

QID: 1 - What is the amount of water used to conduct the initial setting time test of cement which has a standard consistency of P.

Options:

- 1) 0.55 P
- 2) 0.85 P
- 3) 0.60 P
- 4) 0.95 P

Correct Answer: 0.85 P

QID: 2 - What is the water-cement ratio (w/c) required to complete the reactions in hydration of cement?

Options:

- 1) 0.15 to 2.0
- 2) 0.20 to 0.30
- 3) 0.35 to 0.45
- 4) 0.50 to 0.65

Correct Answer: 0.35 to 0.45

QID: 3 - What is the temperature range in the cement kiln?

Options:

- 1) 800 to 1050°C
- 2) 1050 to 1300°C
- 3) 1300 to 1500°C
- 4) 1800 to 2100°C

Correct Answer:

1300 to 1500°C

QID: 4 - Which of the following is used to test the fineness of a cement?

Options:

- 1) Air-content method
- 2) Air-permeability method
- 3) Le-Chatelier apparatus
- 4) Vicat's apparatus

Correct Answer: Air-permeability method

QID: 5 - What is the ratio (approximate) of 7 days and 28 days strength of cement concrete?

Options:

- 1) 0.45
- 2) 0.65
- 3) 0.95
- 4) 1.15

Correct Answer: 0.65

QID: 6 - Compaction factor is defined as the ratio of _____.

Options:

1) mass of fully compacted concrete to mass of partially compacted concrete

2) mass of partially compacted concrete to mass of fully compacted concrete

3) mass of partially compacted concrete to the total mass of concrete

4) None of these

Correct Answer: mass of partially compacted concrete to mass of fully compacted concrete

QID: 7 - Which of the following is **CORRECT** for the workability of the concrete having the compaction factor of 0.92?

Options:

- 1) High
- 2) Low
- 3) Medium
- 4) None of these

Correct Answer: Medium

QID: 8 -

Which of the following shows the **CORRECT** expression for target mean strength (f_m) of concrete, if the characteristic strength and standard deviation is given by f_{ck} and σ respectively?

Options:

1) $f_m = f_{ck} + 1.65\sigma$

2) $f_m = f_{ck} - 1.65\sigma$

3) $f_m = f_{ck} - \frac{\sigma}{1.65}$

4) $f_m = f_{ck} + 1.5\sigma$

Correct Answer:

$f_m = f_{ck} + 1.65\sigma$

QID: 9 - Which of the following constituents is present in the blast furnace slag?

Options:

- 1) 50% alumina and 20% calcium oxide
- 2) 45% calcium oxide and 35% silica
- 3) 25% calcium oxide and 15% silica
- 4) 25% magnesia and 15% silica

Correct Answer: 45% calcium oxide and 35% silica

QID: 10 - Which of the timber is used to make the goods that are used in the sports industry?

Options:

- 1) Alder
- 2) Asanfona
- 3) Mulberry
- 4) Balsa

Correct Answer: Mulberry

QID: 11 - Which of the following estimate is carried out if the sectioned estimate exceeds 5% due to the change in the price?

Options:

- 1) Detailed estimate
- 2) Plinth area estimate
- 3) Preliminary estimate
- 4) Revised estimate

Correct Answer: Revised estimate

QID: 12 - For estimation of the masonry work and excavation work, accuracy requirement in the measurement of the length as compared to thickness or width is _____.

Options:

- 1) less
- 2) more
- 3) equal
- 4) independent

Correct Answer: less

QID: 13 - A wall of width 300 mm contains two T junctions. The height of the wall is 3 m and total length of the central line is 150 m. Calculate the quantity of the brick work (in cubic meter) using central line method.

Options:

- 1) 134.46
- 2) 134.73
- 3) 134.86
- 4) 135

Correct Answer: 134.73

QID: 14 - Which of the following is measured in cubic meter?

Options:

- 1) Brick work
- 2) Concrete work
- 3) Excavation work
- 4) Plinth

Correct Answer: Plinth

QID: 15 - For estimation of the brick masonry, no deduction is made for the end of the rafter up to the area (square inch) of

Options:

- 1) 50
- 2) 72
- 3) 108
- 4) 44

Correct Answer: 72

QID: 16 - Calculate the quantity (cubic meter) of the concrete used in a pier of 1.2 m diameter and 6 m length. The pier is reinforced with 8 bars of 25 mm diameter.

Options:

- 1) 6.5
- 2) 6.7 8
- 3) 8.64
- 4) 9.3

Correct Answer: 6.78

QID: 17 - In long wall and short wall method, the length of the short wall is the equal to the center to center length of wall minus _____.

Options:

- 1) half of the width of wall
- 2) one fourth of width of wall
- 3) twice of the width of wall
- 4) width of wall

Correct Answer: width of wall

QID: 18 - Calculate the quantity (cubic meter) of the earthwork for a canal of 50 m long. Depths of canal at two extreme sections are 3 m and 5 m. The bottom width and top width of the canal are 2 m and 4 m. Use midsection method.

Options:

- 1) 450
- 2) 600
- 3) 750
- 4) 900

Correct Answer: 600

QID: 19 - Calculate the value of a pump after 5 years, if the annual depreciation value is Rs. 200. The original cost of the pump is Rs. 3000 and the useful life of the pump is 10 years.

Options:

- 1) 200
- 2) 100 0
- 3) 1300
- 4) 2000

Correct Answer: 2000

QID: 20 - Which of the following is **NOT** included in the floor area?

- 1) Clear coverage area
- 2) Area of the walls
- 3) Sills of the doors
- 4) Sills of the windows

Options:

- 1) 1 and 3
- 2) 2 and 3
- 3) 2, 3 and 4
- 4) 2 and 4

Correct Answer: 2, 3 and 4

QID: 21 - The scale in which three successive dimensions can be measured at a time is called _____.

Options:

- 1) chord scale
- 2) diagonal scale
- 3) plain scale
- 4) vernier scale

Correct Answer: diagonal scale

QID: 22 - Which one is the **CORRECT** option for the cumulative errors?

1. It decreases with an increase in measurement.
2. It is directly proportional to the length of the line.
3. It may be positive or negative.
4. It is inversely proportional to the length of the line.

Options:

- 1) 1, 3 and 4
- 2) 1 and 3
- 3) 2 and 3
- 4) Only 2

Correct Answer: 2 and 3

QID: 23 - The fore bearing of a line is 30 degree,. Calculate the back bearing of a line (in degree).

Options:

- 1) 60
- 2) 120
- 3) 210
- 4) 330

Correct Answer: 210

QID: 24 - In which of the following plane, the telescope of the theodolite is turned in order to swing?

Options:

- 1) Horizontal axis
- 2) Horizontal plane
- 3) Incline d plane
- 4) Vertical p lane

Correct Answer: Horizontal plane

QID: 25 - Relative error of the closer is the ratio of _____.

Options:

- 1) closing error to sum of departure
- 2) closing error to sum of latitude
- 3) closing error to perimeter of traverse.
- 4) latitude to departure

Correct Answer: closing error to perimeter of traverse

QID: 26 - Determine the number of divisions required on the vernier scale, if it is combined with the main scale of least count 0.5 mm. The least count of the combination required is 0.05 mm for the direct vernier.

Options:

- 1) 0.025
- 2) 0.1
- 3) 1
- 4) 10

Correct Answer: 10

QID: 27 - The height of any point with respect to mean sea level is called _____.

Options:

- 1) Bench mark
- 2) Datum
- 3) Level surf ace
- 4) Reduced level

Correct Answer: Reduced level

QID: 28 - Calculate the reduced level (m) of a point A, if the staff readings at the point A and benchmark are 2.8 m and 2.5 m respectively. The reduced level of the benchmark is 100m.

Options:

- 1) 97.22
- 2) 99.7
- 3) 100.3
- 4) 105.3

Correct Answer: 99.7

QID: 29 - Calculate the horizontal distance between the staff and instrument, if the staff readings are 1.4 m and 2.9 m, which corresponds to lower and the upper horizontal lines of cross hair. The lens of the telescope of the tachometer is of anallactic lens.

Options:

- 1) 100
- 2) 140
- 3) 150
- 4) 200

Correct Answer: 150

QID: 30 –

The volume of an embankment having a total length of L and cross section areas of four sections at an interval of H are A_1, A_2, A_3, A_4 using the trapezoid method

Options:

- 1) $H \left[\frac{(A_1 + A_4)}{2} + A_2 + A_3 \right]$
- 2) $H \left[\frac{(A_1 + A_4)}{4} + A_2 + A_3 \right]$
- 3) $L \left[\frac{(A_1 + A_4)}{2} + A_2 + A_3 \right]$
- 4) $L / 3 \left[(A_1 + A_4) + 2(A_2 + A_3) \right]$

Correct Answer:

$$H \left[\frac{(A_1 + A_4)}{2} + A_2 + A_3 \right]$$

QID: 31 - If the damping ratio is given by 0.10 and damping coefficient is 225 kN-s/m. What is the value of critical damping ratio (kN-s/m)?

Options:

- 1) 22.5
- 2) 225
- 3) 2250
- 4) 2500

Correct Answer: 2250

QID: 32 - What is the value of active earth pressure coefficient for the soil having an internal angle of friction of 30 degree.

Options:

- 1) 1/3
- 2) 1/2 .5
- 3) 1
- 4) 3

Correct Answer: 1/3

QID: 33 - If the voids of a soil are completely filled with air, then it is called _____.

Options:

- 1) dry soil
- 2) partially saturated soil
- 3) submerged soil
- 4) saturate d soil

Correct Answer: partially saturated soil

QID: 34 - Which one of the following represents the measure of particle size range?

Options:

- 1) Slope of gradation curve of soil
- 2) Coefficient of uniformity
- 3) Fineness of the soil
- 4) Relative index

Correct Answer: Coefficient of uniformity

QID: 35 - Calculate the kinematic viscosity (stoke) of the fluid, if the dynamic viscosity of fluid is 0.5 poise and specific gravity is 0.4?

Options:

- 1) 0.95
- 2) 1
- 3) 1.25
- 4) 1.5

Correct Answer: 1.25

QID: 36 - Which of the following causes the major loss in the long pipes?

Options:

- 1) Friction
- 2) Gradual contraction and enlargement both
- 3) Sudden contraction
- 4) Sudden enlargement

Correct Answer: Friction

QID: 37 - Which of the following instrument is used for measuring the discharge?

Options:

- 1) Current meter
- 2) manometer
- 3) Vane anemometer
- 4) Venturimeter

Correct Answer: Venturimeter

QID: 38 - Calculate the diameter of a pipe of 32000 m long, if it is equivalent to another pipe of 0.2 m diameter and 1000 m long.

Options:

- 1) 0.2 m
- 2) 0.3 m
- 3) 0.4 m
- 4) 0.5 m

Correct Answer: 0.4 m

QID: 39 -

Which of the following represents the critical velocity for the discharge per unit width of q m³/s/m from the wide rectangular channel?

Options:

- 1) $(q/g)^{1/3}$
- 2) $(qg)^{1/3}$
- 3) $(qg)^{1/2}$
- 4) None of the these
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Correct Answer:

$(qg)^{1/3}$

QID: 40 - Which of the following is equivalent to one kilo-Pascal?

Options:

- 1) 1000 N/m²
- 2) 1000 N/mm²
- 3) 1000 N/cm²
- 4) 100 N/m²

Correct Answer:

1000 N/m²

QID: 41 - What is the theoretical value of the coefficient of contraction for the sharp edge orifice?

Options:

- 1) 0.401
- 2) 0.611
- 3) 0.982
- 4) 1

Correct Answer: 0.611

QID: 42 - Hydraulic radius of the channel is defined as the ratio of _____.

Options:

- 1) area to depth of channel
- 2) area to wetted perimeter of the channel
- 3) area to width of channel
- 4) perimeter to area of the channel

Correct Answer: area to wetted perimeter of the channel

QID: 43 - In which type of the following flow, losses are more?

Options:

- 1) Critical flow
- 2) Laminar flow
- 3) Transitional flow
- 4) Turbulent flow

Correct Answer: Turbulent flow

QID: 44 - If the diameter of the pipe is given as D, what is the maximum thickness of the boundary layer?

Options:

- 1) 0
- 2) D / 2
- 3) D
- 4) 2D

Correct Answer: D/2

QID: 45 - Calculate the critical velocity (m/sec) of a channel using Kennedy's theory, if the depth of flow is 3 m.

Options:

- 1) 0.84
- 2) 1.11
- 3) 2.7
- 4) 6

Correct Answer: 1.11

QID: 46 - Which one of the followings is NOT a cause of water logging?

Options:

- 1) Excess tapping of the ground water.
- 2) Frequent irrigation.
- 3) High water table.
- 4) Seepage from unlined canals.

Correct Answer: Excess tapping of the ground water.

QID: 47 - Which instrument is used for the measurement of the longitudinal coefficient of friction?

Options:

- 1) Bump integrator
- 2) Both bump integrator and roughometer.
- 3) Roughometer
- 4) Speedometer

Correct Answer: Both bump integrator and roughometer.

QID: 48 - Calculate the capacity (vehicle per hour) of the road when reaction time of the driver is 2 seconds. The design speed is 80 kmph and average length of the vehicle is 6 m. Take coefficient of friction as 0.35.

Options:

- 1) 600
- 2) 653
- 3) 687
- 4) 724

Correct Answer: 653

QID: 49 - Which of the following is the result of disinfection of water?

Options:

- 1) Complete grits
- 2) Killing of bacteria
- 3) Reducing turbidity up to zero
- 4) Improve pH values

Correct Answer: Killing of bacteria

QID: 50 - Which of the following process includes chlorination of water above the break point?

Options:

- 1) Plain chlorination
- 2) Dechlorination
- 3) Excess chlorination
- 4) Super chlorination

Correct Answer: Super chlorination

QID: 51 - Building codes require the partition load to be considered even without partition if live load is less than:-

Options:

- 1) 60 psf
- 2) 70 psf
- 3) 80 psf
- 4) 90 psf

Correct Answer: 80 psf

QID: 52 –

If $R_1 = 1.1$ and $R_2 = 1.2$, then

what is value of L_r (in psf)?

अगर $R_1 = 1.1$ और $R_2 = 1.2$ है, तो L_r मान क्या होगा (psf में)?

Options:

1) 26.1

2) 26.2

3) 26.3

4) 26.4

Correct Answer: 26.4

QID: 53 - How many constraints are there in a fixed support in a planar system?

Options:

1) 2

2) 3

3) 6

4) None of these

Correct Answer: None of these

QID: 54 - Why are steel reinforcing rods used in concrete beams:-

Options:

1) To make it carry compression

2) To make it carry tension

3) To make it carry compression as well as tension

4) None of these

Correct Answer: To make it carry tension

QID: 55 - In planar system, X parts/members are there with Y no. of forces. If $Y > 3X$, the system is:-

Options:

1) Statically indeterminate

2) Statically determinate

3) Can't say

4) Depends on other conditions

Correct Answer: Statically indeterminate

QID: 56 - How many cases out of the following are improperly constrained?

A. Parallel forces

B. concurrent forces

C. perpendicular forces

D. Only moment

Options:

1) 1

2) 2

3) 3

4) 4

Correct Answer: 2

QID: 57 - The space between adjacent bents in a roof truss is called:-

Options:

1) Purlins

2) Bay

3) Knee

4) Braces

Correct Answer: Bay

QID: 58 - There is no bending stresses in truss due to:-

Options:

1) Assumptions made

2) Design

3) Materials used

4) None of these

Correct Answer: Assumptions made

QID: 59 - A truss formed by joining two or more simple trusses is called:-

Options:

1) Simple

2) Compound

3) Complex

4) None of these

Correct Answer: Compound

QID: 60 - If a truss is internally unstable, then we should use it when it is:-

Options:

1) Statically determinate

2) Statically indeterminate

3) Statically determinate or statically indeterminate

4) We must never use it

Correct Answer: We must never use it

QID: 61 - How many types of chemical admixture are there?

Options:

1) 2

2) 3

3) 4

4) 5

Correct Answer: 4

QID: 62 - Which component of concrete gives it desired compressive strength?

Options:

1) Water

2) Cement

3) Aggregates

4) Admixture

Correct Answer: Aggregates

QID: 63 - What is the maximum height through which concrete can be poured?

Options:

1) 0.1 to 0.6 m

2) 0.8 to 1 m

3) 0.5 m

4) 2 m

Correct Answer: 0.8 to 1 m

QID: 64 - Which is the best method for curing of concrete flat surfaces?

Options:

1) Spraying water

2) Placing wet gunny bags

3) Stagnating water

4) None of these

Correct Answer: Stagnating water

QID: 65 - The accumulation of water on outer surface of concrete is:

Options:

- 1) Transpiration
- 2) Bleeding
- 3) Guttation
- 4) Ponding

Correct Answer: Bleeding

QID: 66 - Which admixture is used to improve workability of concrete?

Options:

- 1) Plasticizers
- 2) Metakaolin
- 3) Reducers
- 4) Accelerators

Correct Answer: Plasticizers

QID: 67 - Higher the cement content,

Options:

- 1) Higher aggregates
- 2) Lower workability
- 3) Higher strength
- 4) Lower strength

Correct Answer: Higher strength

QID: 68 - Compaction factor for heavily reinforced section with vibration is:

Options:

- 1) <0.75
- 2) 0.75-0.85
- 3) 0.85-0.92
- 4) >0.92

Correct Answer: 0.85-0.92

QID: 69 - If cylinder specimen is used to test compressive strength of concrete, equivalent cubes strength can be found using:

Options:

- 1) 3/4th strength of cylinder
- 2) 5/4th strength of cylinder
- 3) 5/6th strength of cylinder
- 4) 1/4th strength of cylinder

Correct Answer: 5/4th strength of cylinder

QID: 70 - Which of the below is not a plaster type based on material?

Options:

- 1) Cement
- 2) Gypsum
- 3) Pozzolana
- 4) Lime

Correct Answer: Pozzolana

QID: 71 - Which of the below is not a plaster finish?

Options:

- 1) Rough -cast
- 2) Pebble dash
- 3) Sand faced
- 4) Wooden

Correct Answer: Wooden

QID: 72 - If the depth of moist sand in a cylinder is 15 cm and the depth of the sand when fully inundated with water is 12 cm, then what is the bulking of the moist sand?

Options:

- 1) 0.1
- 2) 0.2
- 3) 0.15
- 4) 0.25

Correct Answer: 0.25

QID: 73 -

If P , Y and Z are weights of cement, fine aggregates and coarse aggregates respectively and W/C is the water cement ratio, the minimum quantity of water to be added to first batch is obtained by the equation

$$A. 0.1P + 0.3Y + 0.1Z = \frac{W}{C} \times P$$

$$B. 0.3P + 0.1Y + 0.01Z = \frac{W}{C} \times P$$

$$C. 0.4P + 0.2Y + 0.01Z = \frac{W}{C} \times P$$

$$D. 0.5P + 0.3Y + 0.01Z = \frac{W}{C} \times P$$

Options:

- 1) Only A
- 2) Only B
- 3) Only C
- 4) Only D

Correct Answer: Only B

QID: 74 - How do we reduce the shrinkage in concrete?

Options:

- 1) By low water cement ratio
- 2) By less cement in concrete
- 3) By proper concrete mix
- 4) All of these

Correct Answer: All of these

QID: 75 - Which of the following are the specifications of a cement bag for storage?

- A. weight 50 kg
- B. height 18 cm
- C. plan area 3000 sq.cm
- D. volume 35 liters

Options:

- 1) A and B Only
- 2) B and C only
- 3) A, B and C only
- 4) A, B, C and D

Correct Answer: A, B, C and D

QID: 76 - What should be done to ensure constant moisture content in aggregates?

Options:

- 1) area of each aggregate pile should be large
- 2) height of each aggregate pile should not exceed 1.50 m
- 3) aggregate pile should be left for 24 hours before aggregates are used
- 4) All of these

Correct Answer: All of these

QID: 77 - For batching 1:3:6 concrete mix by volume, which of the following are the ingredients required per bag of 50kg cement?

Options:

- 1) 70 liters of sand and 120 liters of aggregates
- 2) 70 kg of sand and 140 liters of aggregates
- 3) 105 liters of sand and 140 liters of aggregates
- 4) None of these

Correct Answer: None of these

QID: 78 - Which of the following statements is/are true?

Options:

- 1) The diameter of the pipe line used for transportation of concrete by pumps does not exceed 30 cm
- 2) The slump of the concrete to be pumped, should not be less than 5 cm and more than 8 cm
- 3) The water cement ratio of concrete to be pumped is kept between 0.5 to 0.65
- 4) All of these

Correct Answer: All of these

QID: 79 - In a R.C.C structure, the tension zone lies in the:

Options:

- 1) Top
- 2) Middle
- 3) Side
- 4) Bottom

Correct Answer: Bottom

QID: 80 - In a Pre Stressed Concrete, the tensioning system may be classified into:

Options:

- 1) 3
- 2) 2
- 3) 5
- 4) 4

Correct Answer: 2

QID : 81 - A circular slab subjected to external loading, deflects to form:

Options:

- 1) semi-hemisphere
- 2) ellipsoid
- 3) paraboloid
- 4) None of these

Correct Answer: paraboloid

QID: 82 - For normal cases, stiffness of a simply supported beam is satisfied if the ratio of its span to its overall depth does not exceed

Options:

- 1) 10
- 2) 15
- 3) 20
- 4) 25

Correct Answer: 20

QID: 83 -

If the length of a wall on either side of a lintel opening is at least half of its effective span L , the load W carried by the lintel is equivalent to the weight of brick work contained in an equilateral triangle, producing a maximum bending moment

- A) $\frac{WL}{2}$
- B) $\frac{WL}{4}$
- C) $\frac{WL}{6}$
- D) $\frac{WL}{8}$
- E) $\frac{WL}{12}$

Options:

- 1) A Only
- 2) B Only
- 3) C Only
- 4) D Only

Correct Answer: C Only

QID: 84 - The maximum diameter of a bar used in a ribbed slab is

Options:

- 1) 12 mm
- 2) 6 mm
- 3) 20 mm
- 4) 22 mm

Correct Answer: 22 mm

QID: 85 - A foundation is called shallow if its depth is

Options:

- 1) one-fourth of its width
- 2) half of its width
- 3) three-fourth of its width
- 4) equal to its width

Correct Answer: equal to its width

QID: 86 -

If $P \text{ kg/m}^2$ is the upward pressure on the slab of a plain concrete footing whose projection on either side of the wall is $a \text{ cm}$, the depth of foundation D is given by

- A] $D = 0.00775a\sqrt{P}$
 B] $D = 0.0775a\sqrt{P}$
 C] $D = 0.775P\sqrt{a}$

Options:

- 1) A Only
- 2) B Only
- 3) C Only
- 4) None of these

Correct Answer: A Only

QID: 87 - Which of the following statements is true?

Options:

- 1) The self-weight of the footing is not considered for calculating the upward pressure on footing
- 2) The self-weight of the footing is also considered for calculating the upward pressure on footing
- 3) The self-weight of the footing is not considered for calculating the area of the footing
- 4) None of these

Correct Answer: The self-weight of the footing is not considered for calculating the upward pressure on footing

QID: 88 -

If the length of a combined footing for two columns l meters apart is L and the projection on the left side of the exterior column is x , then the projection y on the right side of the exterior column, in order to have a uniformly distributed load is (Where \hat{x} is the distance of center of gravity of column loads)

- A] $y = L - (l - \hat{x})$ B] $y = \frac{l}{2} + (l - \hat{x})$
 C] $y = \frac{l}{2} - (l + \hat{x})$ D] $y = \frac{l}{2} - (l - \hat{x})$

Options:

- 1) A Only
- 2) B Only
- 3) C Only
- 4) D Only

Correct Answer: D Only

QID: 89 - Maximum principal stress theory for the failure of a material at elastic limit is known as

Options:

- 1) Guest's or Tresca's theory
- 2) St. Venant's theory
- 3) Rankine's theory

4) Haig's theory

Correct Answer: Rankine's theory

QID: 90 -

The general expression for the B.M. of a beam of length l is $M = \frac{wl}{2}x - \frac{wx^2}{2}$, the beam carries

Options:

- 1) a uniformly distributed load 'w' per unit length
- 2) a load varying linearly from zero at one end to w at the other end
- 3) an isolated load at mid span
- 4) None of these

Correct Answer: a uniformly distributed load 'w' per unit length

QID: 91 -

The moment of inertia of a rectangular section of width B and depth D about an axis passing through C.G. and parallel to its width is

- A] $\frac{BD^2}{6}$
 B] $\frac{BD^3}{6}$
 C] $\frac{BD^3}{12}$
 D] $\frac{B^2D}{6}$

Options:

- 1) A Only
- 2) B Only
- 3) C Only
- 4) D Only

Correct Answer: C Only

QID: 92 - Pick up the correct statement from the following

Options:

- 1) The bending stress in a section is zero at its neutral axis and maximum at the outer fibers
- 2) The shear stress is zero at the outer fibers and maximum at the neutral axis
- 3) The bending stress at the outer fibers, is known as principal stress
- 4) All of these

Correct Answer: All of these

QID: 93 - "Poisson's ratio" is defined as:

Options:

- 1) ratio of lateral strain to linear strain
 - 2) ratio of linear strain to lateral strain
 - 3) ratio of lateral stress to linear stress
 - 4) ratio of linear stress to lateral stress
- Correct Answer:** ratio of lateral strain to linear strain

QID: 94 - Which of the following statements is false?

Options:

- 1) Mild steel has 2 yield points
- 2) Mild steel shows strain hardening
- 3) Mild steel is a ductile material
- 4) None of these

Correct Answer: None of these

QID: 95 - If the Young's modulus of elasticity of a material is twice its modulus of rigidity, then the Poisson's ratio of the material is

Options:

- 1) -1
- 2) -0.5
- 3) 0.5
- 4) None of these

Correct Answer: None of these

QID: 96 - In case of biaxial stress, the maximum value of shear stress is given by

Options:

- 1) Difference of the normal stresses
- 2) Sum of the normal stresses
- 3) Half the sum of the normal stresses
- 4) None of these

Correct Answer: None of these

QID: 97 - Which of the following statements is true?

Options:

- 1) The sum of normal stresses is constant
- 2) The sum of normal stresses is variable
- 3) The sum of normal stresses is depends on the plane
- 4) None of these

Correct Answer: The sum of normal stresses is constant

QID: 98 - The slenderness ratio of a column is zero when its

Options:

- 1) effective length is equal to actual length
- 2) length is very large
- 3) length is equal to its radius of gyration
- 4) None of these

Correct Answer: None of these

QID: 99 - In a tension member if one or more than one rivet holes are off the line, the failure of the member depends upon

Options:

- 1) pitch
- 2) gauge
- 3) diameter of the rivet holes

- 4) All of these

Correct Answer: All of these

QID: 100 - For double angles carrying tension, placed back to back and connected to either side of the gusset plate, the sectional area of the section, is equal to the cross sectional area of

Options:

- 1) the section
- 2) the section plus area of rivet holes
- 3) the section minus area of rivet holes
- 4) the section multiplied by the area of the rivet hole

Correct Answer: the section minus area of rivet holes

