1 : What is the purpose of the theory of cartographic projection?
   A : Study of all types of distortion
   B : Study of hills
   C : Study of water bodies
   D : Study of soil

2 : What is the study and practice of making maps?
   A : Hydrography
   B : Topography
   C : Cartography
   D : Geography

3 : Where were the scientific foundations of cartographic laid?
   A : Ancient Rome
   B : Ancient India
   C : Ancient Greece
   D : Ancient Britain

4 : Which was considered to be the oldest cartographic projections?
   A : Orthographic projection
   B : Topographic survey
   C : Geodetic survey
   D : Gnomonic projection

5 : What is the use of oblique and transverse projections?
   A : Reduces distortion
   B : Reduces wind velocity
   C : Increases distortion
   D : Increases wind velocity

6 : Which are the special points of geographic co-ordination?
   A : Poles
   B : Longitudes
   C : Altitudes
   D : Latitudes

7 : What is the condition for the oblique projection?
   A : \(0 > \phi_0\)
   B : \(0 > \pi/2\)
   C : \(0 < \phi_0 < \pi/2\)
   D : \(0 > \phi_0 > \pi/2\)

8 : Who degenerate in to circles?
   A : Ellipses of distortion
   B : Longitudes

9 : Which is used to represents the great circle in orthodromic projection?
   A : Rectangle
   B : Ellipse
   C : Parabola
   D : Straight line

10 : Which projection uses the equidistant parallel lines for showing the meridians?
    A : Cylindrical
    B : Conic
    C : Azimuthal
    D : Pseudo conic

11 : Which is a particular case of azimuthal projection?
    A : Isometric
    B : Perspective
    C : Conic
    D : Cylindrical

12 : Which projection uses the concentric circles for representing parallels?
    A : Pseudo Cylindrical
    B : Cylindrical
    C : Poly conic
    D : Pseudo conic

13 : What are the factors on which the use and selection of cartographic projections depend?
    A : Cost and scale
    B : Purpose and cost
    C : Purpose and scale
    D : Cost and Purpose

14 : Which is used for general cartographic surveys?
    A : Small scale map
    B : Large scale map
    C : Medium scale map
    D : Large scale and Medium scale maps

15 : Which determine the nature of permissible distortion in the cartographic projection?
    A : Purpose
    B : Scale
    C : Purpose and scale
    D : Cost
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 16 : Which formulas give a general method for obtaining the derivatives of the projections? | A : \( x = f_1(x,y) \) \( y = f_2(x,y) \)  
B : \( x = (x,y) \) \( y = (x,y) \)  
C : \( x = f_1(\theta,\tau) \) \( y = f_2(x,y) \)  
D : \( x = f_1(x,y) \) \( y = f_2(\theta,\tau) \) |
| 17 : What is the expansion of TMP? | A : True Meridian Prediction  
B : True Meridian Projection  
C : Traverse Mercator Projection  
D : Transverse Mercator Projection |
| 18 : How many secant lines are formed in the secant case of cylindrical projection? | A : 1  
B : 3  
C : 2  
D : 5 |
| 19 : Which cylindrical projection is used in navigation? | A : The Gauss  
B : The Mercator  
C : Perspective  
D : Azimuthal |
| 20 : Which is the normal aspect of the conic projection? | A : Traverse  
B : Oblique  
C : Polar  
D : Parallel |
| 21 : Which conic projections are most suitable for maps of mid latitude regions? | A : Polar  
B : Oblique  
C : Parallel  
D : Transverse |
| 22 : Which aspect of conic projection has an orientation between transverse between polar aspects? | A : Oblique  
B : Parallel  
C : Normal  
D : Equatorial |
| 23 : Which projections are especially suitable for territories that extend along parallels? | A : Cylindrical  
B : Azimuthal  
C : Conic  
D : Pseudo conic |
| 24 : Which is known as planar projection? | A : Conic  
B : Azimuthal  
C : Cylindrical  
D : Oblique |
| 25 : Which projections are used often for mapping polar regions? | A : Azimuthal  
B : Conic  
C : Oblique  
D : Cylindrical |
| 26 : Which aspect of planar projection has the plane oriented perpendicular to the equatorial plane? | A : Polar  
B : Normal  
C : Oblique  
D : Transverse |
| 27 : Which projection preserves the property of Azimuthality? | A : Conic  
B : Cylindrical  
C : Planar  
D : Pseudo cylindrical |
| 28 : Which projections preserve directions from one or two points? | A : Cylindrical  
B : Azimuthal  
C : Conic  
D : Oblique |
| 29 : Which is the most direct path between two locations across the surface of the globe? | A : Great circle  
B : Great triangle  
C : Geographic meridian  
D : Azimuthal |
| 30 : Which is a good projection for plotting airline connections? | A : Conic  
B : Azimuthal
C : Cylindric
D : Planar

31 : Which projections has concentric circles for parallels and their radii for meridians?
A : Planar
B : Cylindric
C : Conic
D : Azimuthal
32 : Which kind of data are to be used by GIS?
A : Spatial
B : Binary
C : Numeric
D : Complex

33 : What is the meaning of spatial data?
A : Decimal values
B : Positional values
C : Complex values
D : Graphic values

34 : What is the expansion to GIS?
A : Global information system
B : Global information scheme
C : Geographic information system
D : Geographic information scheme

35 : Which is known as spatial databases?
A : Concurrent data bases
B : Mono data bases
C : Geo data bases
D : Decimal values

36 : Which form of energy moves with the velocity of light?
A : Mechanical
B : Electromagnetic
C : Photo electric
D : Electric

37 : Which satellites are stationary in reference to the Earth?
A : Spot
B : Land stat
C : Geo - stationary
D : Polar orbiting

38 : Which indicates the object that is being studied?
A : Target
B : Source
C : Sensor
D : Satellite

39 : Which remote devices collect and record the electromagnetic radiation?
A : Sensor
B : Satellite
C : GPS
D : GIS

40 : Which was the first Indian remote sensing satellite?
A : SEO - II
B : Bhaskara - I
C : Bhaskara - II
D : SEO - I

41 : Which is used to put the satellite into Earth orbit?
A : Sensors
B : Energy source
C : Radiation
D : Launch vehicle

42 : Which gives the user a framework of obtain information?
A : GPS
B : GIS
C : DGPS
D : GNS

43 : What is the maximum values of the electric or magnetic field?
A : Amplitude
B : Altitude
C : Frequency
D : Wave length

44 : What is metal data?
A : Contour data
B : Meteorological
C : Data about data
D : Oceanic data

45 : Which is a network of satellites that determines specific co-ordinates on earth?
A : GPS
B : Digital theodolite
C : Auto level
D : Total station

46 : Which normally includes attribute information?
A : GIS data
B : GPS data
C : CAD
D : GNS

47 : Which is a data base for geographic location?
A : GPS
B : GIS
C : DGPS
D : SMPS

48 : Which is the information from CAD?
A : Data base
B : Drawing
C : Symbols
D : Signs

49 : Which is a data base program?
A : GPS
B : DGPS
C : GIS
D : CAD

50 : Which is the source of energy of passive remote sensing?
A : Sun
B : Wind
C : Rain
D : Pressure

51 : Which acts as a medium for transmitting information from the target to the sensor?
A : Sensor
B : Target
C : Energy source
D : Atmosphere

52 : Which are acquired with the help of specially designed cameras. Which are mounted on the aircraft?
A : GIS
B : Aerial photography
C : GPS
D : DGPS

53 : Which is the technology of obtaining reliable information about objects through the photo images?
A : Photo grammetry
B : DGPS
C : GPS
D : GIS

54 : Which techniques is used for producing three dimensional co-ordinates from two dimensional photography?
A : DGPS
B : Photo grammetry
C : GIS
D : GPS

55 : Which are mounted on the satellites in satellite remote sensing?
A : Sensors
B : Camera
C : Telescope
D : GPS

56 : Which term is used to indicate the image formed by satellite in remote sensing?
A : Drawing
B : Data base
C : Digital image
D : Digital view

57 : Which is more generic frame work?
A : GIS
B : GPS
C : DGPS
D : GNS

58 : Which is the computer program that process data linked to certain places?
A : GNSS
B : GNS
C : GPS
D : GIS

59 : Who records the reflectance value from various objects and form a digital image?
A : Camera
B : GPS
C : Sensor
D : GNS

60 : Which process is used for the transmission of radio signals from the satellites in to the GPS receivers?
A : Triangulation
B : Trilateration
C : Translocation
D : Positioning

61 : Which computer program is utilised to view and handle data about geographic locations?
A : GIS
B : GPS
C : DGPS
D : SMPS

62 : Who creates "Layers" with many pieces of information for the same area?
A : GNS
B : GNSS
C : GPS
D : GIS database
### Question 63
Which is the velocity of satellite in space segment?

- **A**: 5 km/s
- **B**: 2 km/s
- **C**: 3 km/s
- **D**: 4 km/s

### Question 64
How many nations attended in the international Meridian conference?

- **A**: 15
- **B**: 20
- **C**: 25
- **D**: 28

### Question 65
Who developed the GPS?

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

### Question 66
Which is the expansion of GPS?

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

### Question 67
Which segments can use GPS receiver?

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

### Question 68
Which signal indicate the functioning of the space segment?

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

### Question 69
Which type of band can be used in the control segment?

- **A**: S
- **B**: N
- **C**: M
- **D**: K

### Question 70
How many Orbit planes are available for satellites in space segment?

- **A**: 6
- **B**: 5

### Question 71
Which is the main parameter used in Pseudo ranging?

- **A**: Time
- **B**: Distance
- **C**: Velocity
- **D**: Frequency

### Question 72
Which is the path that an object in space follows as it circles the earth?

- **A**: Trajectory
- **B**: Orbit
- **C**: Locus
- **D**: Way

### Question 73
Which object launched specifically to orbit the earth?

- **A**: Satellite
- **B**: Receiver
- **C**: User segment
- **D**: Control

### Question 74
Which is the device that accepts incoming signals and converts them to a waste form?

- **A**: Receiver
- **B**: Control segment
- **C**: User segment
- **D**: Satellite

### Question 75
What is the angle between the equatorial plane and the straight line?

- **A**: Longitude
- **B**: Graticule
- **C**: Latitude
- **D**: Bearing

### Question 76
Which is the angle east or west from a reference Meridian to another Meridian?

- **A**: Latitude
- **B**: Longitude
- **C**: Graticule
- **D**: Bearing

### Question 77
Which co-ordinate system enables every location on the Earth to be specified by a set of numbers or letters or symbols?

- **A**: Geographic
- **B**: Grid
78 : Which is considered as a modern GPS technology?
A : GIS  
B : GPS mode  
C : Instantaneous mode  
D : Kinematic positioning technique

79 : What type of antenna is used in GPS system?
A : Yagi  
B : Helical array  
C : Loop  
D : Parabolic

80 : What is the grid formed by the Latitude and Longitude?
A : Graticule  
B : Meridian  
C : Longitude  
D : Latitude

81 : Which is the inclination of orbit planes of satellites in space segment of GPS?
A : 50°  
B : 45°  
C : 55°  
D : 40°

82 : What is Constellation?
A : Arrangement of GPS satellite  
B : Arrangement of receivers  
C : Locating of unknown point  
D : Measuring the distance

83 : When was the First GPS satellite deployed?
A : February 1978  
B : January 1978  
C : March 1978  
D : April 1978

84 : Who operates the control segment of GPS?
A : Russian government  
B : Italy  
C : Indian Military  
D : US Military

85 : Which classes of positioning techniques possess high precision?
A : Kinematic techniques  
B : Real-Time  
C : Viscous technique  
D : Real time kinematic

86 : Which was the first GPS instruments to be used for control surveying?
A : Macrometer V-1000  
B : TI 4100 GPS  
C : Transit 1A  
D : Transit 1B

87 : When was the development of the transit system begin?
A : 1956  
B : 1950  
C : 1958  
D : 1884

88 : Which was the first Satellite navigation system to be used operationally?
A : Transit  
B : Grid  
C : Propagation  
D : Multi path

89 : What is the average accuracy of point positioning with the GPS?
A : ± 10 m  
B : ± 15 m  
C : ± 20 m  
D : ± 25 m

90 : Which is the Orbit period of Satellite in the space segment of GPS?
A : 10 hrs  
B : 20 hrs  
C : 12 hrs  
D : 24 hrs

91 : When the Internation Meridian conference was held?
A : 1864  
B : 1844  
C : 1884  
D : 1874

92 : Which is the height of satellite from the Earth?
A : 20,200km  
B : 20,000km
C : 20,100km  
D : 20,250km

93 : Which segment is used for shaping the velocity of the satellite orbit?  
A : User  
B : Control  
C : Space  
D : Navigation

94 : Which is the principle of GPS?  
A : Resection  
B : Trilateration  
C : Trisection  
D : Traversing

95 : Satellite generates which type of signals?  
A : Visible rays  
B : Radio waves  
C : X-rays  
D : Cosmic waves

96 : Which is having the same principle as that of determining position in GPS?  
A : Compass  
B : Traversing  
C : Trisection  
D : Resection

97 : What is the standard way to listing latitude and longitude?  
A : DMS  
B : DSM  
C : SMD  
D : SDM

98 : Which is the process of determining the position by intersecting distance?  
A : Trilateration  
B : Triangulation  
C : Translocation  
D : Differential positioning

99 : What is the process of locating unknown points by the formation of triangles?  
A : Triangulation  
B : Trilateration  
C : Translocation  
D : Differential positioning

100 : Which refers to a stop-gap method where the coordinates of points are available in real time?  
A : Viscous techniques  
B : Kinematic  
C : Real time kinematic  
D : Real time

101 : What is the process of tracing something with the GPS?  
A : Tracking  
B : Triangulation  
C : Translocation  
D : Trilateration

102 : Which works on the principle of the measurement of distance between the receiver and the satellite?  
A : Total station  
B : GPS mode  
C : Theodolite  
D : Auto level

103 : What is the process of caching objects that hide in the world with GPS co-ordinates?  
A : Triangulation  
B : Trilateration  
C : Geocaching  
D : Tri location

104 : Which technique is based on using at least two GPS receivers?  
A : GPS  
B : DGPS  
C : SMPS  
D : DPS

105 : How does troposphere affect the satellite signals?  
A : Reflects the signals  
B : Inversion occurs  
C : Reduces velocity  
D : Refracts the signals

106 : Which of the following error occurs due to atmospheric conditions?  
A : Signals multi path  
B : User  
C : Natural  
D : Propagation
<table>
<thead>
<tr>
<th><strong>107</strong></th>
<th>What happens to the satellite signals as the density of the Ionosphere is high?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>Velocity decreases</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>Signals strength increases</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Velocity increases</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>Frequency reduces</td>
</tr>
</tbody>
</table>

NIMI Question Bank

Page 10 of 23
108 : What is the science of measurement and description of features which affect the marine construction navigation, etc.,?
A : GPS
B : Hydrographic survey
C : Topography
D : Arial survey

109 : Which is used synonymously to describe maritime cartography?
A : Topography
B : Aerial survey
C : Cadastral survey
D : Hydrography

110 : What is IHO?
A : International Hydrographic Organisation
B : Indian Hydrology Organisation
C : Indian Health Organisation
D : International Human Organisation

111 : Which survey is used for the determination of shore lines?
A : Topographic
B : Compass
C : Hydrographic
D : Theodolite

112 : Which survey is used for establishing mean sea level?
A : Hydrographic
B : Chain
C : Compass
D : Tacheometry

113 : What is the measurement of depth below the water surface?
A : Level
B : Bench mark
C : Sounding
D : Reduced level

114 : Which survey uses the sounding boat?
A : Tachometry
B : Levelling
C : Theodolite
D : Hydrographic

115 : What is the weight attached to the lead line in Hydrographic survey?
A : Fathometer
B : Sounding lead
C : Sounding rod
D : Sounding boat

116 : What is the use of Fathometer?
A : Ocean sounding
B : Ocean levelling
C : Wind measuring
D : Ranging

117 : What is the weight of sounding level in kg?
A : 4 to 12
B : 4 to 8
C : 4 to 6
D : 4 to 10

118 : Which survey is used synonymously to describe maritime cartography?
A : Conning
B : Ranging
C : Offsetting
D : Centering

119 : Which method of sounding is generally used for open seas up to 5 km off shore?
A : Two angles from the shore
B : Two angles from the boat
C : Conning the survey vessel
D : Tacheometry

120 : How a range line is marked in soundings?
A : By signals
B : Angles
C : Lengths
D : Bearings

121 : Which is the most accurate method of locating the soundings?
A : Range and time intervals
B : Range and one angle from the shore
C : Cross rope
D : Two angles from the shore

122 : Which sounding method uses the three point problem for locating the boat?
A : One angle from the shore & the other from the boat
B : Cross rope
C : Two angles from the shore
D : Two angles from the boat
123. Which method is used to determine the periodical sounding at the same point?
A. Two angles from the shore
B. Intersecting ranges
C. Two angles from the boat
D. Cross rope

124. What is the reduced level of the sub-marine surface in terms of the adopted datum?
A. Reduced sounding
B. Elevation
C. Datum surface
D. Bench mark

125. What is L.W.O.S.T?
A. Low water ocean spring tides
B. Low water optimum spring tides
C. Low water opposing spring tides
D. Low water ordinary spring tides

126. What is the name of three armed protractor used for the plotting of sounding?
A. Mini drafter
B. Junior drafter
C. Station pointer
D. Plotting scale

127. What is M.L.W.S?
A. Mean Low Water Springs
B. Maximum Level of Water Spring
C. Mean Level of Water Springs
D. Mean Level of Water surface

128. What is the use of station pointer in sounding?
A. Ranging
B. Fixing
C. Plotting
D. Sighting

129. What is the time that elapse between the generation of spring tide and its arrival at the place?
A. Gross time
B. Age of tide
C. Net time
D. Mean time

130. What is the cause of the tides?
A. Attractive force between earth and celestial bodies
B. Attractive force b/w the celestial bodies
C. Attractive force between sun and moon
D. Attractive force within the earth

131. What is the name of device used to measure the height of high and low waters?
A. Altimeter
B. Height indicator
C. Tide gauge
D. Pressure gauge

132. Which is the simplest type of tide gauge?
A. Staff gauge
B. Float gauge
C. Weight gauge
D. Self registering gauges

133. Which tide gauge gives a graphical record?
A. Float gauge
B. Staff gauge
C. Self registering gauges
D. Weight gauge

134. What is the least count of board of staff gauge?
A. 5 to 10 cm
B. 5 to 10 m
C. 1 - 5 cm
D. 1 - 5 m

135. What is the use of eco sounder?
A. To determine the depth of water
B. To measure the velocity of water
C. To determine the height of tide
D. To measure the intensity of tide

136. Which oceanographic device for flow measurement?
A. Lagrangian
B. Altimeter
C. Current Meter
D. Eco Sounder

137. What is SONAR?
A. Sound Navigation And Ranging
B. Satellite Navigation And Ranging
C. Sound Navigation and Reading
D. Sound Navigation and Recording

138. Which an oceanographic device for flow measurement?
A. Pitot tube
B. Orifice meter
C : Eco sounder
D : Current meter

Which current meter measures the displacement of an oceanographic drifter?
A : Lagrangian
B : Propeller type
C : Eulerian
D : Tilt current meter
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer Options</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>Which is the structure used to support an overhead power line?</td>
<td>A: Poles, B: Transmission tower, C: Sag template, D: Polygon</td>
</tr>
<tr>
<td>141</td>
<td>Which term comes from the basic shape of the transmission tower?</td>
<td>A: Sag template, B: Pole, C: Pylon, D: Line</td>
</tr>
<tr>
<td>142</td>
<td>Which is the actual distance between two adjacent towers?</td>
<td>A: Normal span, B: Actual span, C: Weight span, D: Wind span</td>
</tr>
<tr>
<td>143</td>
<td>Which is called the design span?</td>
<td>A: Wind span, B: Weight span, C: Normal span, D: Actual span</td>
</tr>
<tr>
<td>144</td>
<td>Which transmission towers have pegs set along the center line of route alignment?</td>
<td>A: Suspension, B: Angle, C: Transposition, D: Alternative</td>
</tr>
<tr>
<td>145</td>
<td>Who issues recommendations on marks for towers?</td>
<td>A: The state civil aviation organization, B: CPWD, C: MES, D: The international civil aviation organisation</td>
</tr>
<tr>
<td>146</td>
<td>Which towers are needed each time the line takes a directional change?</td>
<td>A: Angle, B: Suspension, C: Alternative, D: Transposition</td>
</tr>
<tr>
<td>147</td>
<td>Which towers are most common in the three phase line system?</td>
<td>A: Alternative, B: Pole, C: Transposition, D: Suspension</td>
</tr>
<tr>
<td>148</td>
<td>Which phase includes the study of available maps of the area?</td>
<td>A: Reconnaissance, B: Pole line, C: Final, D: Alignment</td>
</tr>
<tr>
<td>149</td>
<td>Which shows the ground elevation along the line and the top elevation of the poles?</td>
<td>A: Plan, B: Section, C: Alignment, D: Profile</td>
</tr>
<tr>
<td>150</td>
<td>What is the distance of transmission line poles from curbs?</td>
<td>A: 12 feet, B: 3 feet, C: 7 feet, D: 2 feet</td>
</tr>
<tr>
<td>151</td>
<td>What is the distance of transmission line poles from fire hydrants?</td>
<td>A: 2 feet, B: 12 feet, C: 3 feet, D: 7 feet</td>
</tr>
<tr>
<td>152</td>
<td>Which curve is obtained by plotting the sag at a minimum temperature?</td>
<td>A: Ground clearance, B: Hot curve, C: Cold curve, D: Support foot</td>
</tr>
<tr>
<td>153</td>
<td>Which curve is obtained by plotting the sag at measure temperature against span length?</td>
<td>A: Hot curve, B: Ground clearance, C: Support foot, D: Cold curve</td>
</tr>
<tr>
<td>154</td>
<td>Which is used for allocating the position and height of the supports correctly on the profile?</td>
<td>A: Tower, B: Pole, C: Transposition, D: Suspension</td>
</tr>
</tbody>
</table>
C : Sag Template
D : Lines

155 : Which curve is drawn to determine the uplift of conductor?
A : Support foot
B : Cold curve
C : Ground clearance
D : Cold curve

156 : Which tower is designed to support extra weight on a long distance line?
A : Transposition
B : Alternative
C : Angle
D : Suspension

157 : Which tower makes up the majority of the structure types on a high voltage line?
A : Angle
B : Suspension
C : Transposition
D : Alternative

158 : Which are important for the transport of large quantities of electricity over a long distance?
A : Templates
B : Poles
C : Lines
D : Towers

159 : What is the amount of overload factor of a suspension tower?
A : 1.05
B : 1.15
C : 1.10
D : 1.20

160 : What is the amount of overload factor for angle tower?
A : 1.15
B : 1.10
C : 1.20
D : 1.25

161 : Which foundation has its breadth greater than the depth?
A : Pile
B : Well
C : Shallow
D : Deep
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Choice</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>Which is the combination of rails, sleepers, ballast and subgrade?</td>
<td>B : More than 1 mile</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A : Permanent way</td>
<td>C : 10 miles</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>B : Formation</td>
<td>D : Not more than 1/2 miles</td>
<td>-</td>
</tr>
<tr>
<td>163</td>
<td>Which is the minimum distance between the running faces of the two rails?</td>
<td>A : Permanent way</td>
<td>-</td>
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<tr>
<td></td>
<td>B : Formation</td>
<td>C : Subgrade</td>
<td>-</td>
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<tr>
<td></td>
<td>D : Yard</td>
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<td>-</td>
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<td>164</td>
<td>Which is the subgrade prepared to relieve the ballast?</td>
<td>D : Gauge</td>
<td>-</td>
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<tr>
<td></td>
<td>A : Yard</td>
<td>B : Coning</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>C : Permanent way</td>
<td>-</td>
<td>-</td>
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<tr>
<td>165</td>
<td>What is the distance between the running faces of broad gauge?</td>
<td>D : 1.576 m</td>
<td>-</td>
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<tr>
<td></td>
<td>A : 0.610 m</td>
<td>B : 0.762 m</td>
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<tr>
<td></td>
<td>C : 1.676 m</td>
<td>-</td>
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<td>166</td>
<td>Which is the first engineering survey for laying a new railway line?</td>
<td>A : Preliminary survey</td>
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<td></td>
<td>B : Location survey</td>
<td>C : Final survey</td>
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<td></td>
<td>D : Reconnaissance survey</td>
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<td>167</td>
<td>Which survey used to locate the centre line of the railway line?</td>
<td>A : Location survey</td>
<td>-</td>
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<td></td>
<td>B : Preliminary survey</td>
<td>C : Reconnaissance survey</td>
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<td>D : Construction survey</td>
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<td>168</td>
<td>What is the interval of centre line pegs driven along the centre line of the track?</td>
<td>D : 20 m</td>
<td>-</td>
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<td></td>
<td>A : 300 m</td>
<td>B : 30 m</td>
<td>-</td>
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<td></td>
<td>C : 200 m</td>
<td>-</td>
<td>-</td>
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<tr>
<td>169</td>
<td>What is the distance between the BM along the alignment of railway?</td>
<td>A : 1 miles</td>
<td>-</td>
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<td></td>
<td>B : Gradient</td>
<td>C : Camber</td>
<td>-</td>
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<td>170</td>
<td>Which is preferred for the alignment of railway?</td>
<td>C : Depression</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A : Valley line</td>
<td>B : Ridge line</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>D : Hill</td>
<td>-</td>
<td>-</td>
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<td>171</td>
<td>Which is the next process of justification of alignment of railway?</td>
<td>D : Location survey</td>
<td>-</td>
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<td></td>
<td>A : Marking of alignment</td>
<td>B : Reconnaissance</td>
<td>-</td>
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<tr>
<td></td>
<td>C : Preliminary survey</td>
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<td>172</td>
<td>What are the members laid transversally under the rails?</td>
<td>D : Sleepers</td>
<td>-</td>
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<td></td>
<td>A : Ballast</td>
<td>B : Spikes</td>
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<td></td>
<td>C : Chain</td>
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<td>173</td>
<td>What are the granular materials of crushed stones provided under and around the sleepers?</td>
<td>A : Rails</td>
<td>-</td>
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<tr>
<td></td>
<td>B : Ballast</td>
<td>C : Sleepers</td>
<td>-</td>
</tr>
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<td></td>
<td>D : Sand</td>
<td>-</td>
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<td>174</td>
<td>What is the next stage of reconnaissance survey?</td>
<td>D : Marking of alignment</td>
<td>-</td>
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<tr>
<td></td>
<td>A : Selection of good alignment</td>
<td>B : Preliminary survey</td>
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<tr>
<td></td>
<td>C : Final survey</td>
<td>-</td>
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<td>175</td>
<td>What is the value of coning of wheels?</td>
<td>D : 1 in 25</td>
<td>-</td>
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<td>A : 1 in 10</td>
<td>B : 1 in 15</td>
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<td>C : 1 in 20</td>
<td>-</td>
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<td>176</td>
<td>Which is the other name of super elevation?</td>
<td>B : Camber</td>
<td>-</td>
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<td></td>
<td>A : Gradient</td>
<td>-</td>
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</tbody>
</table>
C : Slope  
D : Cant

177 : Which instrument is used in reconnaissance survey for measuring the magnetic bearing of alignment of railway?  
A : Prismatic compass  
B : Theodolite  
C : Chain  
D : Level

178 : Which map is prepared during the reconnaissance survey of railway?  
A : Count our map  
B : Index map  
C : Cadastral map  
D : Topographical map

179 : Which is the interval of cross levelling for the preliminary survey of alignment of railway?  
A : 100 m  
B : 50 m  
C : 20 m  
D : 10 m

180 : Which is the next step of preliminary survey?  
A : Marking of alignment  
B : Construction survey  
C : Final survey  
D : Estimating

181 : Which is the interval of masonry pillars for the centre line of alignment of railway?  
A : 500 m  
B : 1000 m  
C : 100 m  
D : 750 m

182 : Which is the next stage of final survey alignment?  
A : Preparation of report  
B : Construction survey  
C : Fixing the alignment  
D : Marking the alignment

183 : Which survey established the centre line of actual track to be laid?  
A : Location survey  
B : Preliminary survey  
C : Reconnaissance survey  
D : Construction survey
184: Which rocks have clay as its base component?
A: Argillaceous
B: Calcareous
C: Siliceous
D: Stratified

185: Which rocks show distinct signs of layers and can be split easily into layers?
A: Argillaceous
B: Unstratified
C: Stratified
D: Igneous

186: What is the percentage of clay in a good brick earth?
A: 20 to 30
B: 10 to 20
C: 35 to 50
D: 20 to 30

187: What is the standard size of bricks as per Indian standards?
A: 20x10x10cm
B: 22.8x11.4x7.6cm
C: 20x9x9cm
D: 19x9x9cm

188: What is the weight of an ordinary brick?
A: 3.2 kg
B: 3.5 kg
C: 3.8 kg
D: 2.8 kg

189: What is the weight of a single bag of cement?
A: 30 kg
B: 58 kg
C: 38 kg
D: 50 kg

190: What is the percentage of lime in cement?
A: 50-58
B: 60-67
C: 20-30
D: 10-15

191: What is the length of Rotary kiln?
A: 90-100 m
B: 90-110 m

192: Which lime is popularly known as fat lime?
A: High calcium
B: Slaked
C: Hydraulic
D: Quick

193: What lime is known as caustic lime?
A: Quick
B: Slaked
C: Fat
D: Hydraulic

194: What is the chemical formula for limestone?
A: CaO
B: Ca(OH)\(_2\)
C: CaO\(_2\)
D: CaCO\(_3\)

195: Which lime is known as water lime?
A: Hydraulic
B: Slaked
C: Quick
D: Fat

196: What is the value of fineness modulus of sand?
A: 1.5-2.0
B: 1.5-1.8
C: 1.5-2.5
D: 1.5-2.2

197: Which aggregates have thickness small relative to width and length?
A: Rounded
B: Irregular
C: Flaky
D: Angular

198: Which granular materials are chemically inert?
A: Aggregates
B: Cinders
C: Pozzolana
D: Ashes

199: What is the value of specific gravity of good building stones?
A : 2.4 to 3.2
B : 2.4 to 2.8
C : 2.2 to 3.2
D : 2.2 to 2.8

200 : Which is the hard and durable building stone suitable for bridge abutments?
A : Marble
B : Limestone
C : Granite
D : Slate

201 : Which process is used for the kneading of clay for attaining plasticity?
A : Weathering
B : Drying
C : Tempering
D : Burning

202 : Which is used for the burning of raw materials of cements?
A : Rotary kiln
B : Clamp
C : Potters kiln
D : Reverberatory furnace

203 : Which product is obtained by the grinding of bricks?
A : Cinder
B : Pozzolana
C : Ashes
D : Surkhi

204 : What is the commonly used filler material in Engineering works?
A : Cinder
B : Pozzolana
C : Sand
D : Surkhi

205 : Which waste material is obtained from the thermal power stations?
A : Cinder
B : Pozzolana
C : Sand
D : Surkhi

206 : What is the mixture of both coarse and fine aggregates?
A : Irregular aggregates
B : All in Aggregates
C : Flaky aggregates
D : Rounded aggregates

207 : Which aggregates retained in is - 4.75 mm?
A : Fine
B : Coarse
C : Medium
D : All in aggregates

208 : Which is the nominal size of All in aggregates?
A : 20 mm
B : 10 mm
C : 15 mm
D : 25 mm
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<thead>
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<tbody>
<tr>
<td>209</td>
<td>Which distributes the load of a Structure on the wider area?</td>
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<tr>
<td>A</td>
<td>Arch</td>
<td></td>
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<tr>
<td>B</td>
<td>Root slab</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>Foundation</td>
<td></td>
<td></td>
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<td>D</td>
<td>Lintel</td>
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<tr>
<td>210</td>
<td>Which structural component provides a base for the Superstructure?</td>
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<tr>
<td>A</td>
<td>Foundation</td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td>Root slab</td>
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<td></td>
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<td>C</td>
<td>Lintel</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>Sunshade</td>
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<td>211</td>
<td>What is the generally adopted factor of safety for Building site?</td>
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<tr>
<td>A</td>
<td>2 to 3</td>
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<td>B</td>
<td>2 to 4</td>
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<td>C</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>3.5</td>
<td></td>
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<tr>
<td>212</td>
<td>Which foundation covers the whole area in the form of a mat?</td>
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<tr>
<td>A</td>
<td>Grillage</td>
<td></td>
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<tr>
<td>B</td>
<td>Inverted Arch</td>
<td></td>
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<tr>
<td>C</td>
<td>Raft</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>Spread footing</td>
<td></td>
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<td>213</td>
<td>Which foundation has the arrangements like piles?</td>
<td></td>
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<tr>
<td>A</td>
<td>Deep foundation</td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td>Spread footing</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>Cantilever footing</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>Well foundation</td>
<td></td>
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<td>214</td>
<td>Which is also known as cantilever foundation?</td>
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<tr>
<td>A</td>
<td>Strap footing</td>
<td></td>
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<tr>
<td>B</td>
<td>Spread footing</td>
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<tr>
<td>C</td>
<td>Combined footing</td>
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<tr>
<td>D</td>
<td>Column footing</td>
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<td>215</td>
<td>Which footing distributes the load over larger area by Widening the base?</td>
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<tr>
<td>A</td>
<td>Cantilever</td>
<td></td>
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<tr>
<td>B</td>
<td>Spread</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>Steap</td>
<td></td>
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<tr>
<td>D</td>
<td>Combined</td>
<td></td>
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<td>216</td>
<td>What is the offsets on either side of the wall footing</td>
<td></td>
<td></td>
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<tr>
<td>A</td>
<td>5 cm</td>
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<tr>
<td>B</td>
<td>10 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>15 cm</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>20 cm</td>
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<tr>
<td>217</td>
<td>Which is the reason for over-burning of Superstructure?</td>
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<tr>
<td>A</td>
<td>Temperature</td>
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<tr>
<td>B</td>
<td>Rain</td>
<td></td>
<td></td>
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<tr>
<td>C</td>
<td>Dampness</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>Lateral Pressure</td>
<td></td>
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<td>218</td>
<td>What is the maximum height of wall that can be constructed in a day?</td>
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<tr>
<td>A</td>
<td>1.8 m</td>
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<tr>
<td>B</td>
<td>1.0 m</td>
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<tr>
<td>C</td>
<td>1.2 m</td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>1.5 m</td>
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<td>219</td>
<td>What is the ratio between the ultimate bearing capacity and the safe bearing capacity of a soil?</td>
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<tr>
<td>A</td>
<td>Load factor</td>
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<tr>
<td>B</td>
<td>Factor of safety</td>
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<td>C</td>
<td>Ultimate Load</td>
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<tr>
<td>D</td>
<td>Safe Load</td>
<td></td>
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<td>220</td>
<td>Which foundation you recommend for the soils having low bearing capacity to transmit load from steel columns?</td>
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<tr>
<td>A</td>
<td>Cantilever footing</td>
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<tr>
<td>B</td>
<td>Spread footing</td>
<td></td>
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<tr>
<td>C</td>
<td>Raft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Grillage</td>
<td></td>
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<tr>
<td>221</td>
<td>Which footing is the most simplest and economical for brick pillars?</td>
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<tr>
<td>A</td>
<td>Trapezoidal</td>
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<tr>
<td>B</td>
<td>Square</td>
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<tr>
<td>C</td>
<td>Rectangular</td>
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<td></td>
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<tr>
<td>D</td>
<td>Triangular</td>
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<tr>
<td>Question</td>
<td>Answer</td>
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<tr>
<td>222</td>
<td>Which is the maximum particle size of the fine aggregates?&lt;br&gt; A: 3.65 mm&lt;br&gt; B: 4.75 mm&lt;br&gt; C: 4.65 mm&lt;br&gt; D: 3.75 mm</td>
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<tr>
<td>223</td>
<td>What is the maximum size of coarse aggregate in the M20 grade of concrete?&lt;br&gt; A: 20 mm&lt;br&gt; B: 40 mm&lt;br&gt; C: 10 mm&lt;br&gt; D: 15 mm</td>
<td></td>
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<tr>
<td>224</td>
<td>Which bar has its surface roughened to increase the resistance to slipping?&lt;br&gt; A: Round&lt;br&gt; B: Deformed&lt;br&gt; C: Twisted&lt;br&gt; D: Plain</td>
<td></td>
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<tr>
<td>225</td>
<td>Which beam has its one end fixed and other and free?&lt;br&gt; A: Simply Supported&lt;br&gt; B: Cantilever&lt;br&gt; C: Overhanging&lt;br&gt; D: Fixed</td>
<td></td>
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<tr>
<td>226</td>
<td>Which beam has its one or both ends project beyond the supports?&lt;br&gt; A: Overhanging&lt;br&gt; B: Cantilever&lt;br&gt; C: Simply supported&lt;br&gt; D: Fixed</td>
<td></td>
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<tr>
<td>227</td>
<td>How many days are required for the removal of form work of walls columns and vertical sides of beams?&lt;br&gt; A: 1-4&lt;br&gt; B: 1-2&lt;br&gt; C: 1-3&lt;br&gt; D: 1-5</td>
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<tr>
<td>228</td>
<td>Which column has the slenderness ratio less than 32?&lt;br&gt; A: Individual&lt;br&gt; B: Long&lt;br&gt; C: Medium&lt;br&gt; D: Short</td>
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<tr>
<td>229</td>
<td>Which slab is supported on all its four edges?&lt;br&gt; A: Two - way&lt;br&gt; B: One - way&lt;br&gt; C: Cantilever&lt;br&gt; D: Simply supported</td>
<td></td>
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<tr>
<td>230</td>
<td>Which is the PH value of water used for the preparation of R.C.C.?&lt;br&gt; A: 6-8&lt;br&gt; B: 5-6&lt;br&gt; C: 2-3&lt;br&gt; D: 4-6</td>
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<tr>
<td>231</td>
<td>Which is the mix proportion of M15?&lt;br&gt; A: 1:1:2&lt;br&gt; B: 1:2:4&lt;br&gt; C: 1:3:6&lt;br&gt; D: 1:4:8</td>
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<tr>
<td>232</td>
<td>Which is code deals with the construction of R.C.C. structures?&lt;br&gt; A: IS:456&lt;br&gt; B: IS:1139&lt;br&gt; C: IS:432&lt;br&gt; D: IS:226</td>
<td></td>
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</tr>
<tr>
<td>233</td>
<td>What is the maximum value of effective spam to the overall depth of a simply Supported one way slab?&lt;br&gt; A: 35&lt;br&gt; B: 30&lt;br&gt; C: 12&lt;br&gt; D: 20</td>
<td></td>
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<tr>
<td>234</td>
<td>What is the maximum effective spam to the overall depth of a cantilever one way slab?&lt;br&gt; A: 10&lt;br&gt; B: 12&lt;br&gt; C: 15&lt;br&gt; D: 20</td>
<td></td>
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</tbody>
</table>
235 : What is the unit of measurement in MKS system for earthwork excavation in ordinary soil?
A : 10M³
B : M³
C : M²
D : 10M²

236 : Which Indicates incidental expense of miscellaneous character in an estimate?
A : Contingency
B : External services
C : Work-charged establishment
D : Centage charges

237 : Which is proposed as a guidance for the execution of work?
A : General specification
B : Brief specification
C : Rough cost Estimate
D : Detailed specification

238 : What are the essential drawing date required for the preparation of an Estimate?
A : Plan and Section
B : Elevation and Section
C : Plan and Elevation
D : Plan, Sectional Elevation and detailed drawings

239 : What is the useful area or the liveable area of a building?
A : Plinth
B : Circulation
C : Floor
D : Carpet

240 : Which is the built up covered area of a building measured at the floor level?
A : Floor area
B : Carpet area
C : Plinth area
D : Circulation area

241 : Which estimate is required to decide the financial position and policy for the administrative sanction?
A : Preliminary
B : Detailed
C : Supplementary
D : Revised

242 : What is the range of contingencies in an approximate or preliminary Estimate?
A : 5%-8%
B : 5%-7%
C : 5%-10%
D : 10%

243 : Which approval authorises the engineering department to take up the work?
A : Administrative
B : Technical
C : Expenditure
D : Schedule

244 : Which means the sanction of the detailed estimate by the competent authority of the engineering department?
A : Administrative sanction
B : Expenditure sanction
C : Technical sanction
D : Administrative approval

245 : 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

246 : Which estimate is prepared while the original sanctioned estimate is exceeded by more than 5%?
A : Preliminary
B : Revised
C : Supplementary
D : Plinth Area

247 : Which estimate is prepared for the technical sanction of the competent authority?
A : Preliminary
B : Cubical content
C : Plinth area
D : Detailed

ANSWERS :
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Surveyor – Semester 4 Module 10: Estimation
Reviewed and updated on: 01st November 2019 Version 1.1