

028/2020

Question Booklet Alpha Code

A

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|  | Question Booklet Sl. No. |
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Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

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1. The ratio of the length of the drawing to the actual length of the object is
  - A) Representative Fraction
  - B) Diagonal Scale
  - C) Vernier Fraction
  - D) Refraction Index
2. A conic section which have only one directrix is
  - A) Circle
  - B) Hyperbola
  - C) Parabola
  - D) Ellipse
3. Rapid hardening Portland cement having quick rate of gain of strength due to higher content of
  - A) Tricalcium Silicate
  - B) Dicalcium Silicate
  - C) Tricalcium Aluminates
  - D) Tetracalcium Aluminates
4. The property of increase in volume of fine aggregate due to moisture is called
  - A) Slacking
  - B) Bulking
  - C) Warping
  - D) Shrinking
5. Good brick earth this constituent imparts plasticity to the earth it can be moulded
  - A) Lime
  - B) Alumina
  - C) Silica
  - D) Oxide of Iron
6. It is the liquid substance which hold the ingredient of paint in liquid suspension
  - A) Base
  - B) Driers
  - C) Vehicles
  - D) Colouring Pigments
7. In chemical classification of rock, marble is known as
  - A) Siliceous rock
  - B) Metamorphic rock
  - C) Calcareous rock
  - D) Argillaceous rock
8. The process of heating the limestone to redness in contact with air is termed as
  - A) Calcinations
  - B) Slacking of lime
  - C) Fat lime
  - D) Water lime
9. The portion from which the branches is removed receives nourishments from the trunk and dark rings which are known as
  - A) Knots
  - B) Ring galls
  - C) Medulla
  - D) Pith





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25. Contour lines of different elevation can intersect only in the case of
- A) Vertical cliff
  - B) Overhanging cliff
  - C) Uniform surface
  - D) Hill
26. It is the line passing through the intersection of the horizontal and vertical cross hairs and optical centre of the object glass and its continuation
- A) Axis of the level tube
  - B) Horizontal axis
  - C) Line of collimation
  - D) Axis of collimation
27. An angle is measured two or more times by allowing the vernier to remain clamped each time at the end of each measurement instead of setting it back at zero when sighting at the previous station
- A) Repetition method
  - B) Reiteration method
  - C) Direction method
  - D) Direct angle method
28. It is a combination of an electronic theodolite and an electronic distance meter
- A) Geodimeter
  - B) Distomat
  - C) Total station
  - D) Tellurometer
29. A small pocket instrument used for measuring horizontal and vertical angle
- A) Box sextant
  - B) Pantograph
  - C) Clinometer
  - D) Hand level
30. When the vertical circle of a theodolite is on the right side of the observer, the position is
- A) Face left
  - B) Changing face
  - C) Swinging
  - D) Face right
31. In an open traverse the included angle at a station is  $209^{\circ}16'00''$ , deflection angle at that point is
- A)  $29^{\circ}16'00''$
  - B)  $59^{\circ}44'00''$
  - C)  $150^{\circ}44'00''$
  - D)  $318^{\circ}16'00''$

A







48. To minimize the wind forces on the roof, the slope of the roof in degrees should not exceed
- A)  $30^\circ$                       B)  $25^\circ$                       C)  $27^\circ$                       D)  $32^\circ$
49. The ratio of lateral strain to axial strain is a constant for a homogeneous material
- A) Poisson's ratio                      B) Shear modulus  
C) Bulk modulus                      D) Young's modulus
50. The maximum energy stored at elastic limit of a material is known as
- A) Resilience  
B) Bulk resilience  
C) Proof resilience  
D) Modulus of resilience
51. A simply supported beam of span ' $l$ ' carries a uniformly distributed load ' $w$ ' per unit length, the maximum BM at the midpoint will be
- A)  $wl^2/8$                       B)  $wl^2/4$   
C)  $wl^3/8$                       D)  $wl^2/6$
52. The shear stress in a circular shaft of radius ' $r$ ' subjected to torsion, is maximum at a point
- A) At centre of the shaft  
B) At a distance of ' $r/2$ ' from centre of the shaft  
C) At a distance of ' $r/\pi$ ' from centre of the shaft  
D) At the surface of the shaft
53. Modulus of section ' $z$ ' of hollow circular section with external diameter ' $D$ ' and internal diameter ' $d$ ' will be
- A)  $\pi/32d(D^4 - d^4)$                       B)  $\pi/32D(D^4 - d^4)$   
C)  $\pi/32(D^3 - d^3)$                       D)  $\pi/32D(D^3 - d^3)$
54. A circular column of diameter ' $d$ ' under any load will have compressive stress throughout the section of the load act within concentric circle known as core, of diameter
- A)  $d/8$                       B)  $d/3$                       C)  $d/2$                       D)  $d/4$





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70. The relation between the area irrigated and the quantity of water used is expressed as
- A) Duty
  - B) Delta
  - C) Base period
  - D) Crop period
71. The amount of water stored in river channel without any artificial storage is known as the
- A) Dam
  - B) Diversion dam
  - C) Valley storage
  - D) Dead storage
72. The area of the land which drain into the stream of reservoir is called
- A) Cultivated area
  - B) Commanded area
  - C) Reservoir area
  - D) Catchment area
73. Canal normally used for diversion or flood water of river is
- A) Contour canal
  - B) Ridge canal
  - C) Perennial canal
  - D) Inundation canal
74. It is defined as the slope of the line joining the crown and the edge of the surface
- A) Camber
  - B) Super elevation
  - C) Gradient
  - D) Carriage way
75. The solution of bitumen, asphalt or coal tar in solvents is
- A) Emulsion
  - B) Cut backs
  - C) Bitumen macadam
  - D) Sheet asphalt
76. It is a safety island and serves the dual purpose of affording the protection to the pedestrians and segregating the traffic into the proper channel
- A) Refuge island
  - B) Traffic island
  - C) Turbine island
  - D) Multiple junction

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77. The pavement which can resist tensile stresses and having very little resistance to deformation under the wheel load
- A) Flexible pavement
  - B) WBM pavement
  - C) Shoulder pavement
  - D) Rigid pavement
78. The longitudinal movement of the rails in a track due to various reasons
- A) Creeping of rails
  - B) Derailment
  - C) Leed rails
  - D) Hogged rails
79. Clear horizontal distance between inner face of two rails forming the track at the top is
- A) Gauge
  - B) Sleeper density
  - C) Rail length
  - D) Packing space
80. Arrangement to divert train from one track to another is known as
- A) Turn out
  - B) Crossing
  - C) Curves
  - D) Suspended joint
81. Station which are meant only for the control of the track is called
- A) Terminals
  - B) Flag station
  - C) Junction
  - D) Cabin station
82. Paved surface used for landing and take-off of aircraft is known as
- A) Rolling
  - B) Taxiway
  - C) Apron
  - D) Runway
83. Upstream nose of a bridge pier shaped for easy and smooth flow of water through it is known as
- A) Easy water
  - B) Clearance water
  - C) Cut water
  - D) Free water





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Space for Rough Work

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