UPMRC AM

Previous Year Paper

Civil 2 Jan 2023 Shift 1

Uttar Pradesh Metro Rail Corporation Limited
उत्तर प्रदेश मेट्रो रेल कॉर्पोरेशन लिमिटेड

A joint Venture of Govt. of India and Govt. of Uttar Pradesh

Participant ID	
Participant Name	
Test Center Name	
Test Date	02/01/2023
Test Time	9:00 AM - 11:00 AM
Subject	Assistant Manager Civil

Section : **Domain Knowledge**

Q.1 **Identify the incorrect statement with respect to the effect of compaction on soil properties.**

Ans
✔ A. The permeability of soil is independent of individual pore size, rather it depends on the void ration.

✘ B. As the dry density increases due to compaction, the amount of voids goes on reducing and hence the permeability of soil decreases.

✘ C. For the same density, fine grained soil samples compacted dry of optimum are more permeable than those compacted wet of optimum.

✘ D. As the compactive effort is increased, the permeability of soil decreases because of the increased dry density.

Question ID : **486324316**
Status : **Answered**
Chosen Option : **C**

Q.2 **Which of following surveys uses the observations of heavenly bodies (sun, moon, stars etc.) to fix the absolute locations of places on the surface of the earth?**

Ans
✔ A. Astronomical survey

✘ B. Hydrographic survey

✘ C. Cadastral survey

✘ D. Marine survey

Question ID : **486324365**
Status : **Answered**
Chosen Option : **A**

Q.3 **The coefficient of compressibility is defined as _____.**

Ans
✘ A. decrease in density per unit increase of pressure

✔ B. decrease in void ratio per unit increase of pressure

✘ C. increase in shear strength per unit increase of pressure

✘ D. increase in permeability per unit increase of pressure

Question ID : **486324317**
Status : **Answered**
Chosen Option : **B**

Q.4 Which of the following method is a temperature-based method and it was derived to overcome the non-availability of solar radiation data at many locations and recommended estimating solar radiation from extraterrestrial radiation?

Ans
✗ A. Penman-Monteith Method
✗ B. Pan Method
✓ C. Hargreaves Method
✗ D. Thornthwaite Method

Question ID : **486324337**
Status : **Answered**
Chosen Option : **A**

Q.5 Which of the following does NOT come under domestic waste?

Ans
✗ A. Waste paper
✗ B. Food waste
✓ C. Anatomical wastes
✗ D. Diapers

Question ID : **486324357**
Status : **Answered**
Chosen Option : **C**

Q.6 What will be the value of the limiting moment of resistance factor for the singly reinforced rectangular section for flexure? The grade of concrete is M30 and the steel is Fe500.

Ans
✗ A. 3.32
✗ B. 3.99
✗ C. 4.14
✓ D. 4.47

Question ID : **486324303**
Status : **Answered**
Chosen Option : **C**

Q.7 In which year did Rankine investigate the stress condition in a soil at a state of plastic equilibrium?

Ans
✗ A. 1657
✓ B. 1857
✗ C. 1957
✗ D. 1757

Question ID : **486324324**
Status : **Answered**
Chosen Option : **B**

Q.8 At the time of initial tensioning the maximum tensile stress immediately behind the anchorage shall NOT exceed _____ of the ultimate tensile strength of the wire or bar.

Ans
✗ A. 90%
✗ B. 60%
✓ C. 40%
✗ D. 80%

Question ID : **486324307**
Status : **Answered**
Chosen Option : **D**

Q.9 **The elongation of a tapered bar of length 'l', whose diameter varies uniformly from 'd' at one end to 'D' at the other end when subjected to an axial pull of 'P', is given by:**

Ans
✗ A. $2PL / \pi EDd$
✓ B. $4PL / \pi EDd$
✗ C. $PL / \pi EDd$
✗ D. $PL / 4\pi EDd$

Question ID : **486324288**
Status : **Answered**
Chosen Option : **B**

Q.10 **Which of the following statements with respect to assumptions in the analysis of welded joints is INCORRECT?**

Ans
✓ A. Effects of residual stresses, stress concentrations and shape of the welds are considered.
✗ B. The welds connecting the various parts of a steel structure are homogeneous and isotropic.
✗ C. Stresses due to external loads are considered.
✗ D. The parts connected by the weld are rigid and their deformations are therefore, neglected.

Question ID : **486324313**
Status : **Answered**
Chosen Option : **A**

Q.11 **How much amount of mineral oil present in the supply of water for drinking will cause rejection?**

Ans
✗ A. 0.001 mg/l
✗ B. 0.1 mg/l
✓ C. 0.9 mg/l
✗ D. 0.03 mg/l

Question ID : **486324345**
Status : **Answered**
Chosen Option : **D**

Q.12 **Find the depth of the neutral axis of a 150 mm thick one way slab reinforced with an area of steel 400 mm^2, the effective cover is 25 mm using M20 concrete and Fe 500 steel.**

Ans
✗ A. 14.37 mm
✗ B. 10.00 mm
✓ C. 24.16 mm
✗ D. 15.14 mm

Question ID : **486324305**
Status : **Answered**
Chosen Option : **D**

Q.13 A homogeneous anisotropic earth dam, which is 23 m high, is constructed on an impermeable foundation. The water level on the reservoir side is 20 m from the base of the dam, downstream side is dry. It is seen that there are 4 flow channels and 16 equipotential drops in a square flow net drawn in the transformed dam section. Estimate the quantity of seepage per unit length in m^3/s through the dam. Consider the value of the coefficient of permeability (after accounting the coefficient of permeability in both horizontal and vertical directions) as 3.0×10^{-8} m/s.

Ans
✗ A. 2.6×10^{-7} $m^3/s/m$ run
✗ B. 1.8×10^{-7} $m^3/s/m$ run
✓ C. 1.5×10^{-7} $m^3/s/m$ run
✗ D. 1.2×10^{-7} $m^3/s/m$ run

Question ID : **486324320**
Status : **Answered**
Chosen Option : **C**

Q.14 Which of following are water holding elements of the hydrological cycle?

I. Atmosphere
II. Vegetation
III. Streams, lakes and rivers
IV. Oceans

Ans
✗ A. III and IV only
✗ B. I and II only
✗ C. II and III only
✓ D. I, II, III and IV

Question ID : **486324340**
Status : **Answered**
Chosen Option : **D**

Q.15 Rankine's theory overestimates active pressure and underestimates passive pressure because:

Ans
✗ A. it assumes lateral transfer of weight
✓ B. it assumes frictionless wall
✗ C. it assumes vertical and horizontal stresses
✗ D. it assumes shear stresses

Question ID : **486324325**
Status : **Answered**
Chosen Option : **C**

Q.16 In a partial submerged body, the metacentre (M) point is formed when the line of action of buoyant force intersects with normal axis _____.

Ans
✗ A. before rotation
✓ B. after rotation
✗ C. before and after rotation
✗ D. after immersion

Question ID : **486324329**
Status : **Answered**
Chosen Option : **C**

Q.17 When the beam geometry is symmetrical about the x-y plane and the loads are in this plane, the exposed forces in the cut-section can be considered as:

Ans
✗ A. concurrent
✗ B. equilibrium
✓ C. coplanar
✗ D. zero

Question ID : **486324282**
Status : **Answered**
Chosen Option : **C**

Q.18 Identify the method of surveying in which distance can be measured indirectly by optical surveying instruments like theodolites. The method is quite rapid and sufficiently accurate for many types of surveying operations.

Ans
✗ A. Electronic distance measurement
✗ B. Taping (chaining)
✓ C. Tachometry
✗ D. Odometer of a vehicle

Question ID : **486324370**
Status : **Answered**
Chosen Option : **C**

Q.19 The total amount of irrigation water required to bring the soil moisture content in the root zone depth of the crops to field capacity i.e., difference between the field capacity and the soil moisture content in the root zone before application of irrigation water, is known as:

Ans
✗ A. bulk water requirement
✓ B. net irrigation requirement
✗ C. gross water requirement
✗ D. average irrigation requirement

Question ID : **486324339**
Status : **Answered**
Chosen Option : **B**

Q.20 As per IS soil classification, if the coefficient of uniformity of a soil sample is greater than 6 and the coefficient of curvatures lies between 1 to 3, the soil is classified as _____.

Ans
✗ A. GM
✓ B. SW
✗ C. GW
✗ D. SM

Question ID : **486324314**
Status : **Answered**
Chosen Option : **C**

Q.21 Which of the following is the correct unit of measurement for 'flexibility coefficients' used in the analysis of structures by the flexibility method?

Ans
✗ A. N/mm
✓ B. mm/N
✗ C. N/mm^2
✗ D. N-mm

Question ID : **486324294**
Status : **Answered**
Chosen Option : **D**

Q.22 According to Lucknow road plan, the national highway square grid should be

Ans
✓ A. 100 km^2
✗ B. 25 km^2
✗ C. 75 km^2
✗ D. 50 km^2

Question ID : **486324359**
Status : **Answered**
Chosen Option : **D**

Q.23 The Iodometric test is used for water when the presence of _____ and _____ makes the orthotolidine test unstable.

Ans
✗ A. sodium, chlorine
✗ B. bromine, benzene
✓ C. nitrate, nitrogen
✗ D. sulphur, iron

Question ID : **486324351**
Status : **Answered**
Chosen Option : **A**

Q.24 According to the bending equation, the cross-section of a beam does NOT have:

Ans
✗ A. resultant pull
✗ B. resultant push
✓ C. resultant push or pull
✗ D. resultant force

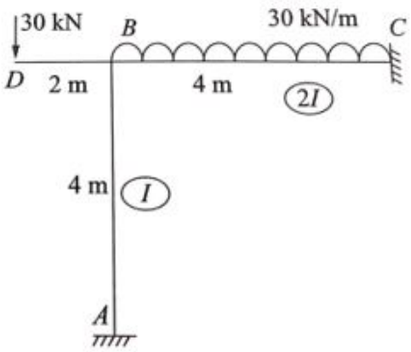
Question ID : **486324286**
Status : **Answered**
Chosen Option : **C**

Q.25 The measure of the capability of some minerals to split along certain planes parallel to the crystal faces is known as:

Ans
✓ A. cleavage
✗ B. fracture
✗ C. streak
✗ D. lustre

Question ID : **486324298**
Status : **Answered**
Chosen Option : **A**

Q.26 Identify the number of kinematic indeterminacies to be determined in the frame shown in the given figure.



Ans

✔ A. 1

✘ B. 3

✘ C. 2

✘ D. 0

Question ID : **486324295**
Status : **Answered**
Chosen Option : **B**

Q.27 Identify the type of piles that have a helix near the pile toe so they can be screwed into the ground. The process and concept is similar to screwing into wood.

Ans

✔ A. Screw piles

✘ B. Micro piles

✘ C. Geothermal piles

✘ D. Bored piles

Question ID : **486324323**
Status : **Answered**
Chosen Option : **A**

Q.28 Which of following factors are to be considered while choosing from a very wide range of foundation types?

I. The nature of the load requiring support.
II. The presence of water table.
III. Durability of the materials.

Ans

✔ A. I, II and III

✘ B. Only II and III

✘ C. Only I and III

✘ D. Only I and II

Question ID : **486324321**
Status : **Answered**
Chosen Option : **A**

Q.29 What is the maximum concentration of Zinc (as Zn) present in drinking water in the absence of an alternate source as per IS 10500-2012?

Ans

✘ A. 10 mg/l

✘ B. 11 mg/l

✔ C. 15 mg/l

✘ D. 25 mg/l

Question ID : **486324346**
Status : **Answered**
Chosen Option : **A**

Q.30 Which of following are the objectives of reconnaissance?

I. To ascertain the possibility of building or constructing route or track through the area.
II. To choose the best one or more routes and record on a map.
III. To estimate probable cost and draft a report.

Ans
✗ A. Only II and III
✗ B. Only I and II
✓ C. I, II and III
✗ D. Only I and III

Question ID : **486324366**
Status : **Answered**
Chosen Option : **C**

Q.31 The number of equations of static equilibrium for a three dimensional system is:

Ans
✗ A. 9
✗ B. 0
✗ C. 3
✓ D. 6

Question ID : **486324292**
Status : **Answered**
Chosen Option : **D**

Q.32 Which of the following is NOT the assumption in Terzaghi's theory of one-dimensional consolidation?

Ans
✗ A. The soil is fully saturated.
✗ B. Soil particles are incompressible.
✗ C. Excess pore water drains out only in the vertical direction.
✓ D. Darcy's law of the velocity of the flow of water through soil is not valid.

Question ID : **486324318**
Status : **Answered**
Chosen Option : **B**

Q.33 As per IS 800 : 2007, what is the maximum slenderness ratio for tension members (Eg. tie in roof truss) and subjected to reversal of stresses due to action of the wind or earthquake forces?

Ans
✗ A. 415
✗ B. 150
✗ C. 270
✓ D. 350

Question ID : **486324310**
Status : **Answered**
Chosen Option : **D**

Q.34 Which of the following Rainfall Abstractions is a Portion of precipitation that is captured in surface depression?

Ans

✔ A. Depression storage

✘ B. Interception

✘ C. Transpiration

✘ D. Evaporation

Question ID : **486324333**
Status : **Answered**
Chosen Option : **A**

Q.35 Estimation of quantity for 'Collapsible steel shutter with a fitting' is done in which of the following units of measurement?

Ans

✘ A. m

✔ B. m^2

✘ C. m^3

✘ D. Quintal

Question ID : **486324300**
Status : **Answered**
Chosen Option : **B**

Q.36 In a submerged body, when the weight of a body is equal to the buoyant force and the centre of buoyancy is above the centre of gravity, then such a submerged body is _____.

Ans

✘ A. in unstable condition

✘ B. in equilibrium

✔ C. in stable equilibrium

✘ D. not in equilibrium condition

Question ID : **486324332**
Status : **Answered**
Chosen Option : **C**

Q.37 Which of following statements is NOT correct regarding applications in engineering?

Ans

✘ A. Hydrology is an indispensable tool in planning and building hydraulic structures.

✘ B. Engineering hydrology enables us to find the relationship between a catchment's surface water and groundwater resources.

✔ C. Hydrology is used to find minimum probable flood at the proposed sites, e.g. dams.

✘ D. Used in the prediction of flood over a spillway, at highway culvert or in urban storm drainage.

Question ID : **486324342**
Status : **Answered**
Chosen Option : **B**

Q.38 As per IS1343:1980, the approximate value of shrinkage strain for design assumed for pre-tensioning will be given by:

Ans

✔ A. 0.0003

✘ B. 0.0005

✘ C. 0.0002

✘ D. 0.0007

Question ID : **486324306**
Status : **Answered**
Chosen Option : **C**

Q.39 On a highway, the car moves at a speed of 120 km/h and the truck moves at a speed of 60 km/h. Calculate the space mean speed.

Ans
- ✔ A. 80 km/h
- ✘ B. 60 km/h
- ✘ C. 120 km/h
- ✘ D. 70 km/h

Question ID : **486324360**
Status : **Answered**
Chosen Option : **A**

Q.40 A body of weight 300 N is lying on a rough horizontal plane having a coefficient of friction as 0.3. What is the magnitude of the force, which can move the body, while acting at an angle of 25° with the horizontal?

Ans
- ✔ A. 87.1 N
- ✘ B. 67.1 N
- ✘ C. 60.1 N
- ✘ D. 80.1 N

Question ID : **486324283**
Status : **Answered**
Chosen Option : **B**

Q.41 Pan coefficient is defined as the:

Ans
- ✔ A. ratio of lake evaporation to pan evaporation
- ✘ B. ratio of pan transpiration to lake transpiration
- ✘ C. ratio of pan evaporation to lake evaporation
- ✘ D. ratio of lake transpiration to pan transpiration

Question ID : **486324334**
Status : **Answered**
Chosen Option : **C**

Q.42 The ultimate strain in concrete under axial compression and flexure is restricted to a range between:

Ans
- ✘ A. 0.0035 and 0.447
- ✘ B. 0.001 and 0.002
- ✔ C. 0.002 and 0.0035
- ✘ D. 0 and 0.001

Question ID : **486324302**
Status : **Answered**
Chosen Option : **C**

Q.43 Which of following is the efficiency of canal and conduit networks from the reservoir, river diversion, or pumping station to the offtakes of the distributary system?

Ans
- ✘ A. Irrigation system efficiency
- ✘ B. Field application efficiency
- ✘ C. Distribution efficiency
- ✔ D. Conveyance efficiency

Question ID : **486324344**
Status : **Answered**
Chosen Option : **D**

Q.44 Which of the following statements is correct?

Statement A: minimum reinforcement in either direction of the slab should not be less than 0.15% of the total cross-section area of mild steel reinforcement.
Statement B: The maximum diameter of the reinforcing bar in the slab should not exceed 1/6 of the total thickness of the slab.

Ans
✗ A. Only statement B is correct.
✗ B. Both statements are incorrect.
✗ C. Both statements are correct.
✓ D. Only statement A is correct.

Question ID : **486324304**
Status : **Answered**
Chosen Option : **C**

Q.45 It consists of solid particles formed by incomplete combustion of carbonaceous materials. It is known as _____.

Ans
✗ A. fume
✗ B. mist
✓ C. smoke
✗ D. spray

Question ID : **486324355**
Status : **Answered**
Chosen Option : **C**

Q.46 Calculate the quantity of bleaching powder required per day for disinfection of 4 million litres/day. Chlorine dosage has to be 0.5 ppm and bleaching powder contains 30% of available chlorine.

Ans
✗ A. 5 kg
✗ B. 8.5 kg
✓ C. 6.67 kg
✗ D. 12 kg

Question ID : **486324350**
Status : **Answered**
Chosen Option : **C**

Q.47 Which of the following statements is/are correct or incorrect with respect to two hinged arches?

Statement A: In the analysis of indeterminate structures by the slope deflection method, the deformations are considered to be caused by the combined effect of bending moment and shear forces.
Statement B: In the analysis of indeterminate structures by the slope deflection method, the deformations are considered to be caused by the combined effect of bending moment and axial forces.

Ans
✓ A. Both statements are incorrect
✗ B. Both statements are correct
✗ C. Statement A is correct and B is incorrect
✗ D. Statement B is correct and A is incorrect

Question ID : **486324296**
Status : **Answered**
Chosen Option : **A**

Q.48 According to the bending equation, the cross-sectional beam strength mainly depends on:

Ans
✗ A. the radius of gyration
✓ B. the section modulus
✗ C. the beam geometry
✗ D. both the section modulus and the radius of gyration

Question ID : **486324290**
Status : **Answered**
Chosen Option : **B**

Q.49 Which of the following statements is/are true or false?

I. The purpose of working from whole to part is to localise the errors.
II. The purpose of working from whole to part is to control the accumulation of errors.

Ans
✗ A. I is true but II is false
✗ B. Both I and II are false
✓ C. Both I and II are true
✗ D. II is true but I is false

Question ID : **486324367**
Status : **Answered**
Chosen Option : **C**

Q.50 Which of the following statements is INCORRECT with respect to Vane shear test on soil?

Ans
✓ A. Vane shear test determines the drained shear strength of cohesive soil.
✗ B. A torque measuring arrangement, such as a calibrated torsion spring, is attached to the rod which is rotated by a worm gear and worm wheel arrangement.
✗ C. Vane shear test is a quick test, used either in the laboratory or in the field.
✗ D. The Vane shear tester consists of four thin steel plates (Vanes), welded orthogonally to a steel rod.

Question ID : **486324319**
Status : **Answered**
Chosen Option : **A**

Q.51 Which of the following tests is used to check for faecal contamination?

Ans
✓ A. Membrane filter test
✗ B. MicroSnap test
✗ C. Presumptive test
✗ D. Confirmed test

Question ID : **486324347**
Status : **Answered**
Chosen Option : **B**

Q.52 Which of the following methods is NOT used for finding the deflections of determinate beams?

Ans
✗ A. Conjugate beam method
✓ B. Kani's method
✗ C. Moment area method
✗ D. Castigliano's method

Question ID : **486324291**
Status : **Answered**
Chosen Option : **B**

Q.53 Which of the following terms is used to designate the losses due to Evapotranspiration and water that is used for the metabolic activities of plants?

Ans
✗ A. Regional use
✗ B. Reference use
✓ C. Consumptive use
✗ D. Estimated use

Question ID : **486324336**
Status : **Answered**
Chosen Option : **C**

Q.54 If a ship is safe in rolling, it will also be safe in:

Ans
✓ A. pitching
✗ B. yawning
✗ C. floating and pitching
✗ D. floating

Question ID : **486324328**
Status : **Answered**
Chosen Option : **B**

Q.55 Potential evapotranspiration, or PET, represents the combined loss of water through:

I. the plant's process of transpiration via its vascular system
II. evaporation of water from the earth's surface

Ans
✗ A. Statement II is true but statement I is false.
✗ B. Statement I is true but statement II is false.
✓ C. Both statements I and II are true.
✗ D. Both statements I and II are false.

Question ID : **486324338**
Status : **Answered**
Chosen Option : **C**

Q.56 The point of action of buoyancy force is called _____.

Ans
✗ A. critical point
✗ B. centre of object exposed in air
✗ C. centre of object immersed in liquid
✓ D. centre of buoyancy

Question ID : **486324327**
Status : **Answered**
Chosen Option : **D**

Q.57 Which of the following is NOT a type of gravity aerators?

Ans
✓ A. Diffuser aerator
✗ B. Salt tray aerator
✗ C. Inclined apron aerator
✗ D. Cascade aerator

Question ID : **486324349**
Status : **Answered**
Chosen Option : **A**

Q.58 Tuberculation is caused when the water has a pH value of:

Ans
- ✗ A. 14
- ✗ B. 11
- ✗ C. 9
- ✓ D. 2

Question ID : **486324348**
Status : **Answered**
Chosen Option : **B**

Q.59 ABCD is a square. Forces of 10, 8 and 4 units act at A in the directions AD, AC and AB, respectively. Determine the resultant force in magnitude and direction.

Ans
- ✗ A. 15.49 units
- ✗ B. 15.39 units
- ✓ C. 18.39 units
- ✗ D. 17.39 units

Question ID : **486324285**
Status : **Answered**
Chosen Option : **A**

Q.60 Which term is used to describe the load carrying capacity of a system beyond the expected or actual loads, and can be defined as the ratio of the maximum stress that a foundation can withstand to the maximum stress estimated for it?

Ans
- ✗ A. Ultimate bearing capacity
- ✓ B. Factor of safety
- ✗ C. Shearing resistance
- ✗ D. Load bearing capacity

Question ID : **486324322**
Status : **Answered**
Chosen Option : **B**

Q.61 Which of the following amount of cement is used for the testing of the fineness of the cement as suggested in IS: 4031 Part-1 (1996)?

Ans
- ✗ A. 500 gm
- ✗ B. 50 gm
- ✗ C. 200 gm
- ✓ D. 100 gm

Question ID : **486324299**
Status : **Answered**
Chosen Option : **D**

Q.62 When the roughness of plate increases, the length of the laminar region:

Ans
- ✗ A. never increases
- ✗ B. never decreases
- ✓ C. decreases
- ✗ D. increases

Question ID : **486324331**
Status : **Answered**
Chosen Option : **D**

Q.63 When both the ends of a column are fixed, the effective length of the column is:

Ans
- ✔ A. 0.5 times the column length
- ✘ B. 1.5 times the column length
- ✘ C. 2 times the column length
- ✘ D. the same as the column length

Question ID : **486324287**
Status : **Answered**
Chosen Option : **A**

Q.64 Which of following crops is NOT classified as a Rabi crop?

Ans
- ✔ A. Muskmelon
- ✘ B. Mustard
- ✘ C. Chickpea
- ✘ D. Fenugreek

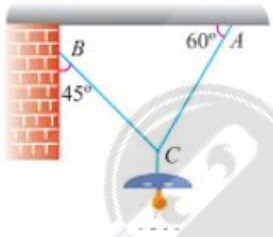
Question ID : **486324343**
Status : **Answered**
Chosen Option : **A**

Q.65 According to IRC 37-2018, the critical compressive strain occurs at the:

Ans
- ✘ A. top of the bituminous layer
- ✔ B. top of the sub-grade layer
- ✘ C. bottom of the bituminous layer
- ✘ D. bottom of the sub-grade layer

Question ID : **486324361**
Status : **Answered**
Chosen Option : **B**

Q.66 An electric light fixture weighing 15 N hangs from a point C, by two strings AC and BC. The string AC is inclined at 60° to the horizontal while BC is inclined at 45° to the vertical, as shown in the figure. Determine the force in the string AC.



Ans
- ✘ A. 5.61 N
- ✔ B. 10.98 N
- ✘ C. 5.68 N
- ✘ D. 9.98 N

Question ID : **486324284**
Status : **Answered**
Chosen Option : **B**

Q.67 Which of the following is NOT an impact of noise pollution?

Ans
✗ A. Hearing damage
✗ B. Physiological and psychological changes
✗ C. Interferes with man's communication
✓ D. Low visibility

Question ID : **486324353**
Status : **Answered**
Chosen Option : **D**

Q.68 Identify the INCORRECT statement with respect to shape factors used for different geometrical shapes used in the plastic analysis.

Ans
✗ A. Deflection at the collapse of a section with shape factor 1.7 is greater than that with shape factor 1.5.
✗ B. The shape factor of a rectangular section is 1.5.
✓ C. The ductility of a section with a shape factor of 1.5 is greater than that with a shape factor of 2.34.
✗ D. Cross sections with a greater value of shape factor give longer warning before the collapse.

Question ID : **486324312**
Status : **Answered**
Chosen Option : **C**

Q.69 When the water flows in the uniform condition, which of the following parameters remains constant?

Ans
✗ A. Velocity of flow, depth of flow and area of cross-section
✗ B. Depth of flow, slope of bed and area of cross-section
✓ C. Velocity of flow, depth of flow, slope of bed and area of cross-section
✗ D. Velocity of flow, slope of bed and area of cross-section

Question ID : **486324330**
Status : **Answered**
Chosen Option : **A**

Q.70 The thickness of the wearing course having aggregate passing 1.9 cm sieve according to the McAdams road is:

Ans
✗ A. 2.5 cm
✗ B. 7.5 cm
✗ C. 10 cm
✓ D. 5.0 cm

Question ID : **486324358**
Status : **Answered**
Chosen Option : **B**

Q.71 Which of following is a function of percussion drivers?

Ans
✗ A. Hydraulic rams pushing piles into the ground
✗ B. Using to screw replacement piles into the ground
✗ C. Piles are vibrating into the ground
✓ D. Hammers driving by steam, compressed air or diesel

Question ID : **486324326**
Status : **Answered**
Chosen Option : **A**

Q.72 The area of Maharashtra is 3,08,000 km^2. The number of towns is 276 and villages is 41,833. Calculate the total length of all categories of the road according to the Lucknow plan.

Ans
✗ A. 2,99,597 km
✗ B. 1,79,597 km
✗ C. 1,89,597 km
✓ D. 1,99,597 km

Question ID : **486324363**
Status : **Answered**
Chosen Option : **C**

Q.73 Calculate the consistency index of a soil sample whose liquid limit, plastic limit and water content are found to be 52%, 20% and 40%, respectively.

Ans
✗ A. 20.0%
✓ B. 37.5%
✗ C. 57.5%
✗ D. 85.0%

Question ID : **486324315**
Status : **Answered**
Chosen Option : **C**

Q.74 According to IRC 37-2018, the following relationships may be used to estimate the resilient modulus of subgrade soil (MRS) for the CBR value greater than 5% is:

Ans
✓ A. 17.6 * $(CBR)^{0.64}$
✗ B. 10.0 * $(CBR)^{0.64}$
✗ C. 17.6 * (CBR)
✗ D. 10.0 * CBR

Question ID : **486324362**
Status : **Answered**
Chosen Option : **A**

Q.75 A 100 m tape is held 1.5 m out of line. What is the true length?

Ans
✓ A. 99.989 m
✗ B. 89.989 m
✗ C. 79.989 m
✗ D. 69.989 m

Question ID : **486324369**
Status : **Answered**
Chosen Option : **B**

Q.76 Which of following components consists of a prism with a sighting slit at the top and the prism magnifies and erects the inverted graduations?

Ans
✗ A. Compass box
✗ B. Graduated ring
✓ C. Object vane
✗ D. Pivot

Question ID : **486324368**
Status : **Answered**
Chosen Option : **C**

Q.77 Which of the following is NOT a primary air pollutant?

Ans
✗ A. Halogen compound
✗ B. Sulphur dioxide
✗ C. Nitrogen oxide
✓ D. Formaldehyde

Question ID : **486324354**
Status : **Answered**
Chosen Option : **D**

Q.78 Determine the capacity of a single-lane (unidirectional) road of a rural highway in India for a design speed of 50 km/h. The average length of the car can be taken as 5 m. The braking time was taken as 2.5 seconds and the co-efficient of friction was assumed to be 0.5.

Ans
✓ A. 840 vehicles per hour per lane
✗ B. 720 vehicles per hour per lane
✗ C. 500 vehicles per hour per lane
✗ D. 635 vehicles per hour per lane

Question ID : **486324364**
Status : **Answered**
Chosen Option : **A**

Q.79 What is the type of Steel with a carbon content between 0.70 to 1.5%?

Ans
✓ A. High carbon steel
✗ B. Medium carbon steel
✗ C. Alloy steel
✗ D. Low carbon steel

Question ID : **486324301**
Status : **Answered**
Chosen Option : **B**

Q.80 Which of the following non-modular sizes of bricks is available for use as per IS1077.1992?

Ans
✗ A. $230 \times 110 \times 110\ mm^3$
✗ B. $190 \times 90 \times 40\ mm^3$
✗ C. $190 \times 90 \times 90\ mm^3$
✓ D. $230 \times 110 \times 70\ mm^3$

Question ID : **486324297**
Status : **Answered**
Chosen Option : **A**

Q.81 Calculate the horizontal force at the lowest point of a cable whose supports are at the same level. Take maximum tension force in the cable at the vicinity of support 56.5 kN and vertical support reaction at A is 45 kN.

Ans
✗ A. 22.58 kN
✗ B. 36.86 kN
✓ C. 34.16 kN
✗ D. 46.78 kN

Question ID : **486324293**
Status : **Answered**
Chosen Option : **B**

Q.82 Which of the following type of failure in tension members is characterised by the tearing out of a segment of material at the end of a member for certain connection configurations and in coped beams?

Ans
✗ A. Torsional buckling failure
✗ B. Net section failure
✓ C. Block shear failure
✗ D. Gross section failure

Question ID : **486324309**
Status : **Answered**
Chosen Option : **C**

Q.83 What are the dimensions of the modified Class A evaporation pan classified by IS: 5973-1970?

Ans
✓ A. 1220 mm diameter and 255 mm depth
✗ B. 1320 mm diameter and 155 mm depth
✗ C. 1520 mm diameter and 355 mm depth
✗ D. 1020 mm diameter and 225 mm depth

Question ID : **486324335**
Status : **Answered**
Chosen Option : **C**

Q.84 Structural steel forms neck before it breaks. Neck formation starts:

Ans
✓ A. at ultimate strength
✗ B. before limits of proportionality
✗ C. before ultimate strength
✗ D. after yield strength

Question ID : **486324289**
Status : **Answered**
Chosen Option : **C**

Q.85 As per IS 800 : 2007, the shear lag factor(K4) used to calculate the effective net area of a tension member is equal to _____ for the number of bolts less than or equal to 2.

Ans
✗ A. 0.90
✗ B. 0.1
✗ C. 0.25
✓ D. 0.60

Question ID : **486324308**
Status : **Answered**
Chosen Option : **A**

Q.86 Which of following is defined as the ratio between the water that reaches a farm or field and that diverted from the irrigation water source?

Ans
✗ A. Storage efficiency
✓ B. Water conveyance efficiency
✗ C. Water distribution efficiency
✗ D. Water use efficiency

Question ID : **486324341**
Status : **Answered**
Chosen Option : **D**

Q.87 Which of the following is the correct Noise Standards Recommended by CPCB (Central Pollution Control Board) Committee?

Ans
✗ A. 75 dB in residential area at day time
✓ B. 75 dB in industrial area at day time
✗ C. 75 dB in silence zone area at night time
✗ D. 75 dB in residential area at night time

Question ID : **486324356**
Status : **Answered**
Chosen Option : **A**

Q.88 When the body is cut into two halves, the surface between both the sections was curved. The force distribution on the body is:

Ans
✗ A. uniform
✗ B. coplanar
✓ C. continuous
✗ D. non-uniform

Question ID : **486324281**
Status : **Answered**
Chosen Option : **D**

Q.89 Choose the correct statement.

Statement A: Fossil fuel burning comes under natural pollution.
Statement B: Photochemical oxidation of terpenes comes under natural pollution.

Ans
✗ A. Both statements A and B are incorrect.
✓ B. Both statements A and B are correct.
✗ C. Only statement B is correct.
✗ D. Only statement A is correct.

Question ID : **486324352**
Status : **Answered**
Chosen Option : **B**

Q.90 Calculate the tensile strength due to gross yielding of an angle ISA 150 × 150 × 10mm, made of Fe410 grade steel. Take, partial safety factor as 1.1 and gross section area (Ag) = 2903 mm^2.

Ans
✗ A. 449.47 kN
✗ B. 789.44 kN
✗ C. 524.98 kN
✓ D. 659.77 kN

Question ID : **486324311**
Status : **Answered**
Chosen Option : **B**

Section : **Quantitative Aptitude and Logical Ability**

Q.1 A cuboidal vessel 14 cm long and 7 cm wide holds water of 735 cc. If it is emptied into a vessel 15 cm long and 5 cm wide, what will be the difference between the heights of the vessels (in cm)?

Ans
✔ A. 2.3
✘ B. 3.4
✘ C. 2.6
✘ D. 3.1

Question ID : **486324380**
Status : **Answered**
Chosen Option : **C**

Q.2 Among the following statements, two are related in such a way that both can be true but both cannot be false. Which are those two statements?

Statement I: All wizards are wise
Statement II: Some wizards are wise
Statement III: No wizard is wise
Statement IV: Some wizards are not wise

Ans
✔ A. Statement II and IV
✘ B. Statement III and IV
✘ C. Statement II and III
✘ D. Statement I and II

Question ID : **486324383**
Status : **Answered**
Chosen Option : **A**

Q.3 Some friends have gone to a stadium to watch a football match. The square stadium only has one row on each side. Karvi is facing south watching her favourite player score a goal. Anubha is sitting directly opposite Karvi but to the south-west of Isha, who is exactly to the east of Gauri. Sanvi is sitting to the south-east of Isha. In which direction of Gauri is Sanvi?

Ans
✔ A. South-east
✘ B. South
✘ C. North
✘ D. North-west

Question ID : **486324385**
Status : **Answered**
Chosen Option : **D**

Q.4 What is the average of all two-digit prime numbers where the units digit is 1 or 7? (Correct to two decimal places)

Ans
✘ A. 44.8
✘ B. 49
✘ C. 43.4
✔ D. 48

Question ID : **486324372**
Status : **Answered**
Chosen Option : **A**

Q.5 N is the daughter of A and S. S is the wife of A. X is the grandmother of N. G is the daughter of N and J. How is J related to A?

Ans
✔ A. Son-in-law
✘ B. Daughter-in-law
✘ C. Brother-in-law
✘ D. Granddaughter-in-law

Question ID : **486324386**
Status : **Answered**
Chosen Option : **A**

Q.6 In a certain code language, 'MANGO' is written as 'QIPCO', and 'APPLE' is written as 'FNRRC'. How will 'BANANA' be written in that language?

Ans
✘ A. CBCHCG
✔ B. CPCPCD
✘ C. CBCHCE
✘ D. CPGPCE

Question ID : **486324384**
Status : **Answered**
Chosen Option : **C**

Q.7 At present Chandra is 48 years old and Dheeraj is 72 years old. How many years ago was the ratio of their ages 3 : 5?

Ans
✘ A. 15 years
✔ B. 12 years
✘ C. 11 years
✘ D. 10 years

Question ID : **486324376**
Status : **Answered**
Chosen Option : **B**

Q.8 If the interest on a sum of ₹12,500 is being compounded annually at 6% per annum, then what is the period for which the compound interest is ₹1,147.50?

Ans
✘ A. 12 months
✘ B. 24 months
✔ C. 18 months
✘ D. 15 months

Question ID : **486324377**
Status : **Answered**
Chosen Option : **C**

Q.9 Two trains of lengths 200 m and 400 m run on parallel lines. When they run in the same direction, it will take 30 seconds to cross each other and when they travel in opposite directions, it will take 6 seconds. What are the speeds (in km/h) of the two trains, respectively?

Ans
✘ A. 280, 140
✘ B. 190, 260
✘ C. 184, 144
✔ D. 216, 144

Question ID : **486324378**
Status : **Answered**
Chosen Option : **D**

Q.10 One Assertion and two Reasons are given. Read the Assertion and choose the correct Reason(s).

Assertion:
Many species of birds are on the verge of extinction, despite the efforts of environmentalists to conserve these species.

Reasons:
I. Regardless of the efforts to conserve birds, all species would become extinct in due time.
II. Human activities of exploitation of the environment are having an adverse effect on the flora and fauna.

Ans
✔ A. Only II is the reason
✘ B. Only I is the reason
✘ C. Neither I nor II is the reason
✘ D. Both I and II are the reasons

Question ID : **486324390**
Status : **Answered**
Chosen Option : **D**

Q.11 Simplify $(1^3 + 2^3 + 3^3 + 4^3)^{-\frac{3}{2}} \div (0.125)^{\frac{2}{3}} \times (625)^{\frac{1}{4}}$.

Ans
✘ A. 0.2
✘ B. 0.1
✘ C. 0.01
✔ D. 0.02

Question ID : **486324371**
Status : **Answered**
Chosen Option : **A**

Q.12 Karan ranks 26th from the top and 23rd from the bottom in the Science examination in his class. How many students are there in the class?

Ans
✘ A. 51
✘ B. 50
✘ C. 49
✔ D. 48

Question ID : **486324382**
Status : **Answered**
Chosen Option : **D**

Q.13 Riya purchased a sewing machine for ₹5,000. She marked it 15% higher than the cost price. She offered a discount of 20%. What is the selling price of the sewing machine?

Ans
✘ A. ₹5,135
✘ B. ₹5,200
✔ C. ₹4,600
✘ D. ₹4,850

Question ID : **486324375**
Status : **Answered**
Chosen Option : **C**

Q.14 A statement is given followed by two courses of action numbered I and II. Assuming everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Statement:
Because of the burning of nearby crops, there is a sharp decline in the air quality above the metropolitan city.

Courses of Action:
I. The government should implement odd and even method for car pool.
II. The government should offer alternate methods to remove leftover crops.

Ans
✗ A. Either I or II follow
✗ B. Only I follows
✗ C. Both I and II follow
✓ D. Only II follows

Question ID : **486324389**
Status : **Answered**
Chosen Option : **C**

Q.15 A, B, C and D are sitting around a square table facing towards the centre. A is facing north, and C is facing east. If D is sitting in front of A, and B is sitting in front of C, in which direction is B facing?

Ans
✗ A. East
✗ B. North
✗ C. South
✓ D. West

Question ID : **486324381**
Status : **Answered**
Chosen Option : **D**

Q.16 If 80% of A is 25% more than B, then by what per cent is B less than A?

Ans
✗ A. 35%
✗ B. 40%
✓ C. 36%
✗ D. 30%

Question ID : **486324373**
Status : **Answered**
Chosen Option : **C**

Q.17 A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

Question:
Where is box 2 placed?

Statement-I: Five boxes 1, 2, 3, 4, 5 are placed on top of each other such that every alternate number is an odd number. The box below the topmost box has a number greater than that of the box below the middle one.
Statement-II: Five boxes 1, 2, 3, 4, 5 are placed on top of each other such that every alternate number is an odd number.

Ans
✗ A. Statement-II alone is sufficient, while Statement-I alone is not sufficient
✗ B. Both Statement-I and Statement-II together are sufficient
✓ C. Statement-I alone is sufficient, while Statement-II alone is not sufficient
✗ D. Either Statement-I or Statement-II is sufficient

Question ID : **486324387**
Status : **Answered**
Chosen Option : **C**

Q.18 Amol sells furniture to Rajesh making a profit of 14%, Rajesh sells it to Vinay making a profit of 9%. Vinay buys the furniture for ₹1,32,000. What is the cost price for Amol (approx.)?

Ans
✗ A. ₹98,999
✗ B. ₹1,11,743
✓ C. ₹1,06,229
✗ D. ₹1,12,328

Question ID : **486324374**
Status : **Answered**
Chosen Option : **C**

Q.19 X and Y can finish a work in 6 days and 9 days, respectively. If they work on alternate days, how long (in days) will it take for them to finish the entire work?

Ans
✗ A. 6
✗ B. 4
✓ C. 7
✗ D. 5

Question ID : **486324379**
Status : **Answered**
Chosen Option : **C**

Q.20 Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the one that is different.

Ans
✗ A. BCH
✗ B. ACA
✓ C. DCM
✗ D. CCA

Question ID : **486324388**
Status : **Answered**
Chosen Option : **D**

Section : **General English**

Q.1 Select the most appropriate option that can substitute the underlined words in the given sentence.

Reetu and Meetu can't live in peace; they are always <u>reviving their old and forgotten quarrels.</u>

Ans
✓ A. ripping up old sores
✗ B. in an uphill fight
✗ C. fighting to the finish
✗ D. in a straight fight

Question ID : **486324394**
Status : **Answered**
Chosen Option : **A**

Q.2 Select the most appropriate conjunction to fill in the blank.

They wanted to reach early _____ got late because of the Delhi traffic.

Ans
✔ A. but
✘ B. so
✘ C. while
✘ D. when

Question ID : **486324391**
Status : **Answered**
Chosen Option : **A**

Q.3 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

P) The exact causes of narcissistic personality disorder among the young ones are unknown, but childhood abuse and neglect may be possible factors involved in its formation.
Q) People with narcissistic personality disorder show a grandiose sense of self-importance, are consumed by fantasies of unlimited success, power, brilliance, beauty or ideal love, and are extremely sensitive to criticism, among other things.
R) Younger people and men seem to be most affected.
S) The Diagnostic and Statistical Manual of Mental Disorders describes narcissistic personality disorder as 'a pervasive pattern of grandiosity, need for admiration, and lack of empathy that begins by early adulthood and is present in a variety of contexts'.

Ans
✘ A. SPQR
✘ B. RSPQ
✔ C. SQRP
✘ D. RQSP

Question ID : **486324398**
Status : **Answered**
Chosen Option : **A**

Q.4 Select the most appropriate synonym of the given word.

Nefarious

Ans
✘ A. Shapeless
✔ B. Wicked
✘ C. Non-entity
✘ D. Negative

Question ID : **486324396**
Status : **Answered**
Chosen Option : **C**

Q.5 Select the most appropriate synonym of the given word.

Unwarranted

Ans
✔ A. Unauthorised
✘ B. Undesirable
✘ C. Unmanageable
✘ D. Unwieldy

Question ID : **486324395**
Status : **Answered**
Chosen Option : **A**

Q.6 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

P) The main and brightest ring extends from the halo boundary out to about 128,940 kilometres (80,000 miles) or just inside the orbit of Adrastea.
Q) The innermost halo ring is toroidal in shape and extends radially from about 92,000 kilometres (57,000 miles) to about 122,500 kilometres (76,000 miles) from Jupiter's centre.
R) It is formed as fine particles of dust from the main ring's inner boundary 'bloom' outward as they fall toward the planet.
S) Close to the orbit of Metis, the main ring's brightness decreases.

Ans
✔ A. QRPS
✘ B. PRQS
✘ C. SRQP
✘ D. QPRS

Question ID : **486324397**
Status : **Answered**
Chosen Option : **D**

Q.7 Select the grammatically correct sentence.

Ans
✘ A. Have I found the way I would have reached on time.
✘ B. Have I found the way I will have reached on time.
✔ C. Had I found the way I would have reached on time.
✘ D. Have I found the way I should not have reached on time.

Question ID : **486324400**
Status : **Answered**
Chosen Option : **A**

Q.8 Sentences of a paragraph are given below. While the first and the last sentences (S1 and S5) are in the correct order, the sentences in between are jumbled up. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

S1: The Indian Cobra is the common name for members of the family of venomous snakes.
Q: Obviously, the best prevention is to avoid getting bitten.
R: The hoods are created by the extension of the ribs behind the cobras' heads.
S: Cobras are recognised by the hoods that they flare when angry or disturbed.
S5: This is facilitated by the fact that humans are not the natural prey of any venomous snake.

Ans
✘ A. QRS
✘ B. RQS
✔ C. SRQ
✘ D. QSR

Question ID : **486324399**
Status : **Answered**
Chosen Option : **D**

Q.9 Select the most appropriate preposition to fill in the blank.

Never put off _____ tomorrow what you can do today.

Ans
✘ A. of
✔ B. till
✘ C. at
✘ D. on

Question ID : **486324392**
Status : **Answered**
Chosen Option : **D**

Q.10 Select the most appropriate meaning of the given idiom.

A utopian scheme

Ans
✔ A. An unrealistic yet a good plan
✘ B. A realistic and bad plan
✘ C. Adapting to new situations
✘ D. Giving fair chance proposal

Question ID : **486324393**
Status : **Answered**
Chosen Option : **A**

Section : **General Awareness**

Q.1 Which edition of the International Telemedicine Conference at Amrita Hospital, Kochi was hosted by Telemedicine Society of India (TSI) and Kerala Chapter in November 2022?

Ans
✘ A. 19^{th}
✔ B. 18^{th}
✘ C. 20^{th}
✘ D. 17^{th}

Question ID : **486324401**
Status : **Answered**
Chosen Option : **D**

Q.2 When was Chandra Shekhar Azad killed in a shooting encounter with the police in a public park, later renamed Azad Park, at Allahabad?

Ans
✘ A. 21 April 1930
✘ B. 15 March 1931
✘ C. 20 February 1930
✔ D. 27 February 1931

Question ID : **486324406**
Status : **Answered**
Chosen Option : **B**

Q.3 Who built the Lakshmana temple of Khajuraho, dedicated to Vishnu, in 954 A.D?

Ans
✔ A. Chandela kings
✘ B. Pallava kings
✘ C. Rashtrakuta kings
✘ D. Chola kings

Question ID : **486324407**
Status : **Answered**
Chosen Option : **B**

Q.4 The Government of India approved the New India Literacy Programme scheme for the fiscal years 2022 to _____ in February 2022.

Ans
✘ A. 2024
✘ B. 2026
✔ C. 2027
✘ D. 2025

Question ID : **486324403**
Status : **Answered**
Chosen Option : **C**

Q.5 Which country was defeated by India to win the SAFF U-17 Championship title in the final in September 2022, at the Racecourse International Stadium in Colombo, Sri Lanka?

Ans
✗ A. Bhutan
✗ B. Sri Lanka
✗ C. Bangladesh
✓ D. Nepal

Question ID : **486324404**
Status : **Answered**
Chosen Option : **B**

Q.6 As per the Crime in India-2021 report of the National Crime Records Bureau (NCRB), the crime rate registered per lakh population in India has decreased from 487.8 in 2020 to _____ in 2021.

Ans
✗ A. 425.9
✓ B. 445.9
✗ C. 435.9
✗ D. 415.9

Question ID : **486324402**
Status : **Answered**
Chosen Option : **A**

Q.7 ICICI bank launched a unique self-service delivery facility called _____ in January 2020.

Ans
✗ A. sBox
✗ B. tBox
✗ C. kBox
✓ D. iBox

Question ID : **486324411**
Status : **Answered**
Chosen Option : **A**

Q.8 Which of the following space telescopes has the ability to detect light wavelengths into the mid-infrared range?

Ans
✓ A. James Webb Space Telescope
✗ B. Kepler Telescope
✗ C. Hubble Space Telescope
✗ D. Nuclear Spectroscopic Telescope Array

Question ID : **486324415**
Status : **Answered**
Chosen Option : **D**

Q.9 Parliament has recently enacted the Government of National Capital Territory of Delhi (Amendment) Act, 2021. It amends certain provisions in the Government of National Capital Territory of Delhi Act, 1991, relating to powers and responsibilities of the Legislative Assembly and the _____.

Ans
✗ A. Governor
✓ B. Lieutenant Governor
✗ C. Chief Minister
✗ D. Deputy Chief Minister

Question ID : **486324420**
Status : **Answered**
Chosen Option : **B**

Q.10 Article 239AA of the Constitution of India granted special status to _____ among Union Territories in the year 1991 through the 69th Constitutional Amendment by the Parliament.

Ans
✓ A. Delhi
✗ B. Jammu and Kashmir
✗ C. Pondicherry
✗ D. Chandigarh

Question ID : **486324418**
Status : **Answered**
Chosen Option : **A**

Q.11 Which of the following languages belong to the Indo-Aryan family?

Ans
✓ A. Bengali
✗ B. Kannada
✗ C. Malayalam
✗ D. Tamil

Question ID : **486324413**
Status : **Answered**
Chosen Option : **D**

Q.12 The Supreme Court declared Transgender as the "Third Gender". Self-determination of identity has been held to be an essential facet of which article?

Ans
✗ A. Article 14
✓ B. Article 21
✗ C. Article 19
✗ D. Article 22

Question ID : **486324419**
Status : **Answered**
Chosen Option : **B**

Q.13 Uranium deposits do NOT occur in which of the following places?

Ans
✗ A. Gaya district of Bihar
✓ B. Raigad district of Maharashtra
✗ C. Saharanpur district of Uttar Pradesh
✗ D. Singhbhum and Hazaribagh districts of Jharkhand

Question ID : **486324414**
Status : **Answered**
Chosen Option : **C**

Q.14 Which of the following hills are located in the north-eastern Indian states?

Ans
✗ A. Devikulam hills
✓ B. Patkai hills
✗ C. Kolli hills
✗ D. Olasuni hills

Question ID : **486324412**
Status : **Answered**
Chosen Option : **B**

Q.15 The 'Octave' festival was initiated in 2006 with the objective of promoting and showcasing folk music and choir singing along with other art and cultural heritage of which of the following states/regions?

Ans
✗ A. Andaman and Nicobar Islands
✗ B. Puducherry
✓ C. North Eastern states
✗ D. Goa

Question ID : **486324409**
Status : **Answered**
Chosen Option : **C**

Q.16 According to Archimedes' principle, the buoyant force acting on an immersed body in water is equal to:

Ans
✗ A. the relative density of the body
✗ B. the weight of the body
✓ C. the weight of the fluid displaced by the object
✗ D. the mass of the body

Question ID : **486324416**
Status : **Answered**
Chosen Option : **C**

Q.17 Which of the following statement(s) is/are correct for Balance of Payments (BOP) accounts?

I. The Current Account of BOP includes Unilateral Transfers.
II. The Capital Account of BOP includes export and import of visible goods.

Ans
✗ A. Neither I nor II
✓ B. Only I
✗ C. Both I and II
✗ D. Only II

Question ID : **486324410**
Status : **Answered**
Chosen Option : **D**

Q.18 Which of the following options is NOT true for the Pala empire, which dominated eastern India till the middle of the ninth century?

Ans
✗ A. The Palas gave grants to a large number of Brahmins from north India.
✗ B. The Pala rulers had cultural ties with Tibet.
✓ C. The Palas were hostile to the Sailendra dynasty, ruling overseas.
✗ D. The Palas extended their patronage to Buddhism, Shaivism and Vaishnavism.

Question ID : **486324405**
Status : **Answered**
Chosen Option : **A**

Q.19 Which of the following is NOT the correct pair of polymer and monomer?

Ans
✔ A. Buna-N – 1,3-Butadiene and Styrene
✘ B. Bakelite – Phenol and Formaldehyde
✘ C. Glyptal – Ethylene glycol and Phthalic acid
✘ D. Nylon 6 – Caprolactam

Question ID : **486324417**
Status : **Answered**
Chosen Option : **C**

Q.20 Ponung and Tapu are the tribal dance forms of _____.

Ans
✘ A. Andhra Pradesh
✔ B. Arunachal Pradesh
✘ C. Himachal Pradesh
✘ D. Madhya Pradesh

Question ID : **486324408**
Status : **Answered**
Chosen Option : **B**