TEST – 4 (SURVEYING)(CIVIL)

Q.1 If the probable error in single observation is +0.04 m and that of the mean is +0.01m, then the number of observation are

a) 4   b) 10

c) 16   d) 64

Q.2 Theory of probability is applied to

a) accidental errors only

b) cumulative errors only

c) both accidental and cumulative errors

d) None of these

Q.3 A survey is conducted with a view to prepare the map of an area to a scale of 1 : 1000. If a scale with least count of 0.1 mm is used for plotting. What would be the accuracy in length measurement in the field

a) 0.325m   b) 0.01 m

c) 0.1m   d) 1m

Q.4 The difference between the most probable value of a quantity and its observed value is

a) true error

b) weighted observation

c) conditional error

d) residual error

Q.5 Geodetic surveying is different form plane surveying because of

a) the curvature of the earth

b) the large difference of elevations between various points

c) coverage of very large area

d) undulations of the topography

Q.6 The error due to bad ranging is

a) cumulative; positive

b) cumulative' negative

c) compensating

d) cumulative; positive or negative

Q.7 'Offsets' are

a) short measurements from chain line

b) ties or check lines which are perpendicular to chain line

c) sets of minor instruments in chain surveying

d) chain lines which go out of alignment

Q.8 Which of the following instruments generally used for base line measurements?

a) chain

b) metallic tape

c) steel tape

d) invar tape

Q.9 An invar tape is made of an alloy of

a) copper and steel

b) brass and nickel

c) brass and steel

d) nickel and steel

Q>10 Number of links in a 30m metric chain is

a) 10^0 b)15^0

b) 18^0 d) 20^0

Q.11 'Ranging; is the process of

a) Fixing ranging rods on the extremities of the area

b) Aligning the chain in a straight line between two extremities

c) Taking off sets room a chain line

d) Chaining over a range of mountains

Q.12 The principle of 'working from whole to part' is used in surveying because

a) Plotting becomes easy

b) Survey work can be completed quickly

c) Accumulation of errors is prevented

d) all of the above

Q.13 During chaining along a straight line, the leader of the party has 4 arrows in his hand while for follower has6. Distance of the follower form the starting point is

a) 4 chains   b) 6 chains

c) 120m   d) 180

Q.14 A metallic tape is made of

a) Steel   b) invar

c) Linen   d) cloth and wires

Q.15 For a well conditioned triangle, no angle should be less than

a) 20^0 b) 30^0

c) 45^0 d) 60^0

Q.16 What is the distance between tress T_1 and T_2 shown in .

a) 4m   b) 5m

c) 7m   d) 12m

Q.17 The position of a point can be fixed more accurately by

a) Cross staff

b) Optical square

c) Oblique offsets

d) Perpendicular offsets

Q.18 The main object of running a tie line is

a) To check accuracy of work

b) To take details of nearby objects

c) To take offsets for detained surveying

d) None of these

Q.19 Which of the following is an obstacle in chaining but not to ranging?

a) River   b) hillock

c) Building   d) None of the above

Q.20 A building is an obstacle to

a) Chaining but not ranging

b) Ranging but not chaining

c) Both chaining and ranging

d) Neither chaining nor ranging

Q.21 The main difference between an optical square and a prism square is

a) Difference in principle of working

b) That optical square is more accurate than prism square

c) that no adjustment is required in a prism square since the angle between the reflecting surfaces cannot be changed.

d) all of the above

Q.22 The angle of intersection of the two plane mirrors of an optical square to

a) 30^0

b) 45^0

c) 60^0

d) 90^0

Q.23 The allowable length of an offset depends upon the

a) degree of accuracy required

c) Method of setting out the perpendiculars and nature of ground

d) Scale of plotting

e) All of the above

Q.24 Which of the following angles can be set out with the help of French cross staff?

a) 45^0 only

b) 90^0 only

c) either 45^0 or 90^0

d) any angle

Q.25 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.26 The correction for sag is

a) Always additive

b) Always subtractive

c) Always zero

d) Sometimes additive and sometimes subtractive

Q.27 Cross staff is an instrument used for

a) Measuring approximate horizontal angles

b) Setting out right angles

c) measuring bearings of the lines

d) none of the above

Q.28 Normal tension is that pull which

a) is used at the time of standardizing the tape

b) neutralizes the effect due to pull and age

c) makes the correction due to sag equal to zero

d) makes the correction due to pull equal to zero

Q.29 Which of the following is not used in measuring perpendicular offsets?

a) Line ranger

b) steel tape

c) Optical square

d) cross staff

Q.30 If the length of a chain is found to be short on testing, it can be adjusted by

a) Straightening the links

b) Removing one or more small circular rings

c) Closing the joints of the rings if opened out

d) all of the above

Q.31 The maximum tolerance in a 20 m chain is

a) $\pm$2mm

b) $\pm$3mm

c) $\pm$5mm

d) $\pm$8mm

Q.32 For accurate work, the steel band should always be used in preference to chain because the steel band

a) is lighter than chain

b) is easier to handle

c) is practically inextensible and is not liable to kinks when in use

d) Can be easily repaired in the field

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TEST – 4 (SURVEYING)(CIVIL)

Q.33 The length of a chain is measured from

a) centre of one handle to centre of other handle

b) outside of one handle to outside of other handle

c) outside of one handle to inside of other handle

d) inside of one handle to inside of other handle

Q.34 Select the incorrect statements.

a) The true meridians at different places are parallel to each other.

b) The true meridian at any place is no variable

c) The true meridians converge to a point is northern and southern hemispheres.

d) The maps prepared by national survey departments of any country are based on true meridians.

Q.35 If the true bearing of a line AB is 269^0 30', then the azimuth of the line AB is ……………

a) 0^0 30'

b) 89^0 30'

c) 90^0 30'

d) 269^0 30'

Q.36 In the prismatic compass

a) The magnetic needle moves with the box

b) The line of the sight does not move with the box

c) The magnetic needle and graduated circle do not move with the box

d) The graduated circle is fixed to the box and the magnetic needle always remains in the N-S direction

Q.37 For a line AB

a) the forbearing of AB and back bearing of AB differ by 18^0

b) the forbearing of AB and back bearing of BA differ by 180^0

c) Both a & b are correct

d) none is correct

Q.38 Local attraction in compass surveying may exist due to

a) Incorrect leveling of the magnetic needle

b) Loss of magnetism of the needle

c) Friction of the needle at the pivot

d) Presence of magnetic substances near the instrument

Q.39 If the quadrennial bearing of a line is N25^0 W, then the whole circle bearing of the line is

a) S 25^0 E   b) 205^0

c) 335^0 d) 295^0

Q.40 IF the forbearing of line AB is 35^0 and that of line BC 15^0 , then the included angle between the lines is

a) 20^0 b) 50^0

c) 160^0 d) 230^0

Q.41 The prismatic compass and surveyor's compass

a) Give whole circle bearing (WCB) of a line and quadriantal bearing (QB) of a line respectively

b) Both give QB of a line and WCB of a line

c) Both give QB of a line

d) Both give WCB of a line

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TEST – 4 (SURVEYING)(CIVIL)

Q.42 The horizontal angle between the true meridian and magnetic meridian at a place is called.

a) azimuth   b) declination

c) local attraction   d) magnetic bearing

Q.43 A negative declination shows that the magnetic meridian is to the

a) eastern side of the true meridian

b) western side of the true meridian

c) southern side of the true meridian

d) none of the above

Q.44 If the magnetic bearing of the sun at a place at noon in southern hemisphere is 167^0. The magnetic declination at that place is

a) 77^0 N   b) 23^0 S

c) 13^0 E   d) 13^0 W

Q.45 Agate cap is fitted with a

a) cross staff

b) level

c) chain

d) prismatic compass

Q.46 Theodolite is an instrument used for

a) tightening the capstan- headed nuts of level tube

b) measurement of horizontal angles only

c) measurement of vertical angles only

d) measurement of both horizontal and vertical angels

Q.47 The process of turning the telescope about the vertical axis in horizontal plane is known is

a) Transiting   b) reversing

c) Plunging   d) swinging

Q.48 Size of a theodolite is specified by

a) the length of telescope

b) the diameter of vertical circle

c) the diameter of lower plate

d) the diameter of upper plate

Q.49 Which of the following is not the function of leveling head?

a) to support the main part of the instrument

b) to attach the theodolite to the tripod

c) to provide a means for leveling the theodolite

d) none of the above

Q.50 The adjustment of horizontal cross hair is required particularly when the instrument is used for

a) Leveling

b) Prolonging a straight line

c) Measurement of horizontal angles

d) all of the above