PAPER - I
DRAUGHTSMAN (CIVIL)
(THEORY)
SEMESTER - IV

TIME: 3 HRS.
MARKS: 150

Note: Attempt all questions.
All questions carry equal marks.
This paper carries negative marking. 25% marks will be deducted for each wrong answer.

Choose correct answer.

1. Which of the salt present in water is harmful for cultivation purposes?
   a) Sodium carbonate  b) Potassium sulphate  c) Calcium sulphate  d) None of these

2. A part of water which exists in the porous space of the soil by molecular attraction, is known as ____________.
   a) Capillary water  b) Gravitational water  c) Hygroscopic water  d) All of these

3. The amount of water required to fill up the pore spaces in soil particles by replacing all air held in pore spaces, is known as ____________.
   a) Field capacity  b) Saturation capacity  c) Available moisture  d) All of these

4. The total depth of water required by a crop during the entire period the crop is in the field, is known as ____________.
   a) Delta  b) Duty  c) Base period  d) Crop period

5. The time (in days) that crop takes from the instant of its sowing to that of its harvest, is known as ____________ period.
   a) Base  b) Crop  c) Kor  d) Delta

6. The depth of root zone is 90 cm for ____________.
   a) Wheat  b) Sugar cane  c) Rice  d) Cotton

7. The optimum depth of kor watering is 19 cm for ____________.
   a) Wheat  b) Sugar cane  c) Rice  d) Cotton

8. The commonly used rain gauge is ____________.
   a) Weighing bucket type  b) Tipping bucket type  c) Float type  d) None of these

9. When the bed level of the canal is higher than the highest flood level (H.F.L) of the drainage, then the cross drainage work is said to be ____________.
   a) Aqueduct  b) Super-passage  c) Canal syphon  d) Syphon aqueduct

Contd...2/-
10. Which of the following is used for circulation of the people from one room to another?
   a) Carpet area  b) Circulation area  c) Non usable area  d) Floor area

11. Which of the following is used to find the cost material at site?
   a) Schedule of rate  b) Analysis of rates  c) Data book  d) Lead statement

12. The fundamental principle of surveying is to work from the _________.
   a) Whole of the part  b) Part of the whole  c) Lower level to higher level  d) Higher level to lower level

13. The instrument attached to the wheel of a vehicle in order to measure the distance travelled, is called_______.
   a) Passometer  b) Pedometer  c) Odometer  d) Speedometer

14. When the measured length is less than the actual length, the error is known as _______.
   a) Positive error  b) Negative error  c) Compensating error  d) Instrumental error

15. A line joining some fixed points on the main survey line is called a _______.
   a) Check line  b) Tie line  c) Base line  d) None of these

16. An open cross-staff is commonly used for setting out _________.
   a) Short offsets  b) Long offsets  c) Oblique offsets  d) None of these

17. The horizontal angle between the true meridian and magnetic meridian is known as _________.
   a) True bearing  b) Dip  c) Local attraction  d) Magnetic declination

18. At the magnetic poles, the amount of dip is _________.
   a) 0°  b) 45°  c) 60°  d) 90°

19. The image formed by the objective in the plane of cross hairs is _________.
   a) Real and straight  b) Real and inverted  c) Virtual and straight  d) Virtual and inverted

20. The deflection angle may have any value between _________.
   a) 0° and 45°  b) 0° and 90°  c) 0° and 12°  d) 0° and 180°

21. A fixed point of reference of known elevation is called _________.
   a) Change point  b) Station point  c) Bench mark  d) Datum

22. Rise and fall method is used in _________.
   a) Profile leveling  b) Differential leveling  c) Check leveling  d) None of these

23. The line of joining the points having the same elevation above the datum surface, is called as _________.
   a) Contour surface  b) Contour line  c) Contour interval  d) Contour gradient

Contd...3/-
24. Contour lines cross ridge or valley lines at
   a) 30°  
   b) 45°  
   c) 60°  
   d) 90°

25. A curve of varying radius is known as ________.
   a) Simple curve  
   b) Compound curve  
   c) Reverse curve  
   d) Transition curve

26. The plotting of small area which can be commanded from a single station, is usually done
   on the plane table by the method of ________.
   a) Radiation  
   b) Intersection  
   c) Traversing  
   d) Resection

27. An arbitrary surface with reference to which the elevation of points are measured and
   compared, is called ________.
   a) Datum surface  
   b) Level surface  
   c) Horizontal surface  
   d) Vertical surface

28. The radius of curvature of the arc of the bubble tube is generally kept ________.
   a) 25m  
   b) 50m  
   c) 75m  
   d) 100m

29. Closed contours of decreasing values towards their centre, represent ________.
   a) Saddle  
   b) Hill  
   c) Depression  
   d) River bed

30. Detailed plotting is generally done by ________.
   a) Resection  
   b) Traversing  
   c) Radiation  
   d) All of these

31. Three point problem can be solved by ________.
   a) Bessels method  
   b) Tracing paper method  
   c) Lehmans method  
   d) All of these

32. A series of closely spaced contour lines ________.
   a) Plane surface  
   b) Gentle slope  
   c) Uniform slope  
   d) Steep slope

33. A metallic tape is made up of ________.
   a) Steel  
   b) Invar  
   c) Linen  
   d) Cloth

34. The method of leveling in which the heights of mountains are found by observing the
   temperature at which water boils is known as ________.
   a) Reciprocal leveling  
   b) Barometric leveling  
   c) Trigonometrically leveling  
   d) Hypsometry

35. Which of the following is particularly suitable when a contoured map of a hill is
   required?
   a) By graphical method  
   b) By squares  
   c) Technometric method  
   d) By cross section

36. The correction for sag is ________.
   a) Always zero  
   b) Always positive  
   c) Always subtractive  
   d) All of these

37. Which of the following is not use in GIS?
   a) Measuring weathering data  
   b) Locating traffic accidents  
   c) Traffic pattern analysis  
   d) Locating utility poles

Contd...4/-
38. Electromagnetic remote sensing uses
   a) Electromagnets
   b) Electromagnetic radiation
   c) Electromagnetic energy
   d) Electromagnetic spectrum

39. Visible light is electromagnetic radiation with wavelength between
   a) 0.1 μm to 0.2 μm
   b) 0.15 μm to 0.25 μm
   c) 0.4 μm to 0.7 μm
   d) 1.0 μm to 1.2 μm

40. _______ is one of the most powerful data-capturing techniques for the creation of GIS spatial database.
   a) Topography
   b) Aerial photograph
   c) Surveying
   d) Resource information system

41. The geoid of earth coincides with
   a) Sea level
   b) Earth surface
   c) Imaginary surface
   d) Ocean floor

42. A series of closed contour lines on the map with lower to higher values inside them represents a
   a) Steep slope
   b) Hill
   c) Ridge
   d) Depression

43. A building is an obstacle to
   a) Ranging but not chaining
   b) Too chaining but not ranging
   c) Both chaining and ranging
   d) None of these

44. The instrument used for measuring area on a contour
   a) Graphometer
   b) Areameter
   c) Plainometer
   d) Clinometer

45. Which among these is a method of wiring?
   a) Joint box
   b) Tee system
   c) Loop system
   d) All of these

46. Which of the following items of work not included in the plinth area estimate?
   a) Verandah area
   b) Room area
   c) Courtyard area
   d) W.C. area

47. The area is measured correct to the nearest
   a) 0.01 sqm
   b) 0.02 sqm
   c) 0.03 sqm
   d) 0.04 sqm

48. Percentage of drum submerged in the slurry in case of rotary drum filter is
   a) 60 cm
   b) 65 cm
   c) 70 cm
   d) 75 cm

49. Irrigation canals are generally aligned along
   a) Contour line
   b) Ridge line
   c) Valley line
   d) Straight line

50. The main function of a diversion head works of a canal from a river is
   a) To remove slit
   b) To control floods
   c) To store water
   d) To raise water level

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