

Draughtsman Civil– Semester 4 Module 1 – Roads

Reviewed and updated on: 01st November 2019 Version 1.1

1 : Which system of transportation is the fastest and provides more comfort for men and material?

- A : Railways
- B : Airways
- C : Waterways
- D : Roadways

2 : Which mode of transportation has the maximum flexibility for travel with respect to route, directions, time etc?

- A : Roadways
- B : Railways
- C : Waterways
- D : Airways

3 : Where did the Central Road Research Institute Started?

- A : England
- B : Nagpur
- C : New Delhi
- D : France

4 : When did the IRC was set up?

- A : 1943
- B : 1860
- C : 1934
- D : 1973

5 : Who created central public works department to look after the work of road?

- A : Lord William Bentick
- B : Lord Mayo
- C : Lord Dalhousie
- D : Lord Ripon

6 : Which cross slope is given to the top layer of road in Macadam Construction?

- A : 1 in 20
- B : 1 in 45
- C : 1 in 10
- D : 1 in 36

7 : Which is the highest point of a cross section of highway?

- A : Camber
- B : Sub base
- C : Carriage way
- D : Crown

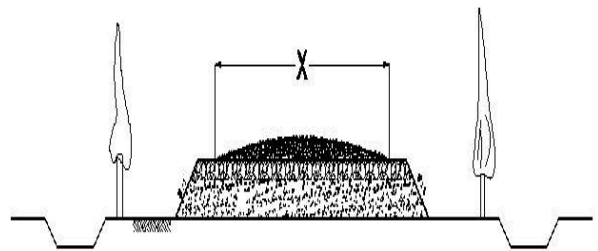
8 : What is the time required for a driver to realise the necessity of applying brakes to the vehicles?

- A : Reaction
- B : Reflection
- C : Perception
- D : Sight distance

9 : Which alternative road is provided to divert traffic to avoid obstruction?

- A : Loop
- B : Ring
- C : Trunk
- D : By pass

10 : What is marked as 'X'?



- A : Right of way
- B : Formation
- C : Roadway
- D : Carriage way

11 : What is the width of shoulders in roads?

- A : 0.5m to 1.25m
- B : 1.25m to 2m
- C : 2m to 4m
- D : 4m to 6m

12 : Which is the portion of the road constructed for vehicular traffic?

- A : Right way
- B : Formation
- C : Carriage way
- D : Road way

13 : Which is the basic requirement of alignment?

- A : Crosses maximum number of bridges
- B : Short
- C : Lengthy straight routes
- D : Curves

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14 : What is the restriction given to lengthy straight routes while setting road alignment?

- A : Minimum
- B : Maximum
- C : Depends on gradient
- D : Depends on rise and fall

15 : Which survey established the centre line of the actual highway?

- A : Location
- B : Preliminary
- C : Reconnaissance
- D : Cadasral

16 : Which survey is conducted to find the number of possible alternative routes between two points?

- A : Preliminary
- B : Reconnaissance
- C : Location
- D : Detailed

17 : Which is the classification of road according to importance?

- A : State highways
- B : Second class
- C : Cement concrete
- D : Express highways

18 : What is the normal recommended land width of national highway in open area?

- A : 24m
- B : 25m
- C : 35m
- D : 45m

19 : Which road connects areas of production and market with state highways and railways?

- A : National highway
- B : Major district
- C : Village
- D : Other district

20 : What is the minimum width of shoulders provided in national highways?

- A : 1m
- B : 1.5m
- C : 2m
- D : 2.5m

21 : What is the value of camber provided in the carriage way of gravel road?

- A : 1 in 30 to 1 in 35
- B : 1 in 25 to 1 in 30
- C : 1 in 15 to 1 in 20
- D : 1 in 10 to 1 in 15

22 : Which camber is provided for earth roads?

- A : 1 in 25 to 1 in 30
- B : 1 in 20 to 1 in 25
- C : 1 in 5 to 1 in 20
- D : 1 in 5 to 1 in 10

23 : Which is the direction of rolling in highway construction?

- A : Sides and proceeds to centre
- B : Centre and proceeds to sides
- C : Centre only
- D : One side and proceed to other

24 : Which is an advantage of cement concrete pavement?

- A : Initial coat is low
- B : Tractive resistance is low
- C : Rolling resistance is high
- D : Less time for construction

25 : What is the another name of continuous bay method?

- A : Alternate
- B : Strip
- C : Expansion
- D : Traverse

Draughtsman Civil– Semester 4 Module 2 – Curves on Road

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26 : Which circular curve consists of a single arc of uniform radius?

- A : Compound
- B : Simple
- C : Reverse
- D : Transition

27 : How a simple circular curve designated?

- A : Curvature of the curve
- B : Radius of the curve
- C : Angle subtended by an arc
- D : Angle subtended by a chord

28 : Which transition curve is recommended by the IRC in the horizontal alignment of highway?

- A : Spiral
- B : Lemniscate
- C : Cubic parabola
- D : Summit

29 : Which instrument is used for setting out curves in angular method?

- A : Compass
- B : Tape
- C : Chain
- D : Theodolite

30 : Which is the linear method of setting out a simple circular curve?

- A : Successive bisection of arcs
- B : Two theodolite method
- C : Tachometric method
- D : Rankin's method

31 : What is the equation for mechanical widening on curve?

A :

$$\frac{V}{9.5\sqrt{R}}$$

B :

$$\frac{nl^2}{2R}$$

C :

$$\frac{l^2}{2R}$$

D :

$$\frac{nl^2}{2R} + \frac{V}{9.5\sqrt{R}}$$

32 : How much extra width of pavement on horizontal curves is given for a radius of 21 to 40m for two lane?

- A : 1.5m
- B : 1.2m
- C : 0.9m
- D : 0.6m

33 : What is the minimum width provided for the cycle track in urban areas?

- A : 1m
- B : 1.5m
- C : 2m
- D : 3m

34 : What is the minimum shoulder width recommended by IRC?

- A : 1.30m
- B : 1.85m
- C : 2m
- D : 2.5m

35 : What is the value of minimum gradient?

- A : 1 in 14.3
- B : 1 in 20
- C : 1 in 30
- D : 1 in 200

36 : What is the minimum sight distance recommended by IRC for minor roads?

- A : 11m
- B : 15m
- C : 18m
- D : 20m

37 : What is the main purpose of providing camber?

- A** : To follow IRC specification
 - B** : To prevent entry of moisture into subgrade
 - C** : To maintain equilibrium
 - D** : To follow specifications
-

38 : Which shape of the surface drain is most preferred for heavy discharge in road?

- A** : Rectangular
 - B** : U shaped
 - C** : Semicircular
 - D** : V shaped
-

39 : Which culvert is used if the water opening is less than 15m² and road crosses the water way on a relatively high embankment?

- A** : Pipe
 - B** : Arch
 - C** : Box
 - D** : Slab
-

40 : Which drain is suitable for small streets of less discharge?

- A** : V shaped
 - B** : Semi circular
 - C** : Rectangular
 - D** : U shaped
-

Draughtsman Civil– Semester 4 Module 3 – Bridges and Culverts

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41 : What is the rise in level of the river water due to obstruction of bridge?

- A : Highest flood level
- B : Run off
- C : Afflux
- D : Free board

42 : Which is the intermediate support of a bridge superstructure?

- A : Foundation
- B : Pier
- C : Abutment
- D : Wing wall

43 : Which is the temporary pier made in the river bed?

- A : Kerb
- B : Scuppers
- C : Afflux
- D : Cribs

44 : What is the minimum distance between the specified position on a bridge?

- A : Bearings
- B : Clearance
- C : Afflux
- D : Water way

45 : Which foundation is suitable for the construction of bridge?

- A : Pile
- B : Shallow
- C : Grillage
- D : Inverted arch

46 : Which material is suitable for caisson of open well type?

- A : Cast iron
- B : RCC
- C : Steel
- D : Timber

47 : Which is a temporary structure constructed to remove water or soil from an area to carry construction under dry condition?

- A : Caisson
- B : Well
- C : Cofferdam
- D : Box

48 : Which is most common type of coffer dam?

- A : Wells

B : Dike

C : Pneumatic

D : Box

49 : What is the shape of the wingwall if it is inclined in plan?

- A : Straight
- B : Return wall
- C : Square
- D : Splayed

50 : What is the name of the abutment shown in figure?



A : Straight

B : Splayed wing wall

C : Return wing wall

D : Straight wing wall

51 : What is the name of the wingwall if the angle of splay 90° ?

- A : Splayed
- B : Return
- C : Straight
- D : Tee abutment

52 : Which bridge composed of several small spans for crossing a valley?

- A : Aqueduct
- B : Fort
- C : Viaduct
- D : Deck

53 : What is the maximum span of culvert?

- A : 2 m
- B : 3 m
- C : 5 m
- D : 6 m

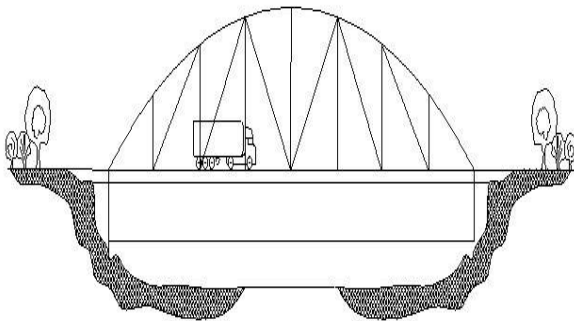
54 : Which bridge is mostly used for railway bridges of small spans?

- A : Steel girder
- B : Steel trough plate
- C : Suspension
- D : Steel truss

Draughtsman Civil– Semester 4 Module 3 – Bridges and Culverts

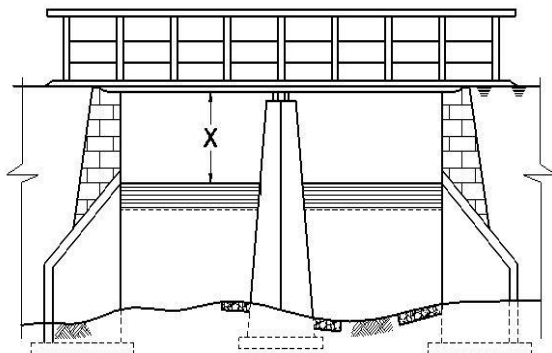
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55 : Which bridge is shown in figure?



- A : Semi through
- B : Deck
- C : Through
- D : Suspension

56 : What is marked as 'x'?



- A : Clearance
- B : Approach
- C : Free board
- D : Apron

57 : Which is the main characteristic for an ideal site for a bridge?

- A : Stream should be broad
- B : Built up areas
- C : Reach of stream should be straight
- D : Whirls and cross currents

58 : What plays a great role in fixing the height of bridge?

- A : Design
- B : Effect of scouring
- C : Highest flood level
- D : Type of traffic

59 : Which is provided for the superstructure in the alignment on curve in hilly areas?

- A : RCC girders

- B : Box culverts
- C : Dumb bell pier
- D : Column bents

60 : When did spread foundation is adopted for bridges?

- A : Good soil is available at shallow depth
- B : Depth of water is more
- C : Good soil is not available at shallow depth
- D : Tension developed is more

61 : Which foundation is adopted when the loose soil extends to a great depth?

- A : Spread
- B : Raft
- C : Caisson
- D : Pile

62 : Which foundation is provided for heavy works at a depth of 12 m to 15 m below the level of standing water surface?

- A : Well
- B : Caisson
- C : Cofferdam
- D : Pile

63 : Which caisson the ratio of sinking effort to skin friction is maximum?

- A : Circular well
- B : Box
- C : Dumb well
- D : Pneumatic caisson

64 : What is the minimum percentage of oxygen concentration in underground air quality for tunnel?

- A : 12.5%
- B : 15.5%
- C : 17.5%
- D : 19.5%

65 : What is the maximum noise levels of ventilation fans while measure at the closest point of employee exposure?

- A : 90 decibel
- B : 100 decibel
- C : 120 decibel
- D : 130 decibel

Draughtsman Civil– Semester 4 Module 4 – Railways

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66 : Who started the development of railways in India?

- A : George stephenson
- B : Lord dalhousie
- C : Lord curzon
- D : Lord ripon

67 : Which gauge is adopted for main cities and routes of maximum intensities?

- A : Broad
- B : Narrow
- C : Metre
- D : Wide

68 : What is the process for filling the ballast around the sleepers?

- A : Creep
- B : Turn table
- C : Boxing
- D : Coning

69 : What is the width of broad gauge?

- A : 0.16 m
- B : 0.762 m
- C : 1.00 m
- D : 1.676 m

70 : What is the name for raising of the level of the outer rail over that of inner rail?

- A : Creep
- B : Cant
- C : Boxing
- D : Wearing

71 : What is the name of the defect in rail due to abnormality of heavy load?

- A : Hogging
- B : Wear
- C : Creep
- D : Kink

72 : What is the length of bull headed rail?

- A : 16.7 m
- B : 18.29 m
- C : 18.6m
- D : 19.2mm

73 : What is the name of the steel placed end to end to provide a level surface for the movement of trains?

- A : Ballast
- B : Sleepers

- C : Rails
- D : Fish plates

74 : What is the minimum depth of ballast for broad gauge?

- A : 20 cm
- B : 30 cm
- C : 40 cm
- D : 50 cm

75 : What is the minimum spacing between sleepers in broad gauge?

- A : 200 mm
- B : 250 mm
- C : 300 mm
- D : 500 mm

76 : Which is a cast iron sleeper?

- A : Duplex
- B : Steel
- C : Pot
- D : Box

77 : What is the standard size of ballast for wooden sleepers?

- A : 25 mm
- B : 40 mm
- C : 50 mm
- D : 60 mm

78 : What is used for fixing the rails to the wooden sleepers?

- A : Spikes
- B : Bearing plates
- C : Fish bolt
- D : Rail chair

79 : Which is used for changing the direction of engine?

- A : Rail joint
- B : Turn table
- C : Points and crossing
- D : Terminal station

80 : Which is used for joining the rail?

- A : Spikes
- B : Rail chairs
- C : Fish plates
- D : Bearing plate

Draughtsman Civil– Semester 4 Module 4 – Railways

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81 : What is the defect of rail with its end or ends bent in vertical direction?

- A : Wear of rails
- B : Hogging of rails
- C : Creep of rails
- D : Bending of rails

82 : Which direction does rail creep occurs?

- A : Longitudinal
- B : Lateral
- C : Vertical
- D : Transverse

83 : Which is used to reduce creeping of rail?

- A : Bearing plates
- B : Spikes
- C : Anchors
- D : Chairs

84 : Which method is used to repair the worn out or damaged rails and to built up damaged components of points and crossing?

- A : Bending
- B : Hogging
- C : Creep
- D : Welding

85 : Which area wear of rails maximum?

- A : Top of rail
- B : End of rail
- C : Inner side of rail
- D : Head of rail

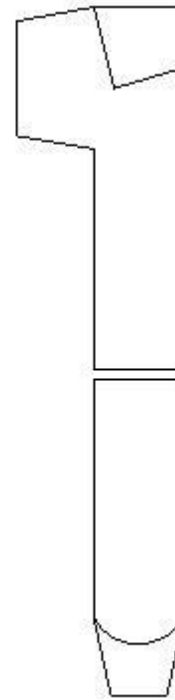
86 : What is the height of embankment above HFL in the construction of permanent way?

- A : 30 cm
- B : 50m
- C : 60 cm
- D : 65 cm

87 : What is the process of tightly ramming the ballest under the sleepers to transmit the load?

- A : Packing
- B : Laying
- C : Boxing
- D : Fixing

88 : What is the name of the spike is in figure?



- A : Round
- B : Screw
- C : Elastic
- D : Dog

89 : Which warner signal is first seen by the driver in railway station?

- A : Disc signal
- B : Home signal
- C : Outer signal
- D : Routing signal

90 : Which crossing the right hand rail of one track crosses the left hand rail of another track and vice versa?

- A : Acute angle
- B : Obtuse angle
- C : Square
- D : Rectangular

Draughtsman Civil– Semester 4 Module 5 – Irrigation Engineering

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91 : Which underground water nourishes the plant roots by capillarity?

- A : Subsurface
- B : Surface
- C : Flood
- D : Flow

92 : Which method of irrigation is called trickle irrigation?

- A : Furrow
- B : Sprinkler
- C : Drip
- D : Border strip

93 : What is the main advantage of irrigation?

- A : Water logging
- B : Yield of crops
- C : Complex
- D : Damper climate

94 : Which irrigation method water is supplied to lower level by the action of gravity?

- A : Flow
- B : Lift
- C : Sprinkler
- D : Subsurface

95 : Which crops are sown in autumn in harvested in spring?

- A : Kharif
- B : Autumn
- C : Rabi
- D : South west monsoon

96 : What is the relation between duty (D) Delta (Δ) and base period (B)?

- A : $\Delta = (86.4B / D)$
- B : $\Delta = (864B / D)$
- C : $\Delta = (8.64B / D)$
- D : $\Delta = (8640B / D)$

97 : What is the time between first watering of a crop on sowing to its last watering before harvesting?

- A : Base period
- B : Rabi season
- C : Kor period
- D : Crop period

98 : What is the total depth of water required by a crop during the entire period in the field?

- A : Duty

B : Base period

C : Delta

D : Crop period

99 : What is the first watering before sowing the crop?

- A : Kor watering
- B : Paleo
- C : Delta
- D : Duty

100 : Which is the graphical representation of average rainfall between rainfall excess?

- A : Hyetograph
- B : Hydrograph
- C : S-hydrograph
- D : Unit hydrograph

101 : Which catchment area run off will be more?

- A : Fan shaped
- B : Tree shaped
- C : Fern shaped
- D : Circular

102 : Which is the angle that the axis of head regulator makes with the axis of the weir?

- A : 90° to 120°
- B : 90° to 60°
- C : 90° to 100°
- D : 180°

103 : Which construction is at the head of the canal to divert the river water towards the canal?

- A : Storage head work
- B : Diversion head work
- C : Barrage
- D : Weir

104 : Which is called safety valve of a dam?

- A : Drainage gallery
- B : Inspection gallery
- C : Spill way
- D : Outlet sluices

105 : What is the name for accumulation of water in the form of an artificial lake?

- A : Spill ways
- B : Barrages
- C : Reservoir
- D : Groynes

Draughtsman Civil– Semester 4 Module 5 – Irrigation Engineering

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106 : What is the classification of dam based on use?

- A : Detention
- B : Debris
- C : Rigid
- D : Buttress

107 : Which of the following is non rigid dam?

- A : Concrete
- B : Rock fill
- C : Gravity
- D : Arch

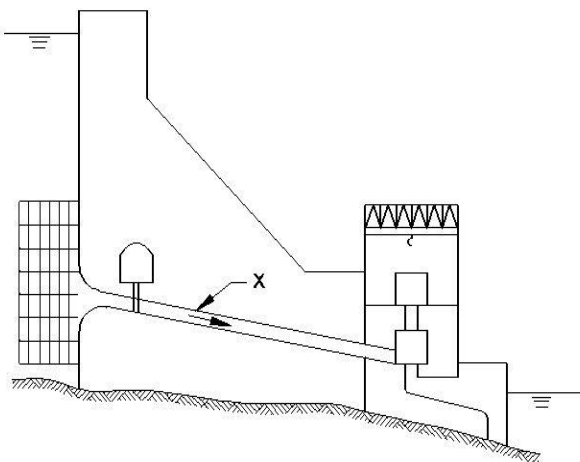
108 : Where did the surplus water in weir is allowed to flow?

- A : Gates
- B : Crest
- C : Spill way
- D : Openings

109 : What is the life period of thermal plant?

- A : Less than 30 years
- B : More than 30 years
- C : Less than 50 years
- D : More than 50 years

110 : What is marked as 'x'?



- A : Turbine
- B : Draft tube
- C : Gallery
- D : Pen stock

111 : Which irrigation constant and continuous supply of water is assured throughout the crop period?

- A : Flood
- B : Artificial

- C : Perennial
- D : Inundation

112 : Which crop is grown at a particular crop season?

- A : Culturable cultivated area
- B : Gross commanded area
- C : Culturable commanded area
- D : Culturable incultivated area

113 : When does hydrograph called as unit hydrograph?

- A : 1 cm of runoff from rainfall
- B : 3 cm of runoff from rainfall
- C : 1 mm of runoff from rainfall
- D : 3 mm of runoff from rainfall

114 : What is the unit for measuring rainfall?

- A : cm
- B : mm
- C : Feet
- D : No unit

115 : Which is the main function of diversion head work of a canal?

- A : To remove silt
- B : To control floods
- C : To store water
- D : To raise water level

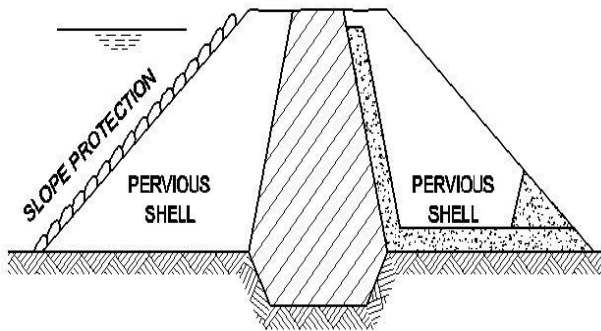
116 : Which is provided in the diversion headwork to scour away silt deposited?

- A : Fish ladder
- B : Groynes
- C : Barrage
- D : Under sluices

117 : Which is the main factor for selection of site for a reservoir?

- A : Maximum runoff
- B : Maximum percolation
- C : Wide opening
- D : Minimum runoff

118 : What is the name of dam?



- A : Rock fill dam
- B : Concrete buttress dam
- C : Earth dam
- D : Combined Earth and Rock dam

119 : Which is known as spill way?

- A : Water spread dam
- B : Detention dam
- C : Debris dam
- D : Over flow dam

120 : Which is the sheet of over flowing water?

- A : Head
- B : Nappe
- C : Upstream
- D : Crest

121 : What is the name of the structure placed in river to increase the depth of water?

- A : Barrage
- B : Weir
- C : Notch
- D : Crest

122 : What is the name of the impervious barrier constructed across a perennial river to raise the water level on the upstream side?

- A : Barrage
- B : Weir
- C : Notch
- D : Mouth piece

123 : Which element of hydroelectric power plant reduce the water hammer pressure formed in the penstock?

- A : Valves
- B : Surge tank

- C : Turbines
 - D : Draft tubes
-

Draughtsman Civil– Semester 4 Module 6 – Canals

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124 : Which canal is constructed to feed two or more canals?

- A : Carrier
- B : Feeder
- C : Navigation
- D : Irrigation

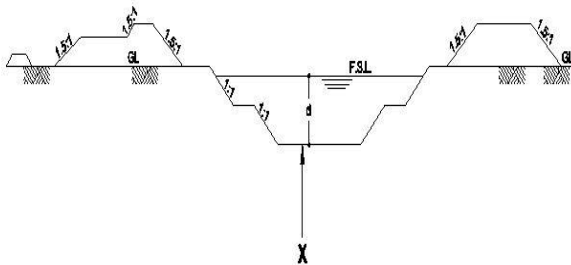
125 : Which of the following canal is classified based on nature of supply?

- A : Carrier
- B : Feeder
- C : Navigation
- D : Permanent

126 : Which canal carries water for another canal besides doing irrigation?

- A : Carrier
- B : Feeder
- C : Navigation
- D : Power

127 : What is marked as 'X'?



- A : Free board
- B : Canal bed
- C : Berm
- D : Bank

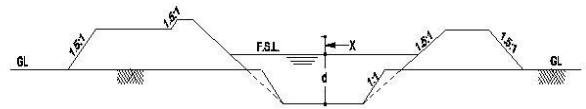
128 : Which canal is aligned along a water washed?

- A : Contour
- B : Side slope
- C : Ridge
- D : Power

129 : Which canal is also known as ridge canal?

- A : Contour
- B : Watershed
- C : Side slope
- D : Main

130 : What is marked as 'X'?

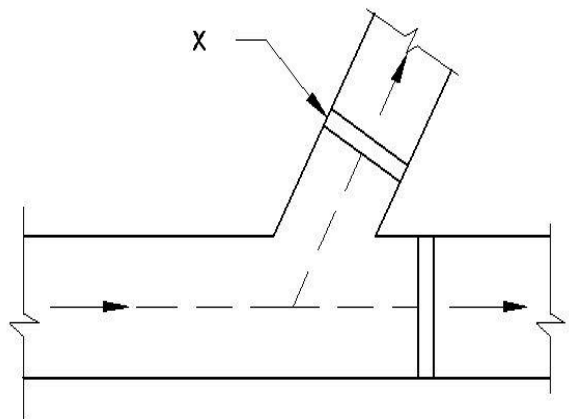


- A : Free board
- B : Canal bed
- C : Berm
- D : Bank

131 : What is also known as canal fall?

- A : Canal syphon
- B : Canal drop
- C : Super passage
- D : Aqueduct

132 : What is marked as 'X'?

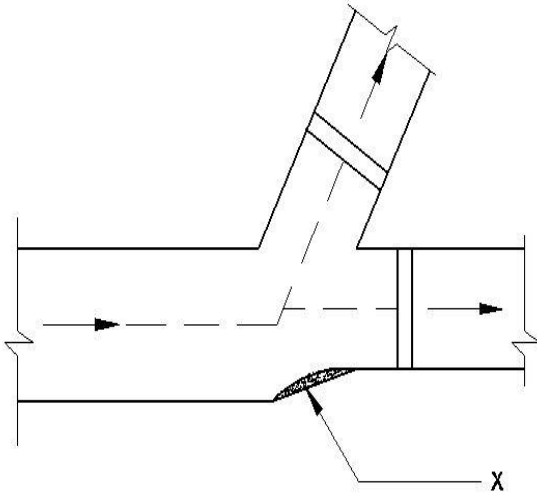


- A : Distributary head regulator
- B : Off take channel
- C : Parent canal
- D : Cross regulator

Draughtsman Civil– Semester 4 Module 6 – Canals

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133 : What is marked as 'X' ?



- A : Parent canal
- B : Silt jetty
- C : Off take canal
- D : Cross regulator

134 : Which cross drainage work is constructed to carry canal over drainage?

- A : Aqueduct
- B : Super passage
- C : Canal syphon
- D : Level crossing

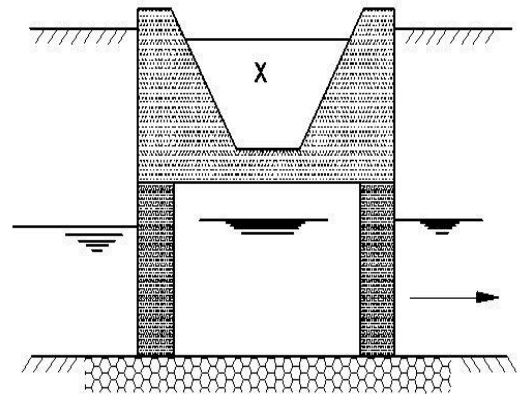
135 : Which cross drainage work is constructed to carry canal below drainage?

- A : Aqueduct
- B : Super passage
- C : Level crossing
- D : Inlet

136 : Which cross drainage work is constructed to cross the canal and drainage at the same level?

- A : Aqueduct
- B : Super passage
- C : Canal syphon
- D : Level crossing

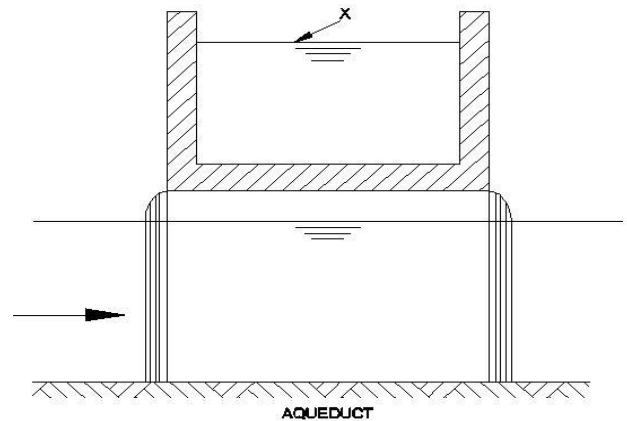
137 : What is marked as 'X'?



SUPER PASSAGE

- A : FSL
- B : Stream
- C : HFL
- D : Canal

138 : What is marked as 'X'?



AQUEDUCT

- A : Canal syphon
- B : Drainage
- C : Culvert
- D : Trough

Draughtsman Civil– Semester 4 Module 7 – Estimation

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139 : What is the name given to built up area of building measured at floor level of any storey?

- A : Plinth area
- B : Floor area
- C : Circulation area
- D : Carpet area

140 : What is the name given to area of a building consisting of verandah's, passages, corridors, balconies etc.?

- A : Circulation area
- B : Horizontal circulation area
- C : Vertical circulation area
- D : Carpet area

141 : What percentage of plinth area is provided for horizontal circulation area?

- A : 5 to 10%
- B : 10 to 15%
- C : 15 to 20%
- D : 20 to 25%

142 : What percentage of plinth area of the residential building comes to carpet area?

- A : 40 to 55%
- B : 50 to 65%
- C : 60 to 75%
- D : 70 to 85%

143 : What percentage of estimate cost is charged for centage charges?

- A : 5 to 10%
- B : 10 to 15%
- C : 15 to 20%
- D : 20 to 25%

144 : Which is rough cost estimate?

- A : Revised estimate
- B : Annual repair estimate
- C : Plinth area estimate
- D : Supplementary estimate

145 : Which is an item rate estimate?

- A : Plinth area
- B : Annual repair
- C : Cubical content
- D : Preliminary

146 : What is the sequence of booking measurements?

- A : Breadth, length and depth
- B : Number, length and depth

C : Diameter, length and density

D : Length, breadth and height

147 : What is the minimum length for bill quantity calculation?

- A : 0.5 mm
- B : 1 mm
- C : 1cm
- D : 10 cm

148 : What is the minimum area for bill quantity calculation?

- A : 1 mm²
- B : 1 cm²
- C : .01 sq.m
- D : 1m²

149 : What is the unit for excavation in M.K.S system?

- A : m
- B : sq.m²
- C : cu.m
- D : No

150 : What is the minimum cubical quantity for bill quantity calculation?

- A : 1 mm³
- B : 1 cm³
- C : 0.01 m³
- D : 0.1 m³

151 : What is the unit for cement concrete in M.K.S. system?

- A : Nos.
- B : m
- C : sq.m
- D : cu.m

152 : What is the unit for brick work in cement mortar for superstructure in MKS system?

- A : m
- B : sq.m
- C : cu.m
- D : Nos.

153 : What is the unit for steel reinforcement bars etc in RCC, RB work in MKS system?

- A : m
- B : Nos.
- C : Quintal
- D : sq.m

Draughtsman Civil– Semester 4 Module 7 – Estimation

Reviewed and updated on: 01st November 2019 Version 1.1

154 : What is the unit for ridges, valleys, gutters in M.K.S system?

- A : metre
- B : sq.m
- C : cu.m
- D : Nos.

155 : What is the unit for flooring in MKS system?

- A : m
- B : sq.m
- C : cu.m
- D : Nos.

156 : What is the minimum lead for earth work excavation?

- A : 10 m
- B : 20 m
- C : 30 m
- D : 50 m

157 : What is the minimum lift for earthwork excavation?

- A : 1 m
- B : 1.5 m
- C : 2.0 m
- D : 3.0 m

158 : What is the measuring unit for soling layer?

- A : m
- B : sq.m
- C : cu.m
- D : Nos.

159 : How much area of the opening is ignored for the masonry quantity calculation?

- A : 1. sq.cm
- B : 10 sq.cm
- C : 100 sq.cm
- D : 1000 sq.cm

160 : What is the measuring unit for cornice?

- A : m
- B : sq.m
- C : cu.m
- D : mm

161 : What is the measuring unit for modern door and window frames?

- A : m
- B : sq.m

C : cu.m

D : mm

162 : What is the scale range used for the preparation of layout plan?

- A : 1cm = 5m to 1cm = 10m
- B : 1cm = 10m to 1cm = 20m
- C : 1cm = .5km to 1cm = 1km
- D : 1cm = 5km to 1cm = 10km

163 : Which data is necessary for the preparation of estimate?

- A : Labour
- B : Material
- C : Fund
- D : Drawings

164 : Which estimate is prepared while the expenditure on a work exceeds by more than 10%?

- A : Supplementary
- B : Revised
- C : Annual repair
- D : Cubical content

165 : Which estimate is prepared while the original sanctioned estimate is exceeded by more than 5%?

- A : Supplementary
- B : Extension and improvement
- C : Revised
- D : Plinth area

166 : Which estimate is required for administrative sanction?

- A : Approximate
- B : Detailed
- C : Revised
- D : Supplementary

167 : How aggregate is specified?

- A : Size in mm
- B : Length in mm
- C : Height and breadth in cm
- D : Length in m, section in mm

168 : Which brick wall thickness is measured in sq.m?

- A : 10 cm
- B : 15 cm
- C : 20 cm
- D : 30 cm

169 : Which brick structure is measured in sq.m?

- A : Reinforced brick work
 - B : Broken glass coping
 - C : Concrete fencing posts
 - D : Brick work in arches
-

170 : What (%) percentage of steel work is provided for rivets in steel roof truss?

- A : 3%
 - B : 5%
 - C : 7%
 - D : 10%
-

171 : What is the density of mild steel?

- A : 0.785 q/cu.m
 - B : 7.85q/cu.m
 - C : 78.5q/cu.m
 - D : 785q/cu.m
-

172 : What is the plastering area for a pillar?

- A : Length x breadth x height
 - B : Section area x height
 - C : Perimeter
 - D : Perimeter x height
-

173 : What (%) percentage is added as contingencies in approximate estimate?

- A : 1% to 5%
 - B : 5% to 10%
 - C : 10% to 12%
 - D : 10% to 15%
-

Draughtsman Civil– Semester 4 Module 8 – Rate Analysis

Reviewed and updated on: 01st November 2019 Version 1.1

174 : What is the out-turn of mason constructing stone arch work?

- A : 0.40 cu.m
- B : 0.55 cu.m
- C : 0.80 cu.m
- D : 0.90 cu.m

175 : What is the out-turn of mason, constructing superstructure with brick masonry?

- A : 0.55 cu.m
- B : 0.85 cu.m
- C : 1.00 cu.m
- D : 1.25 cu.m

176 : What percentage contractors profit is included in the analysis of rate?

- A : 5
- B : 10
- C : 15
- D : 20

177 : What quantity bitumen is required for 100m² first coat painting on DPC?

- A : 75 kg
- B : 100 kg
- C : 125 kg
- D : 150 kg

178 : What quantity of stone is required for 1m³ of rubble masonry?

- A : 0.5 cu.m
- B : 0.75 cu.m
- C : 1.00 cu.m
- D : 1.25 cu.m

179 : How many nominal size bricks are required for 1m³ of brick work?

- A : 500
- B : 600
- C : 700
- D : 800

180 : What quantity of coarse aggregate is required for 100m³ of 1:2:4 cement concrete?

- A : 84 m³
- B : 86 m³
- C : 88 m³
- D : 90 m³

181 : What is printed list of rates of various items of work maintained by the engineering department?

- A : Schedule of rates
- B : Analysis of rates
- C : Item rates
- D : Market rates

182 : Who prepares the schedule of rates?

- A : Engineering department
- B : Contractors
- C : Private agencies
- D : Government agencies

183 : How many mazdoor or helper is required per mason for brickwork?

- A : 1
- B : 1.5 to 2
- C : 3
- D : 4

184 : What is the process of determining the fair price or value of a property?

- A : Valuation
- B : Estimation
- C : Fixation
- D : Taxation

185 : What is the value of dismantled material?

- A : Salvage
- B : Scrap
- C : Market
- D : Book

186 : What is the amount a property can fetch from open market?

- A : Scrap value
- B : Salvage value
- C : Market value
- D : Book value

187 : What is the annual periodic payment for repayment of the capital amount invested by a party?

- A : Capital cost
- B : Annuity
- C : Depreciation
- D : Outgoings

Draughtsman Civil– Semester 4 Module 8 – Rate Analysis

Reviewed and updated on: 01st November 2019 Version 1.1

188 : Which cement concrete proportion is used for damp proofing first class building?

- A : 1:1.5:3
- B : 1:2:4
- C : 1:2:6
- D : 1:4:8

189 : What is the minimum height specified for first class building?

- A : 3.3 m
- B : 3.7 m
- C : 3.8 m
- D : 3.9 m

190 : Which cement concrete proportion is used for damp proofing second class building?

- A : 1:1.5:3
- B : 1:2:4
- C : 1:2:6
- D : 1:4:8

191 : What is the equation for computation of volume by trapezoidal formula?

A :

$$V = \frac{D}{2} [A_1 + A_2 + A_3 + \dots + A_{n-1} + A_n]$$

B :

$$V = \frac{D}{2} [A_1 + A_n + 2(A_2 + A_3 + \dots + A_{n-1})]$$

C :

$$V = \frac{D}{3} [A_1 + A_2 + A_3 + \dots + A_n]$$

D :

$$V = \frac{D}{3} [(A_1 + A_n) + 2(A_3 + A_5 + \dots + A_{n-1}) + 4(A_2 + A_4 + \dots + A_{n-2})]$$

192 : What is the equation for computation of volume by prismoidal formula?

A :

$$V = \frac{D}{2} [A_1 + A_2 + A_3 + \dots + A_{n-1} + A_n]$$

B :

$$V = \frac{D}{2} [(A_1 + A_n) + 2(A_2 + A_3 + \dots + A_{n-1})]$$

C :

$$V = \frac{D}{3} [(A_1 + A_n) + 2(A_3 + A_5 + \dots + A_{n-1}) + 4(A_2 + A_4 + \dots + A_{n-2})]$$

D :

$$V = \frac{D}{2} [A_1 + A_2 + A_3 + \dots + A_{(n-1)} + A_n]$$

193 : What material is specified for the plinth of 1st class building?

- A : First class brick work in cement mortar 1:6
- B : Second class brick work in cement mortar
- C : Third class brick work in cement mortar
- D : Sun dried brick work in mud mortar

194 : What is the area by trapezoidal rule?

Distance (m)	0	30	60	90	120	150	180	210
Off set (m)	0	2.65	3.80	3.75	4.65	3.60	5.00	5.80

- A : 764.5 m²
- B : 770.5 m²
- C : 780.5 m²
- D : 790.5 m²

195 : What is the area by Simpsons rule?

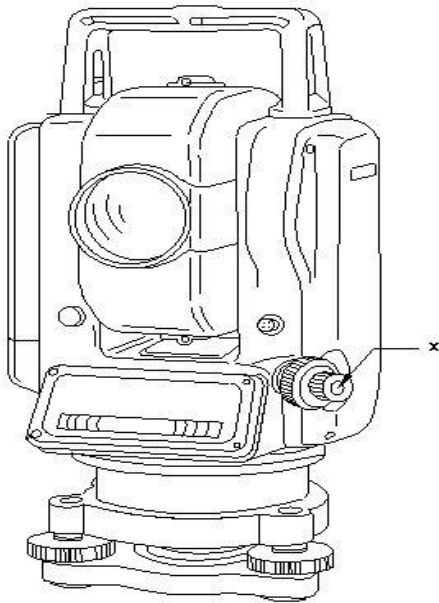
Distance (m)	0	30	60	90	120	150	180	210
Off set (m)	0	2.65	3.80	3.75	4.65	3.60	5.00	5.80

- A : 717 m²
- B : 727 m²
- C : 959 m²
- D : 1090 m²

Draughtsman Civil– Semester 4 Module 9 – Total Station

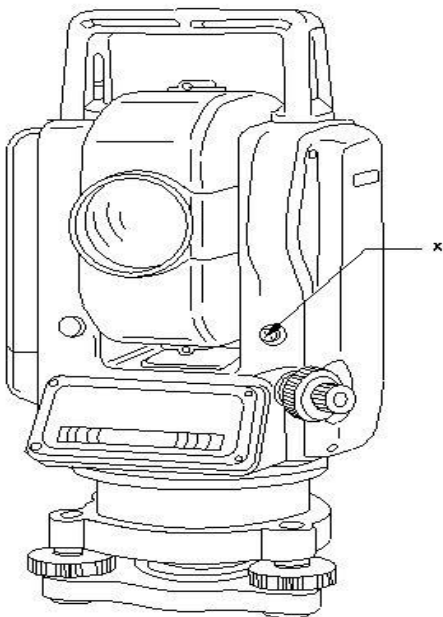
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196 : What is marked as 'x'?



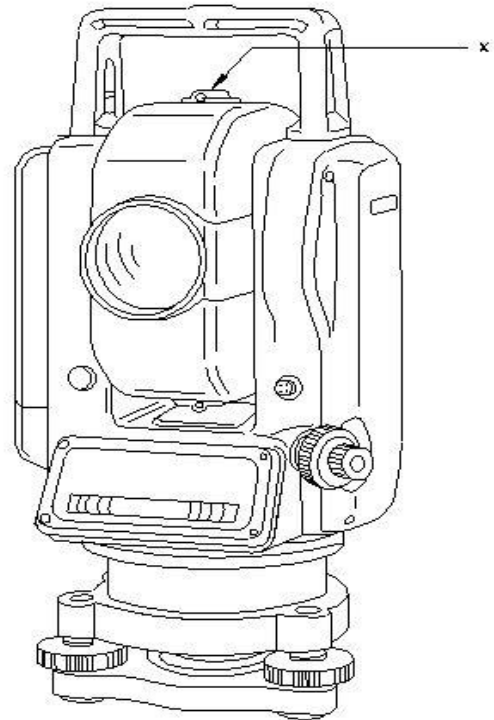
- A : Optical plummet
- B : Collimator
- C : Data out connector
- D : Bottom plate

197 : What is marked as 'x'?



- A : Objective lens
- B : Collimator
- C : Optical plummet
- D : Data out connector

198 : What is marked as 'x'?



- A : Top Handle
- B : Collimator
- C : Optical plummet
- D : Data out connector

199 : Which instrument is a combination of EDM, electronic theodolite and micro processor?

- A : Total Station
- B : Tacheometer
- C : Distomite
- D : Tellurometer

200 : Which program is used for erecting perpendicular line to base line?

- A : Stake out
- B : Free station
- C : Reference line
- D : Tie distance

201 : Which program is used for setting out points?

- A : Resection
- B : Stake out
- C : Reference line
- D : Remote height

202 : Which instrument is used to find out the co-ordinates of a reflection and at the same time measuring the vertical angles?

- A : Auto level
- B : Total station
- C : Theodolite
- D : Transmit theodolite

203 : What is the name of measurement for distances taken to a prism on reflecting foil most accurate?

- A : Precise measurement
- B : Rapid measurement
- C : Tracking measurement
- D : Angle measurement

204 : Which measurement reduces the measurement time to a prism between 0.5 and 1's for both phase shift and pulsed systems?

- A : Precise measurement
- B : Rapid measurement
- C : Tracking measurement
- D : Angle measurement

205 : Which range can be obtained for a reflector less measurement taken with a phase shift system?

- A : 50 m
- B : 100 m
- C : 150 m
- D : 200 m

206 : What is the formula for principle of operation of EDM?

- A : Velocity = Time x Distance
- B : Velocity = Time / Distance
- C : Velocity = Distance x Time
- D : Velocity = Distance / Time

207 : What is the abbreviation for EDM in surveying?

- A : Electronic Distance Measurement
- B : Engineering Distance Measurement
- C : Electro Discharge Maching
- D : Electronic Direct Mailing

208 : What is the shape of a single reflector prism?

- A : Cube corner
- B : Cuboid corner
- C : Circular
- D : Triangular corner

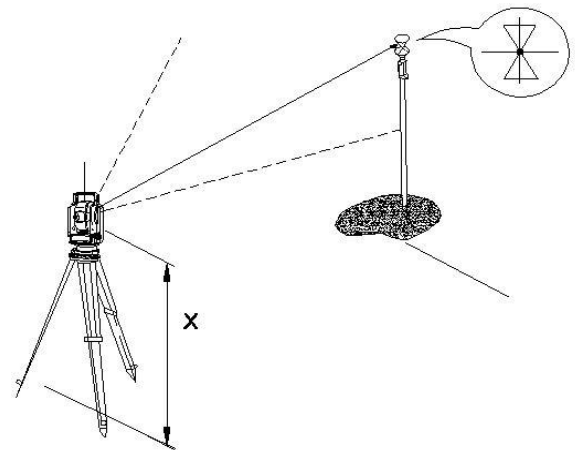
209 : In which conditions, the LCD screen does not work?

- A : Cold
- B : Hot
- C : Warm
- D : Wind

210 : Faulty temperature and pressure measurement occurs by which source of error in EDM?

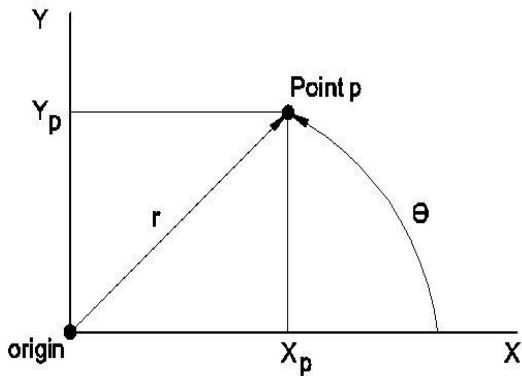
- A : Personal
- B : Instrumental
- C : Natural
- D : Environmental

211 : What is marked as 'x'?



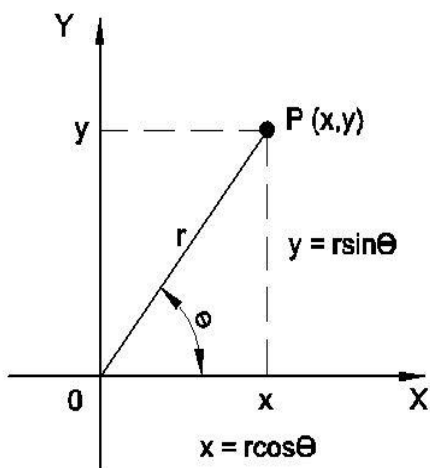
- A : Reflector height
- B : Instrumental height
- C : Height of collimation
- D : Slope height

212 : What is the name of the figure given below?



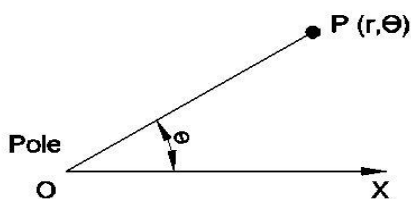
- A : Rectangular and polar co-ordinates
- B : Polar to cartesian co-ordinates
- C : Rectangular co-ordinates
- D : Polar co-ordinates

213 : What is the name of the figure given below?



- A : Rectangular and polar co-ordinates
- B : Polar to cartesian co-ordinates
- C : Rectangular co-ordinates
- D : Polar co-ordinates

214 : What is the name of the figure given below?



- A : Rectangular and polar co-ordinates
- B : Polar to cartesian co-ordinates

- C : Rectangular co-ordinates
- D : Polar co-ordinates

215 : What is the formula to find out the sum of interior angles of a closed polygon traverse?

- A : $(n - 2) \times 360^\circ$
- B : $(n + 2) \times 360^\circ$
- C : $(n - 2) \times 180^\circ$
- D : $(n + 2) \times 180^\circ$

216 : Which are dedicated to the particular instrument and can store and process surveying observation?

- A : Data recorders
- B : Pocket calculators
- C : Field note books
- D : Pen-drives

217 : Which is fitted with a total station capable of storing 900 to 10000 points?

- A : Memory card
- B : Data recorder
- C : Internal memory
- D : Field computer

218 : What is the advantage of Total Station?

- A : The instruments costly
- B : Does not provide field note
- C : Direct observation of sum not possible
- D : Greater accuracy in area computation

219 : What is the disadvantage of Total Station?

- A : Automation of old maps
- B : Local language support
- C : Full GIS creation
- D : The instrument is costly

220 : Which is the total station with latest technology?

- A : Mechanical
- B : Semi automatic
- C : Manual
- D : Automatic

221 : Which program is used to determine polygonal distance?

- A : Tie distance
- B : Reference line
- C : Free station
- D : Resection

Draughtsman Civil– Semester 4 Module 9 – Total Station

Reviewed and updated on: 01st November 2019 Version 1.1

222 : Which program is used to determine the position of new station with reference to two known points?

- A : Free station
- B : Tie distance
- C : Remote height
- D : Reference line

223 : Where is data stored in Total Station?

- A : Pen drive
- B : Data card
- C : Micro processor
- D : External hardware

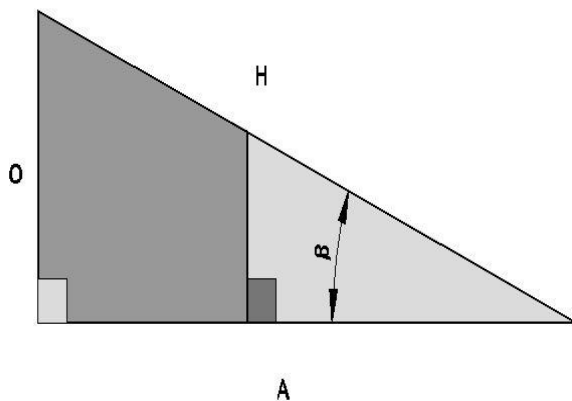
224 : What is the advantage of using EDM?

- A : Precise measurement of distance
- B : Electronic batteries
- C : Expensive
- D : Accuracy affected by atmospheric condition

225 : What is the disadvantage of using EDM?

- A : Capable of measuring long distances
- B : Precise measurement of distance
- C : Accuracy affected by atmospheric conditions
- D : Relectorless are single person operation

226 : Which trigonometrical value is correct?



- A : $O/H = \sin \beta$
- B : $A/H = \sin \beta$
- C : $O/A = \sin \beta$
- D : $H/O = \sin \beta$

227 : What is the sum of the interior angles of a closed polygon traverse that has of 8 sides?

- A : 720°
- B : 1080°
- C : 1440°
- D : 1800°

228 : Where the open traverse is used?

- A : Topographic survey
- B : Layout of engineering works
- C : Construction of pipelines
- D : Property measurement

Draughtsman Civil– Semester 4 Module 10 – GPS

Reviewed and updated on: 01st November 2019 Version 1.1

229 : Which country developed the GPS?

- A : USA
- B : India
- C : Russia
- D : Italy

230 : What is meant by GPS?

- A : Global Processing System
- B : Global Positioning System
- C : Geographic Positional System
- D : Geographic Processing System

231 : What is the orbital height for GPS?

- A : 10,00 km
- B : 15,000 km
- C : 20,180 km
- D : 24,280 km

232 : Which is the common choice of co-ordinate for specifying position?

- A : Latitude, departure and elevation
- B : Latitude, longitude and elevation
- C : Northing, southing and easting
- D : Southing, azimuths and elevation

233 : What is the distance between the UTM grid lines on topomaps?

- A : 100 m
- B : 1000 m
- C : 2000 m
- D : 5000 m

234 : Where the master control station of control segment located?

- A : Hawaii
- B : Colorado
- C : Diego Garcia
- D : Kwajalein

235 : How many operational satellites are available in space segment?

- A : 24
- B : 28
- C : 32
- D : 36

236 : Which segment of GPS consists of satellite?

- A : Control
- B : Space
- C : User
- D : Navigation

237 : Which segment of GPS consists of receivers?

- A : Control
- B : User
- C : Space
- D : Navigation

238 : What is an advantage of GPS survey?

- A : High precision
- B : Weather dependent
- C : Night operation only
- D : Site intervisibility required

239 : Which is an application of GPS for visually impaired?

- A : MOBIC
- B : GIS
- C : Ramchers
- D : Navigation

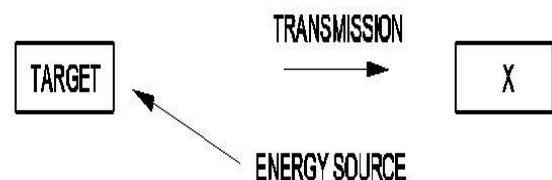
240 : Which is an application of GPS for visually impaired in India?

- A : Marine GOS
- B : Drishti
- C : Ramchers
- D : GIS

241 : What is meant by the study of something without direct contact?

- A : Remote sensing
- B : Geographic information system
- C : Tachometry
- D : Ranging

242 : What is marked as 'x'?



- A : Target
- B : Energy source
- C : Sensor
- D : Transmission

243 : What is the practice of determining the geometric properties of objects from photographic images?

- A** : Photogrammetry
- B** : Positioning
- C** : Remote sensing
- D** : Orientation

244 : What is the another name for exposure station?

- A** : Air station
- B** : Nadir point
- C** : Zenith point
- D** : Horizon point

245 : What is an advantage of GPS survey?

- A** : Two dimensional
- B** : Three dimensional
- C** : Weather dependent
- D** : Only day tim operation

246 : What is an advantage of digital signal?

- A** : High cost
- B** : Difficult to control
- C** : Noise immunity
- D** : Nigidity in response to design

247 : What is the process of getting digital equivalent of analog signals for processing?

- A** : Data acquisition
- B** : Data processing
- C** : Image recognition
- D** : Pattern recognition

248 : What is an advantage of digital over analog signal processing?

- A** : Digital system is difficult to reprogramme
- B** : Digital signal processing provides better control of accuracy
- C** : Digital signals are difficult to store without deterioration
- D** : More ancient signal processing algorithms can be used

249 : What is the advantage of photogrammetry?

- A** : Weather dependent
- B** : Covers large area
- C** : Costlier
- D** : Complex system

250 : What is the advantage for in setup of instrument photogrammetry?

- A** : Heavy equipments needed
- B** : Weather dependent
- C** : Less time consuming
- D** : Costlier

ANSWERS :

1:B; 2:A; 3:C; 4:C; 5:C; 6:D; 7:D; 8:C; 9:A; 10:D; 11:B; 12:C; 13:B; 14:A; 15:A; 16:B; 17:B; 18:D; 19:B; 20:C; 21:B; 22:B; 23:A; 24:B; 25:B; 26:B; 27:B; 28:A; 29:D; 30:A; 31:B; 32:A; 33:C; 34:D; 35:D; 36:B; 37:B; 38:A; 39:D; 40:B; 41:C; 42:B; 43:D; 44:B; 45:A; 46:A; 47:C; 48:B; 49:D; 50:C; 51:B; 52:C; 53:D; 54:B; 55:C; 56:C; 57:C; 58:C; 59:A; 60:A; 61:D; 62:B; 63:A; 64:D; 65:A; 66:B; 67:A; 68:C; 69:D; 70:B; 71:B; 72:B; 73:C; 74:A; 75:D; 76:C; 77:C; 78:A; 79:B; 80:C; 81:B; 82:A; 83:C; 84:D; 85:B; 86:C; 87:A; 88:D; 89:C; 90:A; 91:A; 92:C; 93:B; 94:A; 95:C; 96:C; 97:A; 98:C; 99:B; 100:B; 101:A; 102:A; 103:B; 104:C; 105:C; 106:A; 107:B; 108:B; 109:A; 110:D; 111:C; 112:A; 113:A; 114:B ; 115:D; 116:D ; 117:A; 118:C; 119:D; 120:B; 121:A; 122:B; 123:B; 124:B; 125:D; 126:A; 127:B; 128:C; 129:B; 130:A; 131:B; 132:A; 133:B; 134:A; 135:B; 136:D; 137:B; 138:A; 139:A; 140:B; 141:B; 142:B; 143:B; 144:C; 145:B; 146:D; 147:B; 148:C; 149:C; 150:C; 151:D; 152:C; 153:C; 154:A; 155:B; 156:C; 157:B; 158:B; 159:D; 160:A; 161:C; 162:B; 163:D; 164:B; 165:C; 166:A; 167:A; 168:A; 169:B; 170:B; 171:C; 172:D; 173:B; 174:A; 175:C; 176:B; 177:D; 178:D; 179:A; 180:A; 181:A; 182:A; 183:B; 184:A; 185:B; 186:C; 187:B; 188:A; 189:B; 190:B; 191:B; 192:C; 193:A; 194:D; 195:B; 196:A; 197:B; 198:B; 199:A; 200:C; 201:B; 202:B; 203:A; 204:B; 205:B; 206:D; 207:A ; 208:A; 209:A; 210:A; 211:B; 212:A; 213:C; 214:D; 215:C; 216:A; 217:C; 218:D; 219:D; 220:D; 221:A; 222:A; 223:C; 224:A; 225:C; 226:A; 227:B; 228:C; 229:A; 230:B; 231:C; 232:B; 233:B; 234:B; 235:A; 236:B; 237:B; 238:A; 239:A; 240:B; 241:A; 242:C; 243:A; 244:A; 245:B; 246:C; 247:A; 248:B; 249:B; 250:C;