



Booklet Series

A

No. of Printed Pages : 16

Serial Number of the
Test Booklet

609085

PAPER CODE

PAPER/II-06/SO (Agri)

Roll No. : _____

Name of the Candidate : _____

Test Duration : 03 Hours

Total Questions : 100

Total Maximum Marks : 200

INSTRUCTIONS TO CANDIDATES

1. Candidates will be admitted to the Examination Hall/Room on production of their Admit Card and Original ID such as **EPIC/Aadhaar/Driving License** with a view to establish the true identity of the candidate.
2. Candidates shall reach the venue of examination at least 30 minutes in advance and admission will be refused to a candidate who is late by 10 minutes from the start of the examination.
3. No candidate shall be permitted to leave the Examination Hall/Room until the time for the examination is over or until permitted to do so but not until the half of the allotted time.
4. Candidates must use a **BLUE/BLACK** ball point pen ONLY to make entries on the OMR Answer Sheet.
5. The candidates should not bring any articles (other than those specified above) such as books, notes, loose sheets, mobile phones, pagers, digital diaries, calculators, smart watches, etc. inside the Examination Hall/Room. Any candidate found in possession of the said articles will be liable to be de-barred from applying all future examinations to be conducted by the Board.
6. After receiving the Test Booklet with OMR inserted, the candidates may pull out the OMR Answer Sheet and fill in the necessary details. However the candidates are not allowed to break open the seal of the Test Booklet until the invigilator informs them to do so.
7. Mark carefully your Roll Number, Question Booklet Code and Booklet Series on the OMR Answer Sheet and append signature at the appropriate place. Write your Roll Number and **Name in the Question Booklet**. In the absence of the Roll Number and Question Booklet Series on the OMR Answer Sheet, it may NOT be evaluated.
8. The entire Test is of Objective Type Questions comprising 100 questions.
9. Candidates must check that the Question Booklet contains 100 multiple choice questions. If any discrepancy found, report to the invigilator immediately.
10. Every question carries a total of 2 marks each. Candidates will also keep in mind that there is negative marking of $1/3^{\text{rd}}$ for every wrong answer.
11. Rough work may be done on the space provided in this Question Booklet, but not on the OMR Answer Sheet.
12. In the event of a mistake made in marking the Roll Number in the OMR Answer Sheet or the OMR Series the candidates will not be given a new OMR Answer Sheet but he/she will be allowed to use whitener or correcting fluid for correction of the Roll Number and the Booklet Series only.
13. **Change of answer will not be permitted in the OMR Answer Sheet. Using of correcting fluid (of any sort) will be treated as wrong attracting negative marking.**
14. The candidates must abide by such instructions as may be specified on the cover of the Answer Paper or instructions to candidates given at the back of the Admit Card. If a candidate fails to do so or indulges in improper conduct, he/she will render himself/herself liable to expulsion from the examination or such other punishment as the Board deemed fit to impose.
15. At the end of the Test, candidates must submit the OMR Answer Sheet to the invigilator on duty. Candidates shall be allowed to take their Question Booklet only after the end of the examination session.
16. Any candidate found to be intoxicated with alcohol and/or psychotropic substances will be expelled from the Examination Hall/Room.
17. Examination centre once opted cannot be changed.

PLEASE REFER THE BACKSIDE OF THE QUESTION BOOKLET FOR MORE INSTRUCTIONS.

PAPER/II-06/SO (Agri)

SEAL



1. The apparent displacement of the position of a point with respect to a reference point or a system, caused by a shift in the point of observation is called
- (A) Parallax (B) Longitude
(C) Traverse (D) Sextant

2. An instrument used for measuring angle between two distant objects from the observer's position is called



- (A) Parallax
(B) Sextant
(C) Triangulation
(D) Stereoscope

3. A roof with sloping surface is known as
- (A) Pitched roof
(B) Flat roof
(C) Terraced roof
(D) Curved roof

4. The horizontal wooden or steel members, used to support common rafters of a roof when span is large, are called
- (A) Jack Rafters
(B) Hip Rafters
(C) Purlins
(D) Vally Rafters



5. Find the delta for a crop when its duty is 864 hectares/cumec on the field, base period of this crop is 100 days.
- (A) 120 cm (B) 220 cm
(C) 130 cm (D) 100 cm

6. What are the causes for water logging ?
- (A) Excessive rain
(B) Impervious obstruction
(C) Seepage of water through the canal
(D) All of the above

7. Runoff hydrograph for a river, is the graphical presentation of the river discharge with time. The river discharge constitutes of surface runoff and ground water inflow is called



- (A) Formation of cloud
(B) Base flow
(C) Rainfall interception
(D) Gravity outlet

8. The Metric dimension of present traditional brick is
- (A) $9'' \times 3\frac{1}{2}'' \times 4''$
(B) $9'' \times 4\frac{1}{2}'' \times 3''$
(C) $9'' \times 5\frac{1}{2}'' \times 2''$
(D) $10'' \times 4\frac{1}{2}'' \times 4''$

9. Timber can be made fire resistant by
- (A) Boucherie process
(B) Hot and cold open tank treatment
(C) Charring
(D) Impregnating using chemicals



10. When the cement comes in contact with water, the hydration products starts depositing on the outer periphery of the nucleus of hydrated cement. This reaction proceeds slowly for 2-5 hours and is called as

- (A) Induction
- (B) Dormant period
- (C) Both (A) and (B)
- (D) None of the above

11. The volume of lateral reinforcement (with at least 5 mm diameter bars) provided in the form of links, should not be less than _____ of the gross volume of the pile.

- (A) 0.2% (B) 0.1%
- (C) 0.33% (D) 0.45%

12. In residential buildings, the rise of a stair may vary between 150 mm to 200 mm and the tread between 200 mm to 300 mm. The waist is the thickness of an inclined slab.



When the stair slab is spanning horizontally, a waist slab of about _____ is provided.

- (A) 20 mm (B) 50 mm
- (C) 60 mm (D) 80 mm

13. Consider the following statements and choose false statement.

1. The direction of true meridian through a point can be established by astronomical observation.
2. The direction of magnetic meridian can be established with a help of a magnetic compass.
3. Arbitrary meridian is used to determine relative positions of a line in large area.

- (A) Both 1 and 2
- (B) 2 only
- (C) Both 2 and 3
- (D) 3 only



14. A _____ combines the features of both the dumpy level and the wye level.



- (A) Tilting level
- (B) Reversible level
- (C) Parallax
- (D) None of the above

15. The summit curves are required to be introduced at the situations where

- (A) A positive grade meets a negative grade
- (B) A positive grade meets another milder positive grade
- (C) A positive grade meets a level stretch
- (D) All of the above



16. Class-9 roads, these roads are _____ metres wide and are designed to carry 3-tonne vehicles.

- (A) 4.9 (B) 2.45
(C) 6 (D) 3.65

17. What is the final setting time of Quick Setting Portland cement ?

- (A) 15 minutes
(B) 30 minutes
(C) 45 minutes
(D) 60 minutes

18. Which of the following is an example for spirit varnish ?



- (A) French polish
(B) Oil varnish
(C) Spar polish
(D) Asphalt polish

19. A list of rates of various items of work is called

- (A) Schedule of rates
(B) Schedule of opening
(C) Schedule of furniture
(D) Schedule of materials

20. The concurrence of the government of the expenditure proposed and represents allotment of the money to meet the expenditure is called



- (A) Approval
(B) Bill of quantity
(C) Technical sanction
(D) Expenditure sanction

21. _____ is the amount of irrigation water required in order to meet the evapotranspiration need of the crop as well as other needs such as leaching.



- (A) Net irrigation requirement
(B) Consumptive irrigation requirement
(C) Field irrigation requirement
(D) None of the above

22. _____ is special type of check flooding and is adopted specially for orchard trees.

- (A) Wild flooding
(B) Border flooding
(C) Basin flooding
(D) Free flooding

23. Shrinkage of concrete _____ with high w/c ratio and high cement content.

- (A) Increases
(B) Decreases
(C) Varies
(D) Does not get affected

24. _____ is used to measure an angle or to set off an angle, and is marked either on a rectangular protractor or on an ordinary box wood scale.

- (A) Diagonal scale
(B) Plain scale
(C) Vernier scale
(D) Scale of chords



25. _____ is a pipe provided to preserve the water seal of traps.

- (A) Storm pipe
- (B) Anti-siphonage pipe
- (C) Vent pipe
- (D) Soil pipe

26. Which of the following rules is used in order to select the location of a window ?



- (A) Height of window = $1/8$ (width of room + breadth of room)
- (B) Breadth of window = $1/8$ (width of room + height of room)
- (C) Length of window = $1/8$ (width of room + breadth of room)
- (D) Width of window = $1/8$ (height of room + breadth of room)

27. _____ are used for accurate setting out of works of large magnitude.

- (A) Base line
- (B) Reference grids
- (C) Sight rails
- (D) None of the above

28. A _____ is an instrument which measures the area of plan of any shape very accurately.

- (A) Barometer
- (B) Alidade
- (C) Planimeter
- (D) None of the above



29. Discharge (Q) of a centrifugal pump is given by

- (A) $Q = \pi.D.V_f$
- (B) $Q = \pi.b.V_f$
- (C) $Q = \pi.D.b.V_f$
- (D) $Q = D.b.V_f$

30. _____ scaffolding is used for painting and repair works inside a room upto a height of 15 metres.

- (A) Suspended
- (B) Patented
- (C) Cantilever
- (D) Trestle

31. According to whom, a foundation is shallow if its depth is equal to or less than its width

- (A) Terzaghi
- (B) Dr. B. C. Punima
- (C) Newton
- (D) Er. Ashok K. Jain

32. What are used to transfer load through water or soft soil to a suitable bearing stratum, in pile foundation ?



- (A) Combined piles
- (B) Friction pile
- (C) End bearing piles
- (D) Compaction Pile

33. The amount provided in the estimate and bill of quantities for some specialised work to be done by a specialist firm; whose details are not known at the time of preparing estimate is called



- (A) Specialised sum
- (B) Additional sum
- (C) Provisional sum
- (D) None of the above



34. The total cost of construction including all expenditure incurred from the beginning upto the end of the completion of the work is called

- (A) Carpet area
- (B) Capital cost
- (C) External services
- (D) Complete estimation

35. The word RADAR stands for

- (A) Receiving Detecting and Reflecting
- (B) Ranging Directing and Reflecting
- (C) Radio Detection and Ranging
- (D) Ranging Direction Receiving

36. The first watering which is given to a crop, when the crop is a few centimetres high, is called



- (A) Cash crop
- (B) Kharif-Rabi
- (C) Paleo irrigation
- (D) Kor-watering

37. Relationship between porosity (n) and voids ratio (e) is given by

(A) $n = e(1 + e)$

(B) $n = \frac{e}{1 + e}$

(C) $n = \frac{e}{e - 1}$

- (D) None of the above

38. The average velocity of flow that will take place through the total cross-sectional area of soil under unit hydraulic gradient, is known as



- (A) Coefficient of permeability
- (B) Hydraulic gradient
- (C) Unconfined compressive strength
- (D) All of the above

39. A statement of various items of work giving the description, quantities and unit of rates, is called

- (A) Bill of estimation
- (B) Bill of quality
- (C) Bill of materials
- (D) Bill of quantities

40. The preliminary estimate or an approximate estimate, and is prepared on the basis of the cubical contents of the building the cube rate being deducted from the cost of the similar building having similar specifications and construction, in the locality is called



- (A) Cube rate estimation for building
- (B) Square rate estimation for building
- (C) Cube rate estimation for construction
- (D) Square rate estimation for construction



41. _____ is the projecting part of the tread beyond the face of the riser.

- (A) Nosing (B) Soffit
(C) Scotia (D) Rise

42. Stairs constructed by which of the following material ?

- (A) Timber
(B) Brick
(C) R.C.C. (Reinforced concrete)
(D) All of the above

43. When a body is immersed wholly or partially in a liquid, it is lifted up by a force equal to the weight of the liquid displaced by the body. This statement is called



- (A) Pascal's law
(B) Archimede's principle
(C) Principle of floatation
(D) Bernoulli's theory

44. The bending moment on a section is maximum where shear force is

- (A) Minimum
(B) Maximum
(C) Zero
(D) None of the above

45. The amount of water which can be diverted from the river into the main canal depends upon



- (A) The water available in the river
(B) The capacity of the main canal
(C) The share of another canal taking off the river
(D) All of the above

46. The sediment in a canal is a burden to be borne by the flowing water and is therefore, designated as



- (A) Sediment load
(B) Roster of turn
(C) Canal regulation
(D) Seepage

47. The minimum width of bottom rail and lock rail is kept as

- (A) 100 mm (B) 120 mm
(C) 150 mm (D) 200 mm

48. _____ is a defect that occurs due to the application of too thick a paint.

- (A) Blistering (B) Bloom
(C) Crawling (D) Grinning

49. The most important purpose of frog in a brick is to

- (A) Emboss manufacturers name
(B) Improve insulation by providing 'hollows'
(C) Form keyed joint between brick and mortar
(D) None of the above

50. Which of the following is correctly matched ?

- (A) Sandstone = Igneous rock
(B) Limestone = Sedimentary rock
(C) Basalt = Metamorphic rock
(D) Granite = Argillaceous rock



51. The type of roof is formed by couple or pair of rafters which slope to both the sides of the ridge of the roof are called
- (A) Couple roof
 - (B) Scissor roof
 - (C) Coller Beam roof
 - (D) Double roof

52. An assembly of horizontal and vertical members, forming an enclosure, to which the shutters are fixed is called
- (A) Sill
 - (B) Frame
 - (C) Horn
 - (D) Style

53. If rice requires about 10 cm depth of water at an average interval of about 10 days and the crop period for rice is 120 days. Find out the delta for rice.
- (A) 230 cm
 - (B) 170 cm
 - (C) 120 cm
 - (D) 110 cm

54. One cumec water is pumped into a farm distribution system. 0.8 cumec is delivered to a turn-out, 0.9 kilometre from the well. Compute the conveyance efficiency.
- (A) 60 %
 - (B) 30%
 - (C) 70%
 - (D) 80%

55. A _____ is a foundation unit continuous in two sections covering an area equal to or greater than the base area of the building.
- (A) Strip foundation
 - (B) Pad foundation
 - (C) Combined foundation
 - (D) Mat foundation

56. _____ is a moulding provided under the nosing to improve the elevation of the step, and to provide strength to nosing.

- (A) Scotia
- (B) Soffit
- (C) Baluster
- (D) Newel post

57. An instrument shaped like a watch and is carried in pocket or attached to one leg is called as
- (A) Speedometer
 - (B) Passo meter
 - (C) Odometer
 - (D) None of the above

58. Consider the following statement and find the wrong statement.

1. A gunters chain is 66 feet long.
2. Engineers chain is 100 feet long.
3. Revenue chain is 22 feet long.

- (A) Only 1
- (B) Only 2
- (C) Only 3
- (D) All of the above



59. When air expands, its given volume will become rarer and lighter; and when it contracts its given volume will become dense and heavier. This is called
- (A) Snow flack in cloud
 - (B) Relative humidity
 - (C) Formation of clouds
 - (D) Adiabatic process



60. When the rain starts falling, it is first of all intercepted by buildings, tree and other objects, which prevent it from reaching the ground. This quantity is known as

- (A) Rainfall interception
- (B) Relative Humidity
- (C) Closed drain
- (D) Base flow

61. The middle horizontal member of the door shutter, to which locking arrangement is fixed is called



- (A) Style
- (B) Top Rail
- (C) Bottom Rail
- (D) Lock Rail

62. In which kind of window, the shutter is allowed to swing round pivots fixed to the window frame ?

- (A) Casement window
- (B) Pivoted window
- (C) Double hung window
- (D) Fixed window

63. When a vehicle negotiates a curved path, it is subjected to an outward force known as centrifugal force. In order to resist



this force, the outer edge of the road is generally raised above the inner edge. This is known as

- (A) Highland
- (B) High edge
- (C) Super edge
- (D) Superelevation

64. The city roads which are meant for thorough traffic, usually on a continuous route is called

- (A) Express ways
- (B) Arterial streets
- (C) Collector streets
- (D) National highway

65. Which masonry uses cement concrete blocks, either hollow or solid, for wall construction, with or without stone facing ?



- (A) Stone Composite Masonry
- (B) Brick Stone Composite Masonry
- (C) Hollow Clay Block Masonry
- (D) Concrete Masonry

66. What distribute the load of the superstructure, to a larger area so that the intensity of the load at its base ?

- (A) Roof
- (B) Foundation
- (C) Floor
- (D) Walls

67. Which of the following statement is false in case of Ideal paint ?

1. Paints should be pervious to air and water.
2. Paint should be cheap and economical.
3. Paint should give high coverage, good workability.

- (A) Only 1
- (B) Only 2
- (C) Only 3
- (D) None of the above



68. What is the purpose of curing after placing the concrete ?

- (A) Prevent loss of moisture
- (B) Increase workability
- (C) Aids in transportation
- (D) All of the above

69. The _____ is a cement concrete in which high compressive stresses are artificially induced before its actual use. This concrete can take up high tensile and compressive stresses without development of cracks.



- (A) Cellular or aerated concrete
- (B) Vacuum concrete
- (C) Reinforced cement concrete
- (D) Pre-stressed cement concrete

70. The copper content in water for domestic purpose should not be more than

- (A) 1.5 P.P.M. (B) 0.05 P.P.M.
- (C) 3 P.P.M. (D) 2.5 P.P.M.

71. _____ is a solution of resins or resinous substances (such as common resin, amber, copal, shellac etc.) in alcohol, turpentine or oil.

- (A) Laminate (B) Varnish
- (C) Lacquer (D) Stain

72. _____ traps are used only in large hotels, restaurants or industries where large quantities of oily wastes are expected to enter the water flow.



- (A) Intercepting
- (B) Grease
- (C) Silt
- (D) None of the above

73. A header is the _____ face of the brick.

- (A) Deeper
- (B) Shorter
- (C) Wider
- (D) None of the above



74. The portion of a brick obtained by cutting a brick lengthwise into two portions, is called

- (A) Queen-Closer
- (B) King-Closer
- (C) Arris
- (D) Bevelled Closer

75. The length of a line measured with a 20-metre chain was found to be 250 metres, calculate the true length of the line if the chain was 10 cm long.



- (A) 210.88 metres
- (B) 251.25 metres
- (C) 321.76 metres
- (D) 239.25 metres



76. An offset is measured with an accuracy of 1 in 40. If the scale of plotting is 1cm = 20m, find the limiting length of the offset so that the displacement of the point on the paper from both sources of error may not exceed 0.25 mm.



- (A) 12.11 m (B) 10.23 m
(C) 19.11 m (D) 14.14 m

77. The general procedure of an aerial survey consists of

- (A) Establishing ground control
(B) Flight planning
(C) Photography
(D) All of the above

78. What is used to accommodate the wide separation of the individual photograph of the stereopair, to the fixed length of the eye base ?

- (A) Ground control
(B) Flight planning
(C) Stereoscope
(D) None of the above

79. _____ is the net loading intensity at which neither the soil fails shear nor there is excessive settlement detrimental to the structure.



- (A) Net safe bearing capacity
(B) Net ultimate bearing capacity
(C) Allowable bearing capacity
(D) Safe bearing capacity

80. When the ratio of long span to short span is less than 2, then the slab is known as a

- (A) Slab spanning in one direction
(B) One-way slab
(C) Two-way slab
(D) None of the above

81. _____ is the one in which all the bricks are laid as header on the faces of wall.

- (A) English Bond
(B) Stretcher Bond
(C) Header Bond
(D) Flemish Bond

82. Piers that are provided to resist thrusts from roof trusses or strengthen main walls or boundary walls are called



- (A) Thresholds (B) Buttresses
(C) Jambs (D) Copings

83. In asbestos cement sheets, the laying always begins from

- (A) Rafters (B) Hips
(C) Valleys (D) Eaves

84. _____ are the windows which are fixed on the flat roofs to provide light in the inner portion of the building where light coming from the windows in the external wall is insufficient.

- (A) Lantern window
(B) Skylight
(C) Daylight
(D) Sunlight



85. What type of window is projected outside the external wall of the room ?

- (A) Bay window
- (B) Lantern window
- (C) Sky window
- (D) Dormer window

86. _____ is the property of a material to absorb water vapour from air. It is influenced by air-temperature and relative humidity : pores types, number and size and nature of substance involved.



- (A) Polymorphism
- (B) Adsorption
- (C) Hygroscopicity
- (D) None of the above

87. Indian Road Congress suggested the height of line of sight of the driver above the road surface as

- (A) 1 m (B) 2m
- (C) 1.2 m (D) 1.5 m

88. A curve which consists of a series of two or more simple curves that turn in the same direction and join at the common tangent points, is known as a



- (A) Compound curve
- (B) Parabolic curve
- (C) Reverse curve
- (D) Transverse curve

89. The lower edge of the inclined roof surface is called

- (A) Hip (B) Eaves
- (C) Ridge (D) Verge

90. _____ is depression or recess made inside the door frame, to receive the door shutter.



- (A) Reveal (B) Mullion
- (C) Transom (D) Rebate

91. What are the factors affecting alkali aggregate reaction ?

- (A) Temperature condition
- (B) Reactive type of aggregate
- (C) Availability of moisture
- (D) All of the above

92. Which of the following statement is false ?

1. Rounded aggregate is highly workable but yield low strength concrete.
2. Specific gravity of the aggregate is generally indication of its quality.
3. The bulk density of the aggregate doesn't depend upon their shape and size.

- (A) 1 only
- (B) 2 only
- (C) 3 only
- (D) None of the above



93. If m is the mean particle diameter of the silt in mm, the Lacey's silt factor (f) is given by

- (A) $f = 1.76 m^{1/2}$
- (B) $f = 1.76 m^{3/2}$
- (C) $f = 1.76 m^2$
- (D) $f = 1.76 m^{5/2}$

94. A first-class brick should have a minimum crushing strength of

- (A) 7 MN/m²
- (B) 10.5 MN/m²
- (C) 12.5 MN/m²
- (D) 14 MN/m²

95. Bulk specific gravity of clay brick ranges from _____ to _____.

- (A) 1.6 to 2.5
- (B) 2.2 to 2.7
- (C) 1.1 to 2.0
- (D) None of the above

96. In case of second-class bricks crushing strength should not be less than



- (A) 2.0 N/mm²
- (B) 7.0 N/mm²
- (C) 5.0 N/mm²
- (D) 9.0 N/mm²

97. _____ of the building is the useful area or liveable area or lettable area.

- (A) Circulations path
- (B) Super buildup area
- (C) Carpet area
- (D) None of the above

98. In brick bonding amount of lap should be minimum _____ brick along the length of the wall and _____ brick across the thickness of the wall.



- (A) 1/4 , 1/2
- (B) 1/2, 1
- (C) 1, 1
- (D) None of the above

99. If the flow is such that 'silting and scouring' need no special attention, is called

- (A) Sediment load
- (B) Regime channels
- (C) Seepage
- (D) Canal regulation

100. The process of removal of excess rain water falling on the fields or the excess irrigation water applied to the fields, by constructing open ditches, is called



- (A) Gravity outlet
- (B) Closed drain
- (C) Surface drainage
- (D) Pump outlet