c) Ironoxide
  - (d) Magnesium
74. The defect due to improper sawing of timber is called
- (a) Diagonal grain
  - (b) Bow

- (c) Druxiness
- (d) Foxiness

75. Girth of the trees are to be measured at a height..... above the ground level
- (a) 0.75m
  - (b) 1m
  - (c) 2m
  - (d) 2m
76. The first voussoir at the springing level on either side of the arch is called
- (a) Skewbak
  - (b) Keyblock
  - (c) Springer
  - (d) Haunch
77. The..... truss can be used for long span of about 30m.
- (a) King post
  - (b) Mansard
  - (c) Shellroof
  - (d) Bel-fast
78. A queen post roof truss is suitable for roofs to span varying from
- (a) 5 to 8m
  - (b) 8 to 12m
  - (c) 12to 15 m
  - (d) 4 to 6m
79. The edge formed by the intersection of plane surface of brick are known as
- (a) Prependes
  - (b) Arrises
  - (c) Frog



(d) Bed

80. The maximum differential settlement in case of foundation on clayey soil is usually limited to

- (a) 40mm
- (b) 60mm
- (c) 80mm
- (d) 100mm

81. Where is the Indus Civilization city Lothal?

- (a) Maharashtra
- (b) U.P
- (c) Assam
- (d) Gujarat

82. Which river crosses the equator twice?

- (a) Congo
- (b) Amazon
- (c) Nile
- (d) Huang ho

83. Where did the Black Hole Tragedy took place?

- (a) Murshidabad
- (b) Malapuram
- (c) Calcutta
- (d) Pune

84. Who was known as Akbar of British India

- (a) Arthur welllesley
- (b) Richard wellesely
- (c) Delhousie
- (d) Lord Curzon

85. Who was the "Political Guru" of Mahathma Gandhi?  
(a) Gopalakrishna gokhale  
(b) Tagore  
(c) Wallabhai pattel  
(d) B G Tilak
86. Whose birth anniversary is celebrated as national Women's day on Feb. 13 in India  
(a) Indira Gandhi  
(b) Sarojini Naidu  
(c) Aruna Asif Ali  
(d) Vijayalakshmi Pandit
87. Which is the first indian state to present "paperless" Budget  
(a) Kerala  
(b) Sikkim  
(c) Himachal Pradesh  
(d) Thelungana
88. National Children's museum is situated at  
(a) Mumbai  
(b) New Delhi  
(c) Kollam  
(d) Chennai
89. The battle between Alexander and Porus took place on the bank of river  
(a) Sutlej  
(b) Chinab  
(c) Jhelum  
(d) Yamuna
90. Prime Minister Narendra Modi on 25 December 2015 inaugurated:  
newly-built Parliament House of which country?

- (a) Afghanistan
- (b) Nepal
- (c) Bhutan
- (d) Sri Lanka

91. The first Persian ruler who occupied part of Indian Territory was

- (a) Cyrus
- (b) Darius
- (c) Cambyses
- (d) Xerxes

92. Who is the author of the book "Nineteen Eighty Four"?

- (a) Thomas Hardy
- (b) Walter Scott
- (c) Emile Zola
- (d) George Orwell

93. Who is the author of the book: 'silent spring'?

- (a) Rachel Carson
- (b) T.S. Eliate
- (c) Arundhathi Roy
- (d) Emile Zola

94. Who among the following got the Kerala state film award 2015 for the best actor?

- (a) Sudevinair
- (b) Mohanlal
- (c) Suraj venjaramoodu
- (d) None of these

95. Which state gives Mewar Award?

- (a) Panjab
- (b) Rajasthan

- (c) Hariyana
- (d) Maharashtra

96. The first recipient of Rajiv Gandhi's Khel Ratna award is

- (a) Viswanathan Anad
- (b) Sachin Tendulkar
- (c) P.T. Usha
- (d) Kapil Dev

97. Which renaissance leader in Kerala started "Vidhya poshini sabha" (a)

- Vagghadandha
- (b) Brahmananda Shivayogi
- (c) Sahodaran Ayyappan
- (d) None of these

98. Who organised 'Savarna jatha' in Vaikom sathyagraha

- (a) Mannath padmanabhan
- (b) K. Kelapan
- (c) Chattambi swamikal
- (d) A.K.Gopalan

99. Where did the 1st ODI match was played in India?

- (a) Mumbai
- (b) Ahmedabad
- (c) Banglore
- (d) Delhi

100. Who is the father of Geometry?

- (a) Pythagoras
- (b) Aristotle
- (c) Euclid
- (d) Kepler