

SSC JE DDA JE 2022

(SURVEYING MOST EXPECTED QUESTIONS TCS PATTERN)

Q : 1) When the measured length is less than the actual length, the error known as

- A : Positive error
- B : Negative error**
- C : Compensating error
- D : Instrumental error

B. Town planning survey	2. 1 : 5000
C. Topographical survey	3. 1 : 10000
D. Route survey	4. 1 : 25000

Q : 2) The scale of a given plan is written as 1 : 200. If an original length of 10 cm on the plan has now shrunk to 9.8 cm. Determine the actual distance denoted by a line which currently measures 10 cm.

- A : 20.4 m**
- B : 19.4 m
- C : 21.9 m
- D : 18.9 m

- A : A-a, B-b, C-c, D-d
- B : A-b, B-a, C-c, D-d
- C : A-a, B-b, C-d, D-c**
- D : A-b, B-a, C-d, D-c

Q : 3) The type of surveying in which the curvature of the earth is taken into account is called :

- A : Geodetic surveying**
- B : Plane surveying
- C : Preliminary surveying
- D : Topographical surveying

Q : 6) Which of the following types of survey is NOT based on the object of survey?

- A : Engineering survey
- B : Geological survey
- C : Military survey
- D : Astronomical survey**

Q : 4) A plan drawn to a scale of 1 : 4000 was measured by a scale of 1 : 5000. The % error in the length measured will be :

- A : 10
- B : 1000
- C : 25**
- D : 1.25

Q : 7) The residual error is the difference between :

- A : True value and observed value of a quantity
- B : Most probable value and observed value of a quantity
- C : Most probable value and true and true of a quantity
- D : None of the above**

Q : 5) Match List I with List II and select correct answer using the given lists.

List-I Type of survey	List II Recommended scale
A. Building survey	1. 1 : 1000

Q : 8) Geodetic survey of India was done, using

- A : Triangulation
- B : Traversing
- C : Trilateration**
- D : None of the above

Q : 9) 10 divisions of the vernier scale will have the same length in

- A : 10 division for 9 main scale divisions**
- B : 11 division for 10 main scale divisions
- C : 20 division for 19 main scale divisions
- D : 21 division for 20 main scale divisions

Q : 10) Surveys which are carried out to describe mountains, rivers, water bodies, wooded areas,

25 AUG 2022

and other cultural details are known as :

A : Cadastral surveys

B : City survey

C : Topographical survey

D : Guide map surveys

Q : 11) The least count of a vernier scale is

A : Sum of the smallest divisions of main and vernier scales

B : Value of one division of primary scale divided by the total number of divisions of the vernier scale

C : Value of one division of vernier scale divided by the total number of divisions of primary scale

D : Value of one division of vernier scale

Q : 12) The permissible error in chaining for measurement with chain on rough or hilly ground is

A : 1 in 100

B : 1 in 250

C : 1 in 500

D : 1 in 1000

Q : 13) Diagonal scales are generally used for representing how many units of measurement?

A : Five units

B : Three units

C : Six units

D : One unit

Q : 14) A vernier scale in which the smallest division is longer than the smallest division on the main scale; this vernier is called as :

A : Retrograde vernier

B : Direct vernier

C : Double vernier

D : Simple vernier

Q : 15) Match List I with List II in question and select the correct the correct answer by using code given below :

Code :

List-I	List-II

A. Fathometer	1. Microwave instrument
B. Passometer	2. Sounding instrument
C. Tellurometer	3. Distance measuring instrument
D. Altimeter	4. Height measuring instrument
	5. Pressure measuring instrument

A : 2, 3, 1, 4

B : 3, 5, 1, 4

C : 2, 5, 4, 1

D : 3, 2, 5, 1

Q : 16) The apparatus required for measuring base line length using rigid bars, is :

A : Colby apparatus

B : Wheeler's base line apparatus

C : both of the above

D : None of the above

Q : 17) Well-conditioned triangles are preferred because

A : They causes less survey work

B : Their apex are sharp and can be locate easily

C : They give good pictures on drawing sheets

D : None of the above

Q : 18) The total length of eight links in a 'Revenue chain' is

A : 16.5 feet

B : 33 feet

C : 26 feet

D : 13 feet

Q : 19) in chain surveying work, the line joining tie stations for taking offsets from it, is known as :

A : Tie line

B : Check line

C : Chain line

D : Base line

25 AUG 2022

Q : 20) A 30 m metric chain is found to be 0.1 m too short throughout the measurement. If the distance measured is recorded as 300 m, then the actual distance will be

- A : 300.1 m
- B : 301.0 m
- C : 299.0 m**
- D : 310.0 m

Q : 21) While applying correction due to sag in a chain or tape survey, which of the following shapes is assumed to be followed

- A : Circular
- B : Parabolic**
- C : Hyperbolic
- D : Quadratic

Q : 22) Length of a 50 m chain is short by 0.05 m. What kind of error will it introduce

- A : Positive cumulative error**
- B : Negative cumulative error
- C : Negative compensating error
- D : Positive compensating error

Q : 23) Pick the incorrect pair:

- A : Butt Rod : Measuring offsets
- B : Invar tap : Baseline measurement
- C : Plasters laths : Marking terminal points
- D : Prism square : Setting right angles**

Q : 24) A tape of length ' ℓ ' and weight ' w ' kg/m, is suspended at its ends with a pull of ' P ' kg, the sag correction is :

- A : $\frac{\ell^3 w^2}{24P^2}$**
- B : $\frac{\ell^2 w^3}{24P^2}$
- C : $\frac{\ell^3 w^2}{24P^3}$
- D : $\frac{\ell w^2}{24P}$

Q : 25) The length of a ranging rod should be

- A : 1.5 to 2.0 m
- B : 2 to 3.0 m**
- C : 3 to 4.0 m
- D : 2.5 to 4.5 m

Q : 26) As per Indian standard specification, the length of one link in 30 metre chain is

- A : 20 cm**

- B : 30 cm
- C : 40 cm
- D : 10 cm

Q : 27) Well conditioned triangle is related with

- A : $50^\circ 40'$
- B : $56^\circ 14'$**
- C : $60^\circ 20'$
- D : $66^\circ 15'$

Q : 28) An invar tape is made up of an alloy of :

- A : Copper and steel
- B : Brass and Nickel
- C : Brass and steel
- D : Nickel and steel**

Q : 29) In chain surveying, perpendiculars to the chain line are set out by-

- A : A theodolite
- B : A prismatic compass
- C : A clinometer
- D : An optical square**

Q : 30) The maximum tolerances in overall length of a 20 m and 30 m metric chain should be respectively-

- A : ± 2 mm, ± 8 mm
- B : ± 3 mm, ± 5 mm
- C : ± 5 mm, ± 8 mm**
- D : ± 8 mm, ± 5 mm

Q : 31) A tie line in a chain surveying

- A : Check the accuracy of the framework
- B : Enables the survey or to locate the interior details which are far away from the main chain lines**
- C : Fixes up the directions of all other lines
- D : All of these

Q : 32) Which of the following is not used to in measuring perpendicular offsets?

- A : Line ranger**
- B : Tape
- C : Optical square
- D : Cross-staff

Q : 33) Which was/is the standard length (in ft.) of Gunter's chain and in how many parts was/is it sub-divided?

25 AUG 2022

A : 66, 100

B : 60,100

C : 66, 50

D : 60, 50

Q : 34) Dimensions of the embankment was measured with 20 m chain and the volume was calculated as 400 cum. It was then found that the chain was 8 cm too long. The true volume of the embankment is

A : 395.24

B : 403.2

C : 404.82

D : 40.6

Q : 35) Chain surveying is well adopted for :

A : Small areas in open ground

B : Large areas with simple details

C : Small areas with crowded details

D : Large areas with difficult details

Q : 36) In surveying offsets are

A : Lateral measurements made with respect to main survey line

B : Perpendiculars are elected from chain lines

C : taken to avoid unnecessary walking between chain line

D : Measurements which are not made at right angles to the chain line

Q : 37) Which of the following is NOT a cumulative type of error in chaining?

A : Error in marking tape length

B : Incorrect length of tape

C : Error due to temperature

D : Tape not stretched horizontal

Q : 38) The position of a point can be fixed more accurately by

A : Cross staff

B : Optical square

C : oblique offsets

D : Perpendicular offsets

Q : 39) Example for an obstacle that obstructs both chaining and ranging

A : river

B : Hillock

C : Lake

D : Building

Q : 40) An average length of a pace is :

A : 60 cm

B : 80 cm

C : 100 cm

D : 120 cm

Q : 41) Choose the correct combination for base measurement in triangulation

A. Standardized tapes	i. Short base in plain ground
B. Hunter's short base	ii. Fairly long distances
C. Tacheometric base	iii. Used for measuring 80 m long base
D. EDM	iv. Undulating ground for small bases

A : A-iii, B-iv, C-ii, D-I

B : A-ii, B-I, C-iv, D-iii

C : A-iv, B-iii, C-I, D-ii

D : A-I, B-iii, C-iv, D-ii

Q : 42) The process of establishing number of intermediate points between two fixed end points on ground is known as

A : ranging

B : Offsets

C : Station points

D : Auxiliary points