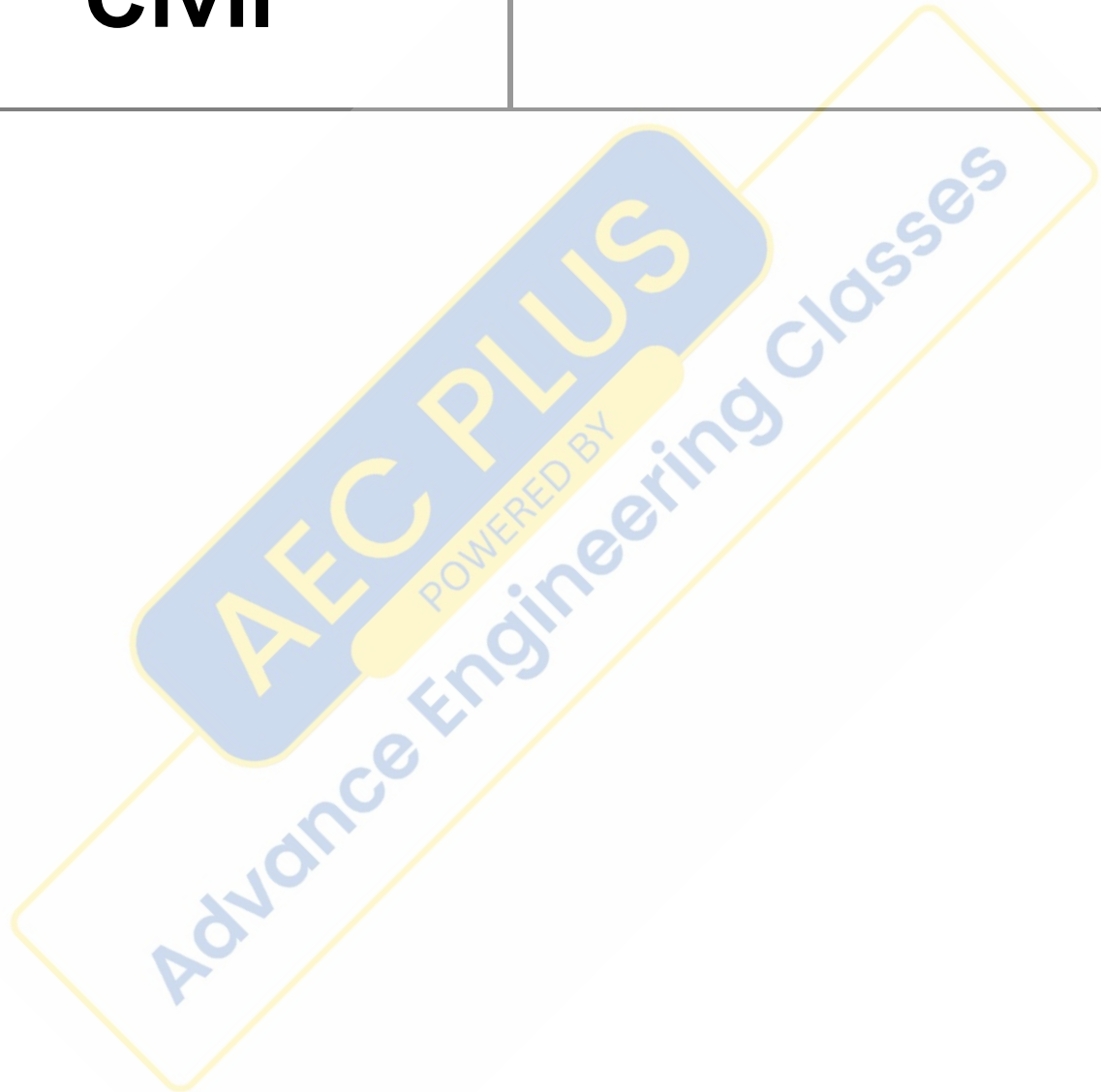


UPMRC JE Civil

Previous Year Paper
2nd Jan 2023





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	1:30 PM - 3:30 PM
Subject	Jr Engineer Civil

Section : Domain Knowledge

Q.1 Which of the following methods is used to measure the pH value of water?

- Ans A. Electro magnetic method
 B. Electrometric method
 C. Reverse osmosis method
 D. Distillation method

Question ID : 486324786
Status : Answered
Chosen Option : B

Q.2 Soils, in which rate of rock decomposition is greater than the rate of erosion or transportation, is best known as:

- Ans A. alluvial soil
 B. residual soil
 C. lacustrine soil
 D. transported soil

Question ID : 486324738
Status : Answered
Chosen Option : B

Q.3 Which of the following compaction equipment is predominantly used to compact granular soils of shallow depth?

- Ans A. Smooth wheel roller
 B. Pneumatic – tyred rollers
 C. Sheep foot roller
 D. Vibratory rollers

Question ID : 486324747
Status : Answered
Chosen Option : A

Q.4 Sand dunes are predominantly formed by:

- Ans A. marine soils
 B. alluvial soils
 C. aeolian soil deposits
 D. glacial soils

Question ID : 486324742
Status : Answered
Chosen Option : C

Q.5 In Bernoulli's equation, the total energy of a flowing liquid per unit weight is expressed as:

- Ans A. $(v^2/2g)$
 B. $Z + h + (v^2/2g)$
 C. $Z - h - (v^2/2g)$
 D. $Z^2 + h^2 + (v^2/2g)$

Question ID : 486324766
Status : Answered
Chosen Option : B

Q.6 Which of the following soil would exhibit the highest shrinkage swelling potential?

- Ans A. Clay
 B. Gravels
 C. Silts
 D. Sands

Question ID : 486324744
Status : Answered
Chosen Option : A

Q.7 The loss of head at the front of a pipe can be expressed as:

- Ans A. $(kv^2/2lg)$
 B. $5 * (v^2/2mg)$
 C. $0.7 * (kv^2/2lg)$
 D. $0.5 * (v^2/2g)$

Question ID : 486324763
Status : Answered
Chosen Option : D

Q.8 If the time required to close a valve of a pipe is greater than $2L/C$ (where L is the length of the pipe and C is the velocity of the pressure wave produced due to water hammer), then the valve closure is said to be:

- Ans
- A. zero
 - B. constant
 - C. sudden
 - D. gradual

Question ID : 486324764
Status : Answered
Chosen Option : D

Q.9 A pipe through which water is flowing has diameter 200 mm and 100 mm at C/S 1 and 2, respectively. The velocity of water at Section 1 (v_1) is 4 m/s. The velocity heads at Sections 1 and 2 are determined as:

- Ans
- A. 0.269 m and 33.04 m, respectively
 - B. 0.815 m and 83.04 m, respectively
 - C. 0.50 m and 50.04 m, respectively
 - D. 0.25 m and 100.09 m, respectively

Question ID : 486324771
Status : Answered
Chosen Option : B

Q.10 The data obtained from the process of levelling is useful _____.

- Ans
- A. to work out the elevations of the given points relative to each other
 - B. to find included angles
 - C. to determine the height of instruments
 - D. to find linear and angular measurements

Question ID : 486324731
Status : Answered
Chosen Option : C

Q.11 The empirical formula which is NOT used in calculating the fire demand of a city is:

- Ans
- A. Kuichling's formula
 - B. Cutter's formula
 - C. Buston's formula
 - D. Freeman's formula

Question ID : 486324778
Status : Answered
Chosen Option : B

Q.12 The optimum water content of "fat clay" generally lies between:

- Ans A. 5 and 10%
 B. 15 and 20%
 C. 10 and 15%
 D. 20 and 25%

Question ID : 486324749
Status : Answered
Chosen Option : B

Q.13 The classification of the system of sanitation which does NOT come under the water carriage system is the:

- Ans A. combined system
 B. partially separate system
 C. separate system
 D. conservancy system

Question ID : 486324790
Status : Answered
Chosen Option : D

Q.14 The cross-section method of contouring is useful for the survey of _____.

- Ans A. roads, railways and canals
 B. hill areas
 C. small open areas
 D. small closed areas

Question ID : 486324735
Status : Answered
Chosen Option : A

Q.15 In case of a circular sewer section, when it is running half full, its velocity will be:

- Ans A. 0.75 times the velocity when it was running full
 B. 0.50 times the velocity when it was running full
 C. equal to the velocity when it was running full
 D. 0.25 times the velocity when it was running full

Question ID : 486324787
Status : Answered
Chosen Option : D

Q.16 Hard board is an example of:

- Ans A. particle board
 B. block board
 C. chip board
 D. fibre board

Question ID : 486324714
Status : Answered
Chosen Option : B

Q.17 Float arrangement is provided in case of:

- Ans
- A. plate valves
 - B. pressure relief valves
 - C. non return valves
 - D. air relief valves

Question ID : 486324788
Status : Answered
Chosen Option : D

Q.18 In a retaining wall retaining dry, cohesionless soil, the angle between the failure planes (slip planes) and horizontal, under active state, would be:

- Ans
- A. $0.66 \phi'$
 - B. ϕ'
 - C. $45^\circ + (\phi'/2)$
 - D. $0.33 \phi'$

Question ID : 486324753
Status : Answered
Chosen Option : C

Q.19 The diameter of a pipe at Sections 1 and 2 is 10 cm and 15 cm, respectively. What is the discharge through the pipe if the velocity of water flowing through the pipe at Section 1 is 5 m/s?

- Ans
- A. $0.0628 \text{ m}^3/\text{s}$
 - B. $0.1139 \text{ m}^3/\text{s}$
 - C. $0.03927 \text{ m}^3/\text{s}$
 - D. $0.1767 \text{ m}^3/\text{s}$

Question ID : 486324768
Status : Answered
Chosen Option : C

Q.20 Which of the following is NOT an objective of sewage disposal?

- Ans
- A. To elevate groundwater table level
 - B. To prevent breeding of mosquitoes
 - C. To dispose sewage after giving suitable treatment
 - D. To prevent decomposition of wastage

Question ID : 486324776
Status : Answered
Chosen Option : A

Q.21 Which principle of surveying is useful to prevent accumulation of errors?

- Ans A. Whole to part
 B. Part to whole
 C. Right to left
 D. Left to right

Question ID : 486324718
Status : Answered
Chosen Option : A

Q.22 If a closed traverse consists of five sides, then the summation of all the included angles must be _____.

- Ans A. 540°
 B. 720°
 C. 900°
 D. 360°

Question ID : 486324726
Status : Answered
Chosen Option : A

Q.23 Which of the following statements is related to the water carriage system of sanitation?

- Ans A. No chance of putrifaction
 B. Large area of land is required for disposal of untreated sewage
 C. Lot of foul smell
 D. Risk of spread of an epidemic

Question ID : 486324782
Status : Answered
Chosen Option : A

Q.24 Read the given statements and select the most appropriate option regarding refractoriness.

Statement 1: Refractoriness denotes the ability of a material to withstand prolonged action of high temperature without melting or losing shape.

Statement 2: Materials resisting prolonged temperatures of 1580°C or more are known as refractory.

- Ans A. Both the statements are true
 B. Statement 1 is true, but statement 2 is false
 C. Both the statements are false
 D. Statement 1 is false, but statement 2 is true

Question ID : 486324703
Status : Not Answered
Chosen Option : --

Q.25 The phenomena of "Bulking of sand" would be most pronounced in:

- Ans A. coarse sand
 B. medium sand
 C. sandy gravel
 D. fine sand

Question ID : 486324746
Status : Answered
Chosen Option : D

Q.26 The density of the liquid _____ during most ordinary conditions of temperature, whereas the density of the gas _____ as the temperature changes.

- Ans A. increases; decreases
 B. is constant; changes
 C. changes; remains constant
 D. decreases; increases

Question ID : 486324755
Status : Answered
Chosen Option : D

Q.27 The RL of point B, which is on the ceiling, is 105.00 m and the foresight reading at B is 2.00 m. If the backsight reading at point A is 3.0 m at the floor, what is the RL of A?

- Ans A. 99.71 m
 B. 94.80 m
 C. 100.00 m
 D. 100.29 m

Question ID : 486324733
Status : Answered
Chosen Option : C

Q.28 If the magnetic bearing of the Sun at a place at noon in the Southern Hemisphere is 180° , the magnetic declination at that place is:

- Ans A. 0°
 B. 23° S
 C. 13° E
 D. 77° N

Question ID : 486324732
Status : Answered
Chosen Option : A

Q.29 Soil deposits, which are formed by landslides are called:

- Ans A. colluvium
 B. alluvial soils
 C. residual soils
 D. peats

Question ID : 486324736
Status : Answered
Chosen Option : A

Q.30 The defect observed as spongy swollen mass over the surface of burned bricks that is caused due to the presence of excess carbonaceous matter and sulphur in brick-clay is:

- Ans A. chuffs
 B. spots
 C. black core
 D. bloating

Question ID : 486324717
Status : Answered
Chosen Option : D

Q.31 Which survey line gives the details of offset?

- Ans A. Base line
 B. Chain line
 C. Tie line
 D. Main survey line

Question ID : 486324720
Status : Answered
Chosen Option : C

Q.32 The function of a reflux valve in a water distribution system is:

- Ans A. to maintain continuous flow of water
 B. to prevent the blockage of water in a pipeline
 C. to allow water to flow in one direction only
 D. to relieve high pressure of water in a pipeline

Question ID : 486324780
Status : Answered
Chosen Option : C

Q.33 Vorticity is _____ times the value of rotation.

- Ans A. 20
 B. 2
 C. 4
 D. 15.5

Question ID : 486324760
Status : Answered
Chosen Option : B

Q.34 In a water distribution system, hydrants are provided for:

- Ans A. storing purpose
 B. fire extinguishing purpose
 C. sampling purpose
 D. drinking purpose

Question ID : 486324789
Status : Answered
Chosen Option : B

Q.35 Most probable number is the unit to measure the:

- Ans A. hardness of water
 B. smell of water
 C. taste of water
 D. coliform bacterial density in water

Question ID : 486324785
Status : Answered
Chosen Option : D

Q.36 Which of the following factors does NOT significantly affect the compaction of soil?

- Ans A. Moisture content of soil
 B. Method of compaction
 C. Temperature
 D. Type of soil

Question ID : 486324745
Status : Answered
Chosen Option : C

Q.37 The type of levelling in which the level is set up at several suitable positions and staff readings are taken till the last sighted point is known as _____.

- Ans A. fly levelling
 B. differential levelling
 C. simple levelling
 D. profile levelling

Question ID : 486324734
Status : Answered
Chosen Option : D

Q.38 The pressure which is measured by using instrumentation, considering the atmosphere pressure as datum, is termed as:

- Ans
- A. absolute pressure
 - B. vacuum pressure
 - C. gauge pressure
 - D. maximum pressure

Question ID : 486324758
Status : Answered
Chosen Option : C

Q.39 If one of the angles in a triangle measures less than 30° , is it a well-defined triangle?

- Ans
- A. It should always be 60°
 - B. Yes
 - C. No
 - D. A triangle is always well-defined for any angle

Question ID : 486324719
Status : Answered
Chosen Option : C

Q.40 Weight density of a fluid is the ratio of _____.

- Ans
- A. specific volume to density
 - B. specific gravity to density
 - C. mass of the fluid to its volume
 - D. weight of the fluid to its volume

Question ID : 486324754
Status : Answered
Chosen Option : D

Q.41 In a water distribution system, the domestic water demand to be considered as per IS:1172-1963 is:

- Ans
- A. 100 litres/capita/day
 - B. 125 litres/capita/day
 - C. 115 litres/capita/day
 - D. 135 litres/capita/day

Question ID : 486324773
Status : Answered
Chosen Option : D

Q.42 The water distribution system which requires a large number of scour valves is the:

- Ans A. radial system
 B. grid iron system
 C. ring system
 D. dead end system

Question ID : 486324772
Status : Answered
Chosen Option : D

Q.43 In timber, the defects due to abnormal growth are:

- Ans A. warpage
 B. shakes, knots
 C. splitting
 D. excessive slope of grains

Question ID : 486324712
Status : Answered
Chosen Option : B

Q.44 For a normally consolidated coarse grained soil, the effective angle of internal friction was obtained as 30° . Its coefficient of lateral earth pressure at rest (K_0) would be nearest to:

- Ans A. 0.75
 B. 0.50
 C. 0.15
 D. 0.30

Question ID : 486324752
Status : Answered
Chosen Option : B

Q.45 In the method of working from whole to part, the main control point is located with:

- Ans A. lower precision
 B. randomly
 C. higher precision
 D. without measurement

Question ID : 486324721
Status : Answered
Chosen Option : C

Q.46 The resultant velocity of a fluid particle at (2, 1, 3) at time $t = 1$ for the velocity vector $4x^3i - 10x^2yj + 2tk$ is determined as (fluid flow) _____.

- Ans
- A. 253.24 units
 - B. 2561.21 units
 - C. 25.89 units
 - D. 51.26 units

Question ID : 486324769
Status : Not Answered
Chosen Option : --

Q.47 Which of the following statements is related to the conservancy system of sanitation?

- Ans
- A. Small area is required for the disposal of treated sludge
 - B. Less initial cost and high running cost
 - C. Labour force is negligibly small
 - D. No chance of putrefication

Question ID : 486324775
Status : Not Answered
Chosen Option : --

Q.48 Which of the following is a characteristic of contour?

- Ans
- A. A contour is not necessarily a closed curve.
 - B. Two contours of different elevations do not cross each other except in case of an overhanging cliff.
 - C. Contours have sharp turning.
 - D. A contour represents a ridge line if the concave side of the lower-value contour lies towards the higher-value contour.

Question ID : 486324730
Status : Answered
Chosen Option : B

Q.49 Which of the following statements regarding the common characteristics of building materials under stress is INCORRECT?

- Ans
- A. Stiff materials have a high modulus of elasticity permitting small deformation for a given load.
 - B. Brittle materials have high plasticity.
 - C. Ductile materials can be drawn out without necking down, the examples being copper and wrought iron.
 - D. Flexible materials on the other hand have low modulus of elasticity and bend considerably without breakdown.

Question ID : 486324705
Status : Answered
Chosen Option : B

Q.50 According to Pascal's law, the intensity of pressure of a static fluid at a point is _____ in all the directions.

- Ans
- A. unequal
 - B. zero
 - C. maximum
 - D. equal

Question ID : 486324756
Status : Answered
Chosen Option : D

Q.51 The theoretical detention time for a continuous flow settling tank in drinking water works will be:

- Ans
- A. Rate of flow of water / Capacity of the settling tank
 - B. Rate of flow of water / Flow area of cross section
 - C. Rate of flow of water / Depth of water in the settling tank
 - D. Capacity of the tank / Rate of flow of water

Question ID : 486324784
Status : Answered
Chosen Option : D

Q.52 Which of the following artificial stones is manufactured by blending silica soda with cement to provide fancy and ornamental flooring?

- Ans
- A. Garlic stone
 - B. Imperial stone
 - C. Ransom stone
 - D. Victoria stone

Question ID : 486324707
Status : Not Answered
Chosen Option : --

Q.53 The condition for the maximum discharge through a circular channel can be expressed as:

- Ans
- A. Depth = $0.95 \times$ Diameter of the circular channel
 - B. Depth = $95 \times$ Diameter of the circular channel
 - C. Depth = $5 \times$ Diameter of the circular channel
 - D. Diameter of the circular channel = $0.5 \times$ Depth

Question ID : 486324765
Status : Answered
Chosen Option : A

Q.54 The direct method of contouring is preferred:

- Ans
- A. when more accuracy is required
 - B. when less accuracy is required
 - C. for small areas and when more accuracy is required
 - D. when area is small

Question ID : 486324729
Status : Answered
Chosen Option : C

Q.55 The term used to indicate the sundry solid waste from offices, residences and other buildings, waste building materials, broken furniture, rags etc., is:

- Ans
- A. sullage
 - B. sewage
 - C. rubbish
 - D. garbage

Question ID : 486324781
Status : Answered
Chosen Option : C

Q.56 Density index is defined as:

- Ans
- A. ratio of bulk density to density
 - B. sum of density and bulk density
 - C. ratio of density to bulk density
 - D. product of density and bulk density

Question ID : 486324701
Status : Answered
Chosen Option : A

Q.57 Granite, Gabbro and Basalt are different types of:

- Ans
- A. igneous rock
 - B. sedimentary rock
 - C. cohesive soil
 - D. metamorphic rock

Question ID : 486324737
Status : Answered
Chosen Option : A

Q.58 A stream function is given by $\psi = 5x - 6y$. The direction of the resultant velocity at any point is determined as:

- Ans
- A. $49^\circ 48'$
 - B. $39^\circ 48'$
 - C. $19^\circ 48'$
 - D. $29^\circ 48'$

Question ID : 486324770
Status : Not Answered
Chosen Option : --

Q.59 The work saved by fitting an air vessel in a single-acting reciprocating pump is _____, while in case of a double-acting reciprocating pump, the work saved is _____.

- Ans
- A. 25%; 25%
 - B. 39.2%; 84.8%
 - C. 50%; 50%
 - D. 84.8%; 39.2%

Question ID : 486324767
Status : Answered
Chosen Option : C

Q.60 Which harmful substances in brick earth do not allow the clay to be mixed thoroughly, spoil the appearance of the brick and it may crack while working?

- Ans
- A. Lime
 - B. Iron pyrites
 - C. Alkalis
 - D. Pebbles, gravels and grits

Question ID : 486324715
Status : Answered
Chosen Option : D

Q.61 Which scale is used to read units, tens and hundreds?

- Ans
- A. Simple scale
 - B. Diagonal scale
 - C. Plain scale
 - D. Vernier scale

Question ID : 486324722
Status : Answered
Chosen Option : B

Q.62 Which of the following is NOT a physical weathering agent?

- Ans
- A. Climate change
 - B. Heavy rainfall
 - C. Acidic rain
 - D. Freeze - thaw cycle

Question ID : 486324743
Status : Answered
Chosen Option : C

Q.63 A closed traverse ABCD is running in anticlockwise direction. If the fore bearing of line AB is 120° and that of line BC is 55° , then the included angle B between line AB and line BC is

- Ans
- A. 50°
 - B. 230°
 - C. 115°
 - D. 20°

Question ID : 486324724
Status : Answered
Chosen Option : C

Q.64 Select the Chezy's formula from the given options.

- Ans
- A. $V = \sqrt{ckmi}$
 - B. $V = C\sqrt{mi}$
 - C. $V = Cim\sqrt{i}$
 - D. $V = Ckmi^2$

Question ID : 486324762
Status : Answered
Chosen Option : B

Q.65 Which of the following equations correctly represents the equation of zero air void line? (Symbols have their usual meanings)

- Ans
- A. $\rho_d = \frac{G\rho_w}{e + \frac{1}{G_s}}$
 - B. $\rho_d = \frac{\rho_w}{w + \frac{1}{G_s}}$
 - C. $\rho_d = \frac{\rho_w}{G_s + \frac{1}{e}}$
 - D. $\rho_d = \frac{\rho_w}{1 + e}$

Question ID : 486324748
Status : Answered
Chosen Option : B

Q.66 The true bearing of a line is $38^\circ 25' 50''$ and the magnetic declination at the place of observation is $3^\circ 00' 50''$ E on the date of observation. The magnetic bearing of the line is:

- Ans
- A. $32^\circ 20' 20''$
 - B. $41^\circ 26' 40''$
 - C. $32^\circ 00' 20''$
 - D. $35^\circ 25' 00''$

Question ID : 486324723
Status : Answered
Chosen Option : D

Q.67 Which of the following characteristics of good timber is INCORRECT?

- Ans
- A. Sweet smell and a shining fresh cut surface
 - B. When struck sonorous sound is produced
 - C. Compact medullary rays
 - D. Broader annual rings

Question ID : 486324709
Status : Answered
Chosen Option : D

Q.68 During an experimental investigation, the Poisson's ratio of soil was found to be 0.33. Assuming a plane strain condition, what would be the approximate value of the coefficient of earth pressure at rest?

- Ans
- A. 1.00
 - B. 0.66
 - C. 0.50
 - D. 0.33

Question ID : 486324741
Status : Answered
Chosen Option : C

Q.69 औद्योगिक नगरों में, पत्थरों को किस विलयन के अनुप्रयोग द्वारा संरक्षित किया जाता है?

- Ans
- A. CaCl_2
 - B. H_2SO_4
 - C. दाहक क्षार (caustic alkalis)
 - D. बैराइटा (baryta)

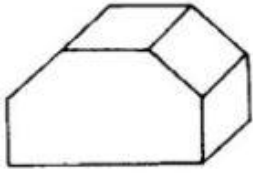
Question ID : 486324713
Status : Not Answered
Chosen Option : --

Q.70 A cohesive frictional soil has an effective cohesion of 20 kPa, the effective friction angle = 18° and a unit weight of 17 kN/m^3 . What would be the depth of the tension crack?

- Ans
- A. 5.76 m
 - B. 3.24 m
 - C. No cracks would develop
 - D. 1.18 m

Question ID : 486324750
Status : Answered
Chosen Option : B

Q.71 Identify the forms of brick shown in the figure.



- Ans
- A. Coping
 - B. Perforated
 - C. Bull nosed
 - D. Double cant

Question ID : 486324716
Status : Answered
Chosen Option : D

Q.72 A rough estimate of the quantity (A) of dynamite required in grams for blasting rocks is given by:

(Where, L = Length of line of least resistance.)

- Ans
- A. $\frac{L^3}{0.002}$
 - B. $\frac{L^2}{0.008}$
 - C. $\frac{L^2}{0.002}$
 - D. $\frac{L^3}{0.008}$

Question ID : 486324706
Status : Answered
Chosen Option : B

Q.73 Platinum cobalt scale is used to measure the:

- Ans
- A. taste of water
 - B. odour of water
 - C. colour of water
 - D. temperature of water

Question ID : 486324783
Status : Answered
Chosen Option : C

Q.74 The shearing strength of wood along the fibres is:

- Ans A. 10 to 30 N/mm²
 B. 6.5 to 14.5 N/mm²
 C. 2.5 to 3 N/mm²
 D. 20 to 30 N/mm²

Question ID : 486324711
Status : Answered
Chosen Option : D

Q.75 Which of the following options shows the relation between the fore bearing and the back bearing?

- Ans A. $BB = 180 \pm FB$
 B. $BB \geq 180 \pm FB$
 C. $BB = 180 + FB$
 D. $BB = 180 - FB$

Question ID : 486324727
Status : Answered
Chosen Option : A

Q.76 Which of the following statements regarding the kiln seasoning of timber is INCORRECT?

- Ans A. It is quite technical and expensive.
 B. Kiln seasoned timber is more amenable to attack of insects and fungi.
 C. It requires less stacking space.
 D. Wood is more thoroughly and evenly dried.

Question ID : 486324710
Status : Answered
Chosen Option : D

Q.77 The ability of a material to change its shape under load without cracking and to retain this shape after the load is removed is known as:

- Ans A. hardness
 B. plasticity
 C. brittleness
 D. elasticity

Question ID : 486324704
Status : Answered
Chosen Option : D

Q.78 With increase in compactive effort, the maximum dry density of soil:

- Ans A. increases
 B. shows irregular behaviour
 C. decreases
 D. remain constant

Question ID : 486324739
Status : Answered
Chosen Option : A

Q.79 Select the Darcy-Weisbach formula from the given options.

- Ans A. $h_f = (10fLv^2)/d^2 \cdot g$
 B. $h_f = (4fLv^2)/d \cdot 2g$
 C. $h_f = (0.5fkLv^2)/d \cdot 4g$
 D. $h_f = (2lfLv^2)/d \cdot 8g$

Question ID : 486324761
Status : Answered
Chosen Option : B

Q.80 Examination of turbidity of water comes under:

- Ans A. bacterial test
 B. biological test
 C. physical test
 D. chemical test

Question ID : 486324777
Status : Answered
Chosen Option : C

Q.81 Which method of calculating the RL of any point gives the complete check of back, fore and intermediate observations?

- Ans A. Method of contouring
 B. Rise and fall method
 C. Height of instrument method
 D. Method of fly levelling

Question ID : 486324728
Status : Answered
Chosen Option : B

Q.82 The coefficient of discharge in orifice for the external mouthpiece, the internal mouthpiece (running full), the internal mouthpiece (running free) and the convergent-divergent mouthpiece is:

- Ans
- A. 1, 0.5, 0.5 and 1, respectively
 - B. 0.85, 0.70, 0.50 and 1, respectively
 - C. 0.5, 1, 1 and 0.5, respectively
 - D. 1, 0.50, 0.70 and 0.85, respectively

Question ID : 486324759
Status : Answered
Chosen Option : B

Q.83 If in a standard proctor test, due to negligence, the number of blows given per layer was increased to 30, then approximately what would be the value of compactive effort in kN-m/m^3 ?

- Ans
- A. 709
 - B. 397
 - C. 591
 - D. 1105

Question ID : 486324751
Status : Not Answered
Chosen Option : --

Q.84 In the IS Light Compaction test, the number of blows given per layer of the soil is:

- Ans
- A. 15
 - B. 45
 - C. 25
 - D. 35

Question ID : 486324740
Status : Answered
Chosen Option : C

Q.85 Which of the following methods will NOT be used for forecasting the population of a city?

- Ans
- A. Master plan method
 - B. Statistical method
 - C. Comparative graphical method
 - D. Decreasing rate method

Question ID : 486324774
Status : Answered
Chosen Option : A

Q.86 Which classification of timber of commercial grading is based on dimensions and general appearance?

- Ans A. Grade D
 B. Grade B
 C. Grade A
 D. Grade C

Question ID : 486324708
Status : Not Answered
Chosen Option : --

Q.87 The relation 'The rate of increase of pressure in vertical direction = Weight density of the fluid at any point,' is applied to _____.

- Ans A. Newton's modified law
 B. hydrostatic law
 C. hydrothermic law
 D. hydrophobic law

Question ID : 486324757
Status : Answered
Chosen Option : B

Q.88 A closed traverse ABCD runs in clockwise direction. The included angle A can be calculated by:

- Ans A. $180^\circ - \text{FB of AB}$
 B. $\text{BB of DA} - \text{FB of AB}$
 C. $\text{FB of AB} - \text{BB of AD}$
 D. $90^\circ - \text{BB of AD}$

Question ID : 486324725
Status : Answered
Chosen Option : C

Q.89 A sluice valve is a/an:

- Ans A. pressure relief valve
 B. check valve
 C. gate valve
 D. air relief valve

Question ID : 486324779
Status : Answered
Chosen Option : C

Q.90 The ability of a material to conduct heat and is influenced by nature of material, its structure, porosity, character of pores and mean temperature at which heat exchange takes place is known as:

- Ans
- A. frost resistance
 - B. thermal capacity
 - C. heat conductivity
 - D. hygroscopicity

Question ID : 486324702
Status : Answered
Chosen Option : C

Section : Quantitative Aptitude and Logical Ability

Q.1 Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

CFDB : YWUX :: GJHF : ?

- Ans
- A. USQU
 - B. USRT
 - C. USQT
 - D. USTQ

Question ID : 486324807
Status : Answered
Chosen Option : C

Q.2 L, M, N, O, P, R, S और T आठ व्यक्ति एक आठ-तल वाली इमारत में रहते हैं। इमारत के भूतल की संख्या 1 है, पहले तल की संख्या 2 है, और इसी प्रकार आगे भी। इन आठ व्यक्तियों के अपने-अपने तलों पर अलग-अलग फूल हैं, जिनके नाम हैं, ट्यूलिप, लिली, गुलाब, चमेली, डेज़ी, आर्किड, पॉपी और डैफोडिल। L किसी सम संख्या वाले तल पर रहता है, जो तीसरे तल से ऊपर है, और L को आर्किड, चमेली या डैफोडिल पसंद नहीं हैं। L के ऊपर रहने वाले व्यक्तियों की सटीक संख्या, T के नीचे रहने वालों की संख्या के बराबर है। T, P के तल से दो तल नीचे रहता है, और P को लिली पसंद है। R, L के तल के ऊपर रहता है। N और M क्रमशः शीर्ष तल और भूतल पर रहते हैं, और क्रमशः डैफोडिल और ट्यूलिप पसंद करते हैं। जो व्यक्ति 7वें तल पर रहता है, उसे आर्किड पसंद है। T तीसरे तल पर रहता है और T का पसंदीदा फूल गुलाब है। S, M के तल से तीन तल ऊपर रहता है, और S का पसंदीदा फूल पॉपी है।

O किस तल पर रहता है?

- Ans
- A. छठे
 - B. पांचवे
 - C. तीसरे
 - D. दूसरे

Question ID : 486324801
Status : Answered
Chosen Option : D

Q.3 चार अक्षर -समूह दिए गए हैं, जिनमें से तीन किसी प्रकार से एक समान हैं और एक असंगत है। असंगत अक्षर-समूह चुनें।

- Ans A. XAY
 B. FIG
 C. BEC
 D. RUT

Question ID : 486324808
Status : Answered
Chosen Option : D

Q.4 एक राशि को 4 वर्षों के लिए एक निश्चित दर पर साधारण ब्याज पर निवेश किया गया। यदि इसे 3% अधिक दर पर निवेश किया गया होता, तो इसे ₹1,680 अधिक मिलते। राशि क्या थी?

- Ans A. ₹14,000
 B. ₹13,750
 C. ₹15,250
 D. ₹12,500

Question ID : 486324797
Status : Answered
Chosen Option : A

Q.5 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:
Some teachers are musicians.
All musicians are mathematicians.
Some mathematicians are teachers.

Conclusions:
I. All teachers are musicians
II. All mathematicians are musicians
III. Some teachers are mathematicians

- Ans A. Only conclusion III follows
 B. Only conclusion I follows
 C. Conclusions I and III follow
 D. Conclusions I and II follow

Question ID : 486324802
Status : Answered
Chosen Option : A

Q.6 In a certain code language, 'COLLEGE' is written as 'BPKMDHD'. How will 'HIGHER' be written in that language?

- Ans A. GHFDS
 B. GJGDR
 C. GJFIDS
 D. GJFSDI

Question ID : 486324804
Status : Answered
Chosen Option : C

Q.7 25 संख्याओं का औसत 62 है। पहली 13 संख्याओं का औसत 60.5 है और अंतिम 13 संख्याओं का औसत 64.5 है। यदि 13वीं संख्या को हटा दिया जाए, तो शेष संख्याओं का औसत क्या होगा? (दशमलव एक स्थान तक सही)

- Ans A. 60.5
 B. 62.8
 C. 60.8
 D. 61.5

Question ID : 486324792
Status : Not Answered
Chosen Option : --

Q.8 What approximate value should come in place of the question mark(?) in the following expression?

$$17.89 \times 11.06 - 44.91 \div 14.89 + 39.96 = ?$$

- Ans A. 238
 B. 236
 C. 235
 D. 234

Question ID : 486324810
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.9 If $\sqrt{10 + 4\sqrt{3} - 2\sqrt{2}} = a + \sqrt{2} b$, then what is the value of $(3a + 5b)$?

- Ans A. 14
 B. 13
 C. 11
 D. 8

Question ID : 486324791
Status : Not Answered
Chosen Option : --

Q.10 एक ड्रेसिंग टेबल का अंकित मूल्य ₹3,600 था। इसे 4% की छूट पर बेचने पर 2% का लाभ होता है। ड्रेसिंग टेबल का क्रय मूल्य क्या होगा? (निकटतम पैसे तक)

- Ans A. ₹3,388.24
 B. ₹3,888.32
 C. ₹4,204.65
 D. ₹2,106.66

Question ID : 486324795
Status : Answered
Chosen Option : B

Q.11 एक व्यक्ति ने समान कीमत पर दो एयर प्युरीफायर खरीदे। वह एक को 5% का लाभ अर्जित करते हुए ₹9,261 में बेचता है और दूसरे को ₹7,938 में बेचता है। दूसरे पर लाभ या हानि प्रतिशत क्या है?

- Ans
- A. 7.5% की हानि
 - B. 5% का लाभ
 - C. 8% का लाभ
 - D. 10% की हानि

Question ID : 486324794
Status : Not Answered
Chosen Option : --

Q.12 Select the number from among the given options that can replace the question mark (?) in the following series.

43, 57, 73, 91, ?, 133

- Ans
- A. 121
 - B. 110
 - C. 103
 - D. 111

Question ID : 486324809
Status : Answered
Chosen Option : D

Q.13 X एक निश्चित कार्य को 40 दिनों में कर सकता है। Y, X से 25% कम कुशल है, जबकि Z, X से 25% अधिक कुशल है। यदि Y और Z, 10 दिनों तक एक साथ कार्य करते हैं और चले जाते हैं, तो शेष कार्य अकेले X द्वारा कितने दिनों में पूरा किया जाएगा?

- Ans
- A. 20
 - B. 15
 - C. $18\frac{2}{3}$
 - D. $22\frac{1}{3}$

Question ID : 486324799
Status : Not Answered
Chosen Option : --

Q.14 रविवार सुबह वीना और उमंग एक दूसरे के साथ टेनिस खेल रहे थे। यदि वीना की परछाई उसके ठीक दाहिनी ओर थी, तो उमंग किस दिशा में अभिमुख है?

- Ans
- A. दक्षिण
 - B. पश्चिम
 - C. पूर्व
 - D. उत्तर

Question ID : 486324805
Status : Answered
Chosen Option : A

Q.15 An empty tank is in the form of a right circular cone with radius 3 feet and height 14 feet. The tank is filled with water at the rate of 1 cu. feet per second. In how many minutes will the tank be completely full?

- Ans
- A. 2.2
 - B. 4.5
 - C. 1.3
 - D. 3.1

Question ID : 486324800
Status : Answered
Chosen Option : A

Q.16 चरन, संपूर्ण यात्रा के $\frac{4}{15}$ भाग को साइकिल से, $\frac{9}{20}$ भाग को कार से और शेष 30 km स्कूटर से पूरा करता है। उसकी यात्रा की कुल दूरी ज्ञात कीजिए।

- Ans
- A. $\frac{160}{17}$ km
 - B. $\frac{180}{17}$ km
 - C. $\frac{190}{17}$ km
 - D. $\frac{150}{17}$ km

Question ID : 486324798
Status : Answered
Chosen Option : B

Q.17 A की आय, B की आय से 30% कम है। यदि A की आय में 35% की वृद्धि होती है और B की आय में 20% की कमी होती है, तो A की आय B की आय से कितने प्रतिशत कम/अधिक होगी?

- Ans
- A. अधिक, 18.125%
 - B. कम, 15.35%
 - C. कम, 18.125%
 - D. अधिक, 15.35%

Question ID : 486324793
Status : Not Answered
Chosen Option : --

Q.18 X, Y और Z बहनें हैं। P, Q का भाई है और Q, Y की पुत्री है। X का P से क्या संबंध है?

- Ans
- A. मौसी
 - B. चचेरी बहन
 - C. बहन
 - D. भांजी

Question ID : 486324806
Status : Answered
Chosen Option : A

Q.19 निम्नलिखित स्ट्रिंग में ऐसी कितनी संख्याएं हैं, जिनमें से प्रत्येक के ठीक बाद एक अक्षर और ठीक पहले एक प्रतीक है?

\$ 2 R 3 # T & 6 W # 1 H 8 Y % 9 R 7 P 4 D @ 2 A & 4 S U

- Ans
- A. चार
 - B. तीन
 - C. छह
 - D. पांच

Question ID : 486324803
Status : Answered
Chosen Option : A

Q.20 The sides of a triangle are in the ratio $\frac{1}{20} : \frac{1}{30} : \frac{1}{24}$ and its perimeter is 45 cm. The length of the shortest side is:

- Ans
- A. 16 cm
 - B. 12 cm
 - C. 10 cm
 - D. 15 cm

Question ID : 486324796
Status : Answered
Chosen Option : B

Section : General English

Q.1 Select the most appropriate synonym of the given word.

Milieu

- Ans
- A. Docility
 - B. Millennium
 - C. Location
 - D. Compassion

Question ID : 486324816
Status : Not Answered
Chosen Option : --

Q.2 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) Children face disruption of regular schooling and are often required to work to support their families.

Q) It is due to the fact that they are often required to work to support their families.

R) Regardless of the duration of the stay, migrants face myriad challenges at their destinations, which include restricted access to basic needs such as identity documentation, social entitlements, inadequate housing, low-paid, insecure or hazardous work and financial services.

S) Many migrants – especially those who relocate to a place where the local language and culture is different from that of their region of origin – also face harassment and political exclusion.

- Ans
- A. SPRQ
 - B. QSRP
 - C. RSPQ
 - D. RPSQ

Question ID : 486324818
Status : Not Answered
Chosen Option : --

Q.3 The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

If I were you / I will not accept / the decision of the committee / without consultation.

- Ans
- A. the decision of the committee
 - B. I will not accept
 - C. without consultation
 - D. If I were you

Question ID : 486324819
Status : Not Answered
Chosen Option : --

Q.4 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) A transmission/transaxle keeps the engine's output optimally matched to the speed and load conditions.

Q) The torque converter, connected to the automatic transmission/transaxle input shaft, connects, multiplies and interrupts the flow of engine torque into the transmission.

R) These joints also allow the driveshaft and/or CV shaft to work at an angle.

S) Universal and/or Constant Velocity (CV) joints connect to the driveshaft to transmit output power from the transmission to the rear axle on rear-wheel-drive cars and the front axle on front-wheel-drive cars.

- Ans
- A. SPQR
 - B. PQSR
 - C. RPQS
 - D. QSPR

Question ID : 486324817
Status : Not Answered
Chosen Option : --

Q.5 Select the most appropriate option to fill in the blank.

She is 83 _____ still goes swimming every day.

- Ans A. whereas
 B. but
 C. while
 D. then

Question ID : 486324811
Status : Answered
Chosen Option : C

Q.6 Select the most appropriate synonym of the given word.

Prodigal

- Ans A. Impudent
 B. Reckless
 C. Proud
 D. Extravagant

Question ID : 486324815
Status : Not Answered
Chosen Option : --

Q.7 The following sentence has been split into four segments. Identify the segment that contains an error.

The Right of Children / for Free and Compulsory Education Act 2009 / was enacted / on 4th August 2009.

- Ans A. The Right of Children
 B. was enacted
 C. on 4th August 2009
 D. for Free and Compulsory Education Act 2009

Question ID : 486324812
Status : Not Answered
Chosen Option : --

Q.8 Select the most appropriate meaning of the given idiom.

As right as rain

- Ans A. In good health
 B. Falling water droplets
 C. Eating candies
 D. Humid climate

Question ID : 486324813
Status : Not Answered
Chosen Option : --

Q.9 Select the grammatically correct sentence.

- Ans A. Ganges is one of the river which flows the longest.
 B. Ganges is one of the longer rivers in the world.
 C. Ganges is the long flowing river in the world.
 D. Ganges is one of the longest rivers in the world.

Question ID : 486324820
Status : Not Answered
Chosen Option : --

Q.10 Select the most appropriate option that can substitute the underlined words in the given sentence.

My cousin brother says, "Sages and philosophers are often away from reality."

- Ans A. gathering clouds
 B. in a cloud of suspicion
 C. lost in the clouds
 D. floating on the cloud

Question ID : 486324814
Status : Not Answered
Chosen Option : --

Section : General Awareness

Q.1 सरिस्का राष्ट्रीय उद्यान निम्नलिखित में से किस राज्य में स्थित है?

- Ans A. राजस्थान
 B. आंध्र प्रदेश
 C. हिमाचल प्रदेश
 D. उत्तर प्रदेश

Question ID : 486324832
Status : Answered
Chosen Option : A

Q.2 राजेंद्र इंस्टीट्यूट ऑफ मेडिकल साइंसेज (RIMS) जुलाई 2022 में जीनोम अनुक्रमण परीक्षणों के संबंध में खबरों में था। RIMS कहाँ स्थित है?

- Ans A. पटना, बिहार
 B. धनबाद, झारखंड
 C. मुजफ्फरपुर, बिहार
 D. रांची, झारखंड

Question ID : 486324822
Status : Not Answered
Chosen Option : --

Q.3 सेंटर फॉर मॉनिटरिंग इंडियन इकोनॉमी (CMIE) द्वारा जारी डेटा के अनुसार, मार्च 2022 में भारत में सबसे कम बेरोजगारी दर वाले राज्यों में कौन-सा राज्य प्रथम स्थान पर रहा है?

- Ans
- A. मेघालय
 - B. महाराष्ट्र
 - C. छत्तीसगढ़
 - D. राजस्थान

Question ID : 486324823
Status : Answered
Chosen Option : B

Q.4 संघ और राज्य लोक सेवा आयोगों के निम्नलिखित कर्तव्य हैं। गलत को पहचानिए।

- Ans
- A. राष्ट्रपति या राज्यपाल को वार्षिक रूप से संघ या राज्य आयोग द्वारा किए गए कार्य के बारे में जैसा भी मामला हो, एक रिपोर्ट पेश करना।
 - B. उन्हें भेजे गए किसी भी मामले पर, और किसी अन्य मामले पर सलाह देने के लिए जिसे प्रधान मंत्री या या जैसा भी मामला हो, किसी राज्य के मुख्यमंत्री उपयुक्त आयोग को संदर्भित कर सकते हैं।
 - C. क्रमशः संघ की सेवाओं और राज्य की सेवाओं में नियुक्तियों के लिए परीक्षा आयोजित करना।
 - D. संघ के लिए लोक सेवा आयोग, यदि किसी राज्य के राज्यपाल द्वारा ऐसा करने का अनुरोध किया जाता है, तो वह राष्ट्रपति के अनुमोदन से राज्य की सभी या किसी भी आवश्यकता को पूरा करने के लिए सहमत हो सकता है।

Question ID : 486324840
Status : Not Answered
Chosen Option : --

Q.5 निम्नलिखित में से किस भारतीय राज्य में पहली बार 'यूट्रिकुलरिया फुरसेलटा (Utricularia Furcellata)' नामक एक दुर्लभ मांसाहारी पौधे की प्रजाति पाई गई?

- Ans
- A. उत्तराखंड
 - B. हिमाचल प्रदेश
 - C. सिक्किम
 - D. असम

Question ID : 486324836
Status : Not Answered
Chosen Option : --

Q.6 'संगीत रत्नाकर' के लेखक कौन हैं?

- Ans
- A. शारंगदेव
 - B. वेंकटमुखी
 - C. भातखंडे
 - D. भरत

Question ID : 486324829
Status : Not Answered
Chosen Option : --

Q.7 _____ is defined as a persistent rise or, a tendency towards the persistent rise in the general level of prices.

- Ans
- A. Deflation
 - B. Inflation
 - C. Unemployment
 - D. Equilibrium

Question ID : 486324830
Status : Answered
Chosen Option : B

Q.8 उस अधिनियम का नाम बताइए जिसने ब्रिटिश शासन के दौरान भारत में पश्चिमी शिक्षा की दिशा में पहला कदम उठाया।

- Ans
- A. 1784 का पिट्स इंडिया एक्ट
 - B. 1773 का रेगुलेशन एक्ट
 - C. 1853 का चार्टर अधिनियम
 - D. 1813 का चार्टर अधिनियम

Question ID : 486324826
Status : Answered
Chosen Option : D

Q.9 As per the census 2011, which of the following religious communities has the highest percentage population in India?

- Ans
- A. Muslim
 - B. Christian
 - C. Jain
 - D. Buddhist

Question ID : 486324833
Status : Answered
Chosen Option : A

Q.10 निम्नलिखित में से किसे 27 जून 2019 को राष्ट्रीय आवास बैंक (NHB) का प्रबंध निदेशक नियुक्त किया गया?

- Ans
- A. विद्याधर पाठक
 - B. आर.वी. शास्त्री
 - C. जयश्री व्यास
 - D. शारदा कुमार होता

Question ID : 486324831
Status : Not Answered
Chosen Option : --

Q.11 हैदराबाद स्थित स्टार्ट-अप स्काईरूट एयरोस्पेस द्वारा भारत के पहले निजी तौर पर विकसित रॉकेट का नाम क्या है?

- Ans A. रमन-C
 B. बोस-J
 C. विक्रम-S
 D. भाभा-H

Question ID : 486324821
Status : Answered
Chosen Option : A

Q.12 Which industry in India is the basic industry on which all the other industries depend upon?

- Ans A. Cotton
 B. Iron and steel
 C. Jute
 D. Sugar

Question ID : 486324834
Status : Answered
Chosen Option : B

Q.13 Which of the following is NOT the non-tax revenue of the Union?

- Ans A. Broadcasting
 B. Railways
 C. Estate duty
 D. Post and Telegraphs

Question ID : 486324839
Status : Not Answered
Chosen Option : --

Q.14 संसद ने (अपराध) अधिनियम, _____ 1955 को अधिनियमित किया है, जिसे नागरिक अधिकारों के संरक्षण अधिनियम, 1955 के रूप में संशोधित किया गया है और नाम बदला गया है (1976 में)।

- Ans A. नस्लीय भेदभाव (Racial Discrimination)
 B. शिक्षा अधिकार (Education Rights)
 C. अस्पृश्यता (Untouchability)
 D. स्वतंत्रता का अधिकार (The Right to Freedom)

Question ID : 486324838
Status : Answered
Chosen Option : C

Q.15 सेला नृत्य छत्तीसगढ़ का एक समूह नृत्य है जिसमें पुरुष कलाकार शामिल होते हैं जो _____ नृत्य करते हैं।

- Ans
- A. धन की देवी को प्रसन्न करने के लिए
 - B. करम वृक्ष की स्तुति करने के लिए
 - C. फसल काटने के बाद बांस के डंडे से
 - D. टीम में भगवान कृष्ण की वेश-भूषा वाले बाल सदस्य को घेर कर

Question ID : 486324828
Status : Not Answered
Chosen Option : --

Q.16 निम्नलिखित में से कौन सी मस्जिद अत्यधिक सजावटी मस्जिद (decorative mosque) है, जिसमें लाल बलुआ पत्थर और सफेद संगमरमर की पट्टियों (strip) से निर्मित तीन बड़े द्वार, चार टावर और दो 40 m ऊंची मीनारें हैं?

- Ans
- A. जामा मस्जिद, दिल्ली
 - B. मक्का मस्जिद, हैदराबाद
 - C. मोती मस्जिद, दिल्ली
 - D. नखोदा मस्जिद, कोलकाता

Question ID : 486324827
Status : Answered
Chosen Option : B

Q.17 What is Cytotaxonomy?

- Ans
- A. The use of chemical constituents of a plant to resolve confusions
 - B. Study of information like chromosome number, structure and behaviour
 - C. Taxonomy based on putative ancestral descent of organisms
 - D. System for ordering species based on overall similarity

Question ID : 486324837
Status : Not Answered
Chosen Option : --

Q.18 Which state of matter is created in the sun because of very high temperature?

- Ans
- A. Bose-Einstein condensate
 - B. Vapour
 - C. Solid
 - D. Plasma

Question ID : 486324835
Status : Answered
Chosen Option : D

Q.19 When was the National education Policy 2020 approved by the Union cabinet?

- Ans A. 25 July 2020
 B. 29 July 2021
 C. 29 July 2020
 D. 25 July 2021

Question ID : 486324824
Status : Not Answered
Chosen Option : --

Q.20 यशस्वी जायसवाल सितंबर 2022 में कोयम्बटूर में दलीप ट्रॉफी (Duleep Trophy) फाइनल के दौरान प्रथम श्रेणी क्रिकेट में संयुक्त रूप से सबसे तेज _____ रन बनाने वाले भारतीय बन गए।

- Ans A. 750
 B. 1000
 C. 1250
 D. 500

Question ID : 486324825
Status : Not Answered
Chosen Option : --

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