

PSC Surveyor Gr Ii - Hydro-geology Branch - Ground Water Examination Previous Year Question Paper

***Exam Name: Surveyor Gr Ii - Hydro-geology
Branch - Ground Water***

Date of Test : 20.05.2015

Question Paper Code: 094/2015

Medium of Questions: English



94/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Length of gunters chain is :
(A) 20 meter (B) 66 feet
(C) 16 feet (D) 100 feet
2. One hectares is equal to :
(A) 40.46 M² (B) 100 M²
(C) 10000 M² (D) 1000²
3. Total number of links in 20 M chain is :
(A) 100 (B) 150
(C) 66 (D) 33
4. Area of A0 trimmed size drawing sheet is _____ M².
(A) 1.25 M² (B) 1 M²
(C) 1.5 M² (D) 0.75 M²
5. Angle of dip at pole is _____ degree.
(A) 30° (B) 60°
(C) 90° (D) 120°
6. The area enclosed in an irregular curve can be formed out by :
(A) Planimeter (B) Pentagraph
(C) Clinometer (D) Prism square
7. The quadrantal bearing of a line is S40° W; its whole circle bearing is :
(A) 40° (B) 400°
(C) 220° (D) 140°
8. In _____ field book is eliminated.
(A) Chain surveying (B) Plane table surveying
(C) Compass surveying (D) Theodolite surveying

A

3

[P.T.O.]

9. Curvature correction for leveling is always :
(A) Additive (B) Subtractive
(C) Either additive or subtractive (D) None of these
10. _____ is a chord between two successive regular stations on a curve.
(A) Long chord (B) Sub chord
(C) Normal chord (D) Short chord
11. If the two tangents are produced in a simple curve they will meet at a point, the point is called :
(A) Vertex (B) Appex
(C) Point of tangency (D) Curve tangent point
12. The horizontal distance between two consecutive contour line is known as :
(A) Horizontal interval (B) Horizontal equivalent
(C) Horizontal scale (D) Contour interval
13. 2.54 inch is equal to :
(A) 64.516 mm (B) 60451 mm
(C) 6.451 cm (D) 64.516 cm
14. In a triangle when two adjacent sides a & b and their included angle ' C ' are given then its area will be :
(A) $\frac{1}{2} ab \cos C$ (B) $\frac{1}{2} ab \tan C$
(C) $\frac{1}{2} ab \sin C$ (D) $ab \sin C$
15. If the radius of a half circle is given by ' r ' then its perimeter will be :
(A) πr (B) $2\pi r$
(C) $\pi(r+2)$ (D) $2(\pi+r)$
16. The height of a chimney is ' h ' meter and the observer is located at a distance of ' s ' meter. Its angle of elevation ' ϕ ' will be :
(A) $\tan^{-1}(s/h)$ (B) $\sin^{-1}(s/h)$
(C) $\tan^{-1}(h/s)$ (D) $\sin^{-1}(h/s)$

17. If the perimeter of circle is 50 cm, its area will be :
(A) 189.04 cm² (B) 199.04 cm²
(C) 209.04 cm² (D) 50 cm²
18. The length, breadth, height of a rectangular prism are 20 cm, 15 cm and 10 cm respectively. Its whole surface area will be :
(A) 1000 cm² (B) 1200 cm²
(C) 1100 cm² (D) 1300 cm²
19. $5/12 + 12/7$ is equal to :
(A) 0.213095 (B) 21.3095
(C) 0.0213095 (D) 2.13095
20. A cubical tanks is filled with water, if each side of a cube is 1 meter, weight of water will be :
(A) 1026 kg (B) 10 tonne
(C) 960 kg (D) 1 tonne
21. For a cantilever beam :
(A) Both end supported
(B) One end fixed and other end free
(C) Both end fixed
(D) One end fixed and other end overhanging
22. In AutoCAD design centre is :
(A) A drop down menu (B) A right click menu
(C) A palette (D) A dialog
23. While ranging a line, the code of indication of left arm extend indicates :
(A) Continue to move left (B) Continue to move right
(C) Fix (D) Correct
24. _____ is an instrument used for enlarging or reducing maps.
(A) Ghat tracer (B) Clinometer
(C) Planimeter (D) Pentagraph

25. The product of mass and velocity is :
(A) Momentum (B) Moment
(C) Velocity (D) Torque
26. The number of verticals posts in a King post truss is :
(A) Nil (B) Three
(C) Two (D) One
27. The staff reading taken on a bench mark or a point of known reduced level is :
(A) Inter sight (B) Back sight
(C) Reduced level (D) Fore sight
28. One mile is equal to :
(A) 1016 Km (B) 0.609 Km
(C) 1.609 Km (D) 1.016 Km
29. One Joule is equal to :
(A) 10^7 erg (B) 10^5 erg
(C) 10^8 erg (D) 10^2 erg
30. -40°C is equal to :
(A) -80°F (B) 40°F
(C) 80°F (D) -40°F
31. One radian is equal to _____ degree.
(A) $\pi \times 180$ (B) $180/\pi$
(C) 180 (D) $\pi/180$
32. A regular polygon having eight sides is called :
(A) Pentagon (B) Hexagon
(C) Heptagon (D) Octagon
33. The ratio of 15 cm : 2 meters is equal to :
(A) 3 : 40 (B) 1 : 40
(C) 40 : 3 (D) 40 : 1

34. The value of π is :
(A) $21/7$ (B) $7/22$
(C) $22/7$ (D) $27/7$
35. Mass is a _____ quantity.
(A) Vector (B) Scalar
(C) Fixed (D) Variable
36. One standard measurement $190 \times 90 \times 90$ mm is :
(A) Standard size of brick (B) Standard size of rubble
(C) Standard size of late rite (D) Standard size of ashlar
37. Foundation of a building consists of R.C.C slab covering the entire area in plan is called :
(A) Grillage foundation (B) Well foundation
(C) Pile foundation (D) Raft foundation
38. The bottom surface of a door or a window opening is known as :
(A) Plinth (B) Sill
(C) Lintel (D) Step
39. _____ line is used for dimension line.
(A) Continuous thick (B) Continuous thin Zigzag
(C) Continuous thin (D) None of these
40. Scale 1:x designated as :
(A) Reduced scale (B) Full size
(C) Enlarged scale (D) None of these
41. On a diagonal scale, it is possible to measure :
(A) One dimension (B) Three dimensions
(C) Two dimensions (D) Four dimensions
42. Accidental errors are :
(A) Natural error (B) Instrumental error
(C) Cumulative error (D) Compensating error

43. Error due to sag in chaining is :
- (A) Cumulative and positive (B) Cumulative and negative
(C) Compensative and positive (D) Compensative and negative
44. A declination of 2° east means :
- (A) The magnetic north is 2° west of true north
(B) The true north is 2° east of magnetic north
(C) The magnetic north is 2° east of true north
(D) None of these
45. The whole circle bearing of a line is 300° , its quadrantal bearing is :
- (A) $N60^\circ W$ (B) $W30^\circ N$
(C) $W60^\circ N$ (D) $N30^\circ W$
46. If the fore bearing of a line is zero degree its back bearing is _____ degree.
- (A) 0 (B) 360
(C) 90 (D) 180
47. If the magnetic bearing of a line is $35^\circ 30'$ the magnetic declination $3^\circ 30' W$, the true bearing of the line will be :
- (A) 39° (B) 32°
(C) 37° (D) 38°
48. The line joining points of equal dip are called :
- (A) Agonic lines (B) Isogonics lines
(C) Aclinic lines (D) Isoclinic lines
49. Line joining places of zero magnetic declination are known as _____ lines.
- (A) Isoclinic (B) Aclinic
(C) Agonic (D) Isogonics
50. The annual variation of magnetic declination at a place is caused because of the rotation of :
- (A) Earth about Sun (B) Moon about Earth
(C) Earth about its own axis (D) Moon about Sun

51. The operation of centering is facilitated by providing an additional arrangement called _____ for a theodolite.
- (A) Shifting clamp (B) Centering fork
(C) Shifting centre (D) Moving centre
52. For a theodolite transiting is the operation of revolving the telescope through _____ degree in vertical plane about horizontal axis.
- (A) 0° (B) 180°
(C) 90° (D) 270°
53. The telescope is said to be normal when its vertical circle is :
- (A) Left of the vertical axis (B) Right of the vertical axis
(C) Left of the observer (D) Right of the observer
54. For a theodolite, revolving the telescope in the horizontal plane, about its vertical axis is called :
- (A) Swinging (B) Transiting
(C) Balancing (D) Face changing
55. For balancing the traverse _____ rule is used when the linear and angular measurements are equally precise.
- (A) Transit rule (B) Simpson's rule
(C) Bowditch rule (D) Trapezoidal rule
56. Still water surface is an example for :
- (A) Still surface (B) Level surface
(C) Mean surface level (D) Horizontal surface
57. The imaginary line tangential to the longitudinal curve of the bubble tube at its midpoint is known as :
- (A) Tangent of bubble table (B) Line of collimation
(C) Axis of telescope (D) Axis of bubble tube
58. G.T.S. stands for :
- (A) Great Traverse Survey (B) Gale's Traverse Survey
(C) Geodetic Trigonometric Survey (D) Great Trigonometric Survey

59. BM in surveying designates :
(A) Bench mark (B) Bending moment
(C) Bending mark (D) All the above
60. The average refraction correction can be taken as _____ of the curvature correction.
(A) $1/12^{\text{th}}$ (B) $1/7^{\text{th}}$
(C) $1/6^{\text{th}}$ (D) $1/14^{\text{th}}$
61. A church is situated on the far side of a river and is inaccessible. It can be located by _____ method in plane table surveying.
(A) Radiation (B) Intersection
(C) Resection (D) Traversing
62. The lines having equal gradient along a slope are called :
(A) Contour intervals (B) Centre slope
(C) Grade contour (D) Contour gradient
63. _____ where the contour lines intersect each other.
(A) Vertical cliff (B) Spur
(C) Valley (D) Overhanging cliff
64. If the angle of intersection of a curve is ϕ , then deflection angle will be :
(A) $180 + \phi$ (B) $180 - \phi$
(C) $90 - \phi$ (D) $90 + \phi$
65. The angle subtended the long chord of a simple circular at its centre is equal to :
(A) Deflection angle (B) $180^\circ - \text{deflection angle}$
(C) $180^\circ - \text{deflection angle} / 2$ (D) Two times the deflection angle
66. The essential condition for the application of Simpson's rule to find the area, the number ordinates should be :
(A) Even (B) Odd or even
(C) Odd (D) None of the above
67. Droparrow is an instrument associated with _____ in chain survey :
(A) Offsetting (B) Chain angle
(C) Reciprocal ranging (D) Stepping method

68. Combined correction for curvature and refraction for a distance of 3 Km is :
(A) 0.6057 mm (B) 0.6057 cm
(C) 0.6057 km (D) 0.6057 m
69. A well conditioned triangle should not have angles more than _____ degrees.
(A) 60 (B) 120
(C) 45 (D) 90
70. Invar tape is made of an alloy of :
(A) Copper and nickel (B) Steel and zinc
(C) Steel and nickel (D) Copper and zinc
71. Hypotenuses allowance to be applied to each 20 m chain length along a slope ϕ degree is:
(A) $20(\sec \theta - 1)$ m (B) $20(\operatorname{cosec} \theta - 1)$
(C) $20(1 - \sec \theta)$ m (D) $20(1 - \operatorname{cosec} \theta - 1)$
72. The angle between horizon mirror and index mirror of an optical square is _____ degree.
(A) 135 (B) 120
(C) 90 (D) 45
73. Which of the following figure are equal to one acre?
(A) 10 sq engineers chain (B) 10 sq grunter's chain
(C) 10 sq metric chain (D) 10 sq revenue chain
74. Parallax can be eliminated by focusing :
(A) Eye piece (B) Objective
(C) Eye piece and objective (D) None of these
75. Scale of chord is used to measure:
(A) Angle (B) Area
(C) Length (D) Radius
76. The average length of one pace is taken as :
(A) 90 cm (B) 100 cm
(C) 70 cm (D) 80 cm

77. Compensative errors of length L is proportional to :
- (A) L (B) L^2
(C) L^3 (D) $\sqrt{L}$
78. The staff reading taken on a bench mark or a point of known elevation is known as :
- (A) Fore sight (B) Back sight
(C) Intermediate sight (D) Line of sight
79. An example for obstacles to both chaining and ranging is :
- (A) A river (B) A lake
(C) A jungle (D) A building
80. By using a chromatic lens in a telescope the optical defect ————— can be eliminated.
- (A) Spherical abbration (B) Chromic abbration
(C) Both (A) and (B) (D) None of these
81. The first politician received 'Bharat Ratna' the highest Civilian Award of India?
- (A) Jawaharlal Nehru (B) Dr. S. Radhakrishnan
(C) C. Raja Gopalachari (D) Indira Gandhi
82. Who among the following was not a disciple (Citar) of 'Ayya Vaikundar'?
- (A) Dharma citar (B) Karma citar
(C) Bhima citar (D) Nakulan citar
83. Indira Awaas Yojana (IAY) was initiated in:
- (A) 1985 (B) 1975
(C) 1986 (D) 1976
84. The Head Quarters of International Water Management Institute situated in:
- (A) New York (B) Colombo
(C) Stockholm (D) New Delhi

85. Birth Place of Sankaracharya:

- | | |
|--------------|---------------|
| (A) Aluva | (B) Kaladi |
| (C) Ankamali | (D) Ernakulam |

86. Founder of the political party 'Forward Bloc', (a faction within the congress) in 1939 :

- | | |
|----------------------|--------------------------|
| (A) Jawaharlal Nehru | (B) A.O. Hume |
| (C) Gokhale | (D) Subhash Chandra Bose |

87. The first Indian Satellite 'Aryabhata' was launched on :

- | | |
|-------------------|-------------------|
| (A) 19 April 1975 | (B) 20 April 1975 |
| (C) 18 April 1975 | (D) 25 April 1975 |

88. 'ERNET' means :

- (A) External Networking Technology
- (B) Employment and Regeneration Technology
- (C) International Networking Technology
- (D) The Education and Research Network

89. Who was the owner of the Newspaper 'Swadeshabhimani'?

- | | |
|---------------------------|---------------------------------|
| (A) K. Ramakrishna Pillai | (B) A. Ramakrishna Pillai |
| (C) Abdul Rehiman | (D) Vakkom Abdul Khader Maulavi |

90. Human Right's Day :

- | | |
|-------------------------------|------------------------------|
| (A) 10 th December | (B) 10 th October |
| (C) 20 th December | (D) 20 th October |

91. 'Moksha Pradheepam' was the book written by:

- | | |
|---------------------------|------------------------|
| (A) Ayya Vaikundar | (B) Vagbhatananda |
| (C) Brahmananda Shivayogi | (D) Chattampi Swamikal |

92. The First Five Year plan was launched in:

- | | |
|----------|----------|
| (A) 1951 | (B) 1949 |
| (C) 1950 | (D) 1948 |

93. First chairman of the 'Atomic Energy Commission in India'?
- (A) Vikram SaraBhai (B) C.V. Raman
(C) Homi. J. Bhabha (D) S. N. Bose
94. India Government declared internal emergency on:
- (A) 25th June 1975 (B) 25th July 1975
(C) 27th June 1975 (D) 27th July 1975
95. Which country was the runner-up of 2014 World Cup Foot Ball?
- (A) Argentina (B) Germany
(C) Holland (D) Brazil
96. Who discovered South-west Monsoon wind in 45 AD?
- (A) Pliny, the Elder (B) Hippalus
(C) Horodotus (D) Greek Merchants
97. Gandhiji's First experiment of satyagraha in India :
- (A) Kheda Satya Graha (B) Sabarmathi
(C) Champaran (D) Ahammedabad
98. 1857 revolt or Sepoy mutiny in India was broke out in :
- (A) Surat (B) Meerut
(C) Delhi (D) Kanpur
99. 'Samatva Samajam', the organization was founded by:
- (A) Chattampi Swamikal (B) Pt. Karuppan
(C) Vaikunda Swamikal (D) Sree Narayana Guru
100. Total Number of West flowing rivers in Kerala:
- (A) 44 (B) 43
(C) 3 (D) 41