# Telangana State Council Higher Education

#### **Notations:**

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with \* icon are incorrect.

Question Paper Name: Environmental Management 13th June 2024

Shift 1

**Subject Name:** Environmental Management

**Creation Date :** 2024-06-13 12:26:50

**Duration:** 120 **Total Marks:** 120 **Display Marks:** Yes **Share Answer Key With Delivery Engine:** Yes **Actual Answer Key:** Yes **Change Font Color:** No **Change Background Color:** No **Change Theme:** No **Help Button:** No **Show Reports:** No **Show Progress Bar:** No

# **Environmental Management**

Group Number: 1

**Group Id:** 38382346

Group Maximum Duration:

Group Minimum Duration:

Show Attended Group?:

No
Edit Attended Group?:

No
Break time:

0

Group Marks:

# **Mathematics**

**Section Id:** 383823122

Section Number:

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions: 10

Number of Questions to be attempted: 10

**Section Marks**: 10 **Maximum Instruction Time**: 0

**Sub-Section Id:** 383823122

**Question Shuffling Allowed:** Yes

Question Number: 1 Question Id: 3838236361 Question Type: MCQ Option Shuffling: Yes

1

**Display Question Number : Yes** 

**Sub-Section Number:** 

Correct Marks: 1 Wrong Marks: 0

If l > 0, K < 0 are roots of  $x^2 + x - 20 = 0$ , the system of linear equations 3x - y + 4z = 3,

x+2y-3z = -2 and 6x+5y+Pz = -3 has

# Options:

- 1 \* unique solution when P = K
- 2. \* infinite number of solutions when P = I
- 3. \* no solution when P = K + l
- $_{\Delta}$  wunique solution when P = l

Question Number : 2 Question Id : 3838236362 Question Type : MCQ Option Shuffling : Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

The number of positive integral solutions of x + y + z = 12,  $x \le y \le z$  is

# Options:

- 1. \* 55
- 2. \* 36
- 3. 🗸 11
- 4. \* 13

Question Number: 3 Question Id: 3838236363 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

If the equations  $x^2 + 2x + K = 0$  and  $x^2 + Kx + 2 = 0$  have one root in common, then the product of the other two roots is

# **Options:**

1. ✓ 2K

 $2. \times 12 + K$ 

 $3. \times K + 1$ 

4. \* 3K

Question Number: 4 Question Id: 3838236364 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

If for a progression, sum of the first n terms is  $2n^2 + 5n + 6$  and  $T_n$  is the n<sup>th</sup> term of the

progression, then  $\sum_{K=1}^{10} T_{3K} =$ 

# Options:

1. 🗸 690

2. \* 270

3. \* 780

4. \* 460

Question Number: 5 Question Id: 3838236365 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Correct Marks : 1 Wrong Marks : 0

Let X be a discrete random variable with probability mass function P(X = x) where

$$x \in \{x_1, x_2, ... x_n\}$$
. If  $\sum_{i=1}^{n} (x_i - 2)^2 P(X = x_i) = 28$  and  $\sum_{i=1}^{n} (x_i + 2)^2 P(X = x_i) = 12$ . Then

variance of X is

# Options:

1. \* 20

 ${\bf Question\ Number: 6\ Question\ Id: 3838236366\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

If  $b_{yx}$  and  $b_{xy}$  are regression coefficients and they are equal, then

# Options:

1. \* correlation coefficient is one

y = x variance of x and variance of y are equal

Mean of x and mean of y are equal

 $4 \times$  Standard deviation of x is greater than standard deviation of y

Question Number : 7 Question Id : 3838236367 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the probability density function of a continuous random variable X is

$$f(X=x) = Ke^{-3x}$$
,  $0 < x < \infty$ , then a solution of  $\frac{P^2 + 1}{P} = \frac{K}{\sqrt{2}}$  is

$$\frac{1}{\sqrt{2}}$$

$$\frac{1}{\sqrt{3}}$$

Question Number: 8 Question Id: 3838236368 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

For a bivariate data  $(x_i, y_i)$  (i = 1, 2, 3, ..., 10),  $\sum x_i y_i = 6200$ ,  $\sum x_i = 400$ ,  $\sum y_i = 1220$ ,

 $\sum x_i^2 = 1800$ , then equation of line of best fit is

# **Options:**

$$y = 0.2x + 0.3$$

$$2. \times y = 3x + 1$$

$$y = 2x + 3$$

$$4. \checkmark y = 3x + 2$$

 ${\bf Question\ Number: 9\ Question\ Id: 3838236369\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

In large sample, the critical value for the single tailed test at 5% level of significance is

# **Options:**

- 2.58
- 2 🗸 1.96
- 3. \* 1.642
- 4. \* 1.28

Question Number : 10 Question Id : 3838236370 Question Type : MCQ Option Shuffling : Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

Mean of a binomial distribution 12 and variance is 8. The probability of having at least one success is

$$1 - \left(\frac{1}{3}\right)^{36}$$

$$1 - \left(\frac{2}{3}\right)^{36}$$

$$1 - \left(\frac{2}{3}\right)^{35} \left(\frac{1}{3}\right)$$

$$1 - \left(\frac{1}{3}\right)^{35} \left(\frac{2}{3}\right)$$

# **Environmental Management**

**Section Id:** 383823123

Section Number: 2

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions :110Number of Questions to be attempted :110Section Marks :110Maximum Instruction Time :0

**Sub-Section Id**: 383823123

**Question Shuffling Allowed:** Yes

Question Number: 11 Question Id: 3838236371 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

**Sub-Section Number:** 

Correct Marks: 1 Wrong Marks: 0

Which component of an ecosystem is responsible for the cycling of nutrients such as carbon, nitrogen and phosphorus?

- 2 Primary producers
- 2 \* Consumers
- 3. 

  ✓ Decomposers
- 4. \* Abiotic factors

Question Number: 12 Question Id: 3838236372 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Energy flow is always unidirectional in an ecosystem because

# **Options:**

- 1 whe energy that is lost during energy flow cannot be reused in other stages of energy flow
- 2. Energy flows from tertiary consumers to secondary consumers and finally to producers
- 3. \* the energy that is gained during energy flow can be reused in other stages of energy flow
- Energy flows from tertiary consumers to producers and finally to primary consumers

Question Number: 13 Question Id: 3838236373 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Energy flow in an ecosystem is based on which laws?

#### **Options:**

- Avogadro's law
- 2. \* Gas law
- 3. Thermodynamics law
- ∠ W Henry's law

Question Number: 14 Question Id: 3838236374 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Photosynthesis converts solar energy into the chemical energy of a carbohydrate by

- 1. 

  ✓ Reducing CO<sub>2</sub> and oxidizing H<sub>2</sub>O
- 2. Reducing H2O and oxidizing CO2
- 3. \* Reducing the carbohydrate

▲ Reducing glucose and water

Question Number: 15 Question Id: 3838236375 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

In a food chain, energy is transferred from one trophic level to another. What happens to

the energy as it moves up the food chain?

#### **Options:**

- 1 x It increases
- 2 It decreases
- 3 \* It remains constant
- 4. \* It fluctuates randomly

Question Number: 16 Question Id: 3838236376 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the primary purpose of biogeochemical cycles in ecosystems?

# **Options:**

- To regulate the temperature of the environment
- 2 ✓ To recycle nutrients and elements essential for life
- 3. \* To control the population sizes of organisms

Question Number: 17 Question Id: 3838236377 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What are the four factors that affect population growth ecology?

- 1 × Predation, competition, resource availability and habitat destruction
- 2. \* Environmental changes, disease outbreaks, natural disasters and genetic mutations
- 3. \* Immigration, emigration, predation and competition
- 4. Birth rate, death rate, emigration and immigration

Question Number: 18 Question Id: 3838236378 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following Indian states is known for its significant population of the Bengal Tiger?

#### **Options:**

- 1. \* Karnataka
- 2. \* Tamil Nadu
- 3. Madhya Pradesh
- 4 Maharashtra

Question Number: 19 Question Id: 3838236379 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which part of India is rich in biodiversity?

#### **Options:**

- 1 \* The Himalayas
- 2. \* Indo-Burma Region
- 3 Western Ghats
- 4. Sundaland

 $\label{thm:question} \textbf{Question Number: 20 Question Id: 3838236380 Question Type: MCQ Option Shuffling: Yes}$ 

**Display Question Number : Yes** Correct Marks: 1 Wrong Marks: 0 The Sundarbans, located in India, are known for being the largest ecosystem in the world **Options:** 1. grass land 2. \* pond 3 \* forest 4. mangrove Question Number: 21 Question Id: 3838236381 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 Which characteristic is common to both bacteria and yeast? **Options:** 1 / Unicellular 2 \* Eukaryotic 3. \* Photosynthetic 4. \* Prokaryotic Question Number: 22 Question Id: 3838236382 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0

Which type of medium allows for the differentiation of microorganisms based on their metabolic characteristics?

- 1 \* Defined medium
- 2 Complex medium
- 3 Selective medium

## 4. Differential medium

Question Number: 23 Question Id: 3838236383 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the primary mechanism of action of ultraviolet (UV) radiation in controlling microorganisms?

#### **Options:**

- 1. \* Protein denaturation
- 2 Disruption of DNA replication
- 3 \* Inhibition of metabolic enzymes
- ▲ Cellular dehydration

Question Number: 24 Question Id: 3838236384 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which chemical agent is effective against enveloped viruses, such as influenza and herpes viruses?

#### **Options:**

- Ethylene oxide
- 2. \* Benzalkonium chloride
- 3. \* Chlorine dioxide
- A Quaternary ammonium compounds

Question Number: 25 Question Id: 3838236385 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

In anaerobic wastewater treatment the microorganisms present are

1 ✓ methane formers and acid formers 2 \* actobacillus 3 Nocardia 4. \* Ecoli Question Number: 26 Question Id: 3838236386 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 Which process occurs during the acidogenesis stage of anaerobic digestion? **Options:** 1 \* Hydrolysis of complex organic compounds Production of organic acids and volatile fatty acids 3 \* Conversion of organic acids to methane and carbon dioxide ₄ Formation of methane gas by methanogens Question Number: 27 Question Id: 3838236387 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 In aerobic biological waste treatment, microorganisms utilize which compound as the primary electron acceptor during the degradation of organic matter? **Options:** 1 V Oxygen 2 \* Carbon dioxide

Question Number: 28 Question Id: 3838236388 Question Type: MCQ Option Shuffling: Yes

3 \* Nitrate

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following is a major group of microbes involved in nitrogen fixation?

#### **Options:**

✓ Bacteria

2 🗶 Fungi

3. \* Protozoa

4. \* Archaea

Question Number: 29 Question Id: 3838236389 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which group of microbes is known for its role in the production of antibiotics?

#### **Options:**

Actinomycetes

2. \* Cyanobacteria

3. \* Archaea

4. × Yeasts

Question Number: 30 Question Id: 3838236390 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a common nitrogen source used in cultivation media for microorganisms?

# **Options:**

1 \* Ammonium sulfate

2. \* Peptone

3. \* Urea

#### 4. ✓ Glucose

Question Number: 31 Question Id: 3838236391 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

What is the scope of environmental chemistry in our daily life?

# **Options:**

do not help in classify contaminated soils as hazardous waste, manage their disposal, and

- 1. \* supervise on-site remediation
- 2. \* do not help to assess the risks of contaminants in soil and ground water
- 3. do help to assess the long-term risks of contaminants in soil and groundwater
- do not help to undertake corrective strategies

Question Number: 32 Question Id: 3838236392 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Environmental chemistry mainly deals with the study of

# **Options:**

- 1. ✓ unwanted substances and their effects
- 2. \* flora and fauna
- 3 \* biodiversity
- 4. \* forest resources

Question Number: 33 Question Id: 3838236393 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Acid rain is primarily caused by the emission of which two gases into the atmosphere?

# **Options:**

Nitrogen oxides and sulfur dioxide

- 2. \* Carbon monoxide and methane
- 3. \* Ozone and carbon monoxide
- 4 \* Hydrogen sulfide and ammonia

Question Number: 34 Question Id: 3838236394 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following is not a feature of the lithosphere?

#### **Options:**

- 1 Mountains
- 2. Walleys
- 3. \* Ocean trenches
- 4. Ozone layer

Question Number: 35 Question Id: 3838236395 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Deep-ocean currents are driven by differences in the

# **Options:**

- 1. water temperature
- 2. \* water type
- 3. \* water concentration
- 4. \* water source

Question Number: 36 Question Id: 3838236396 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following is not a major biome found in the biosphere?

# **Options:** 1. \* Rainforest 2. \* Tundra 3 \* Desert ∠ ✓ Plateau Question Number: 37 Question Id: 3838236397 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes Correct Marks: 1 Wrong Marks: 0** The boundary between the troposphere and stratosphere is known as the **Options:** 1 Tropopause 2. \* Stratopause 3. \* Mesopause 4. \* Thermopause Question Number: 38 Question Id: 3838236398 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 Which photochemical oxidants are formed by the action of sunlight on nitrogen oxides and reactive hydrocarbons **Options:** 1. peroxyacetyl nitrate 2. \* acid rain 3. \* inorganic carbon 4. \* particulate matter

Question Number: 39 Question Id: 3838236399 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Ozone is good

# **Options:**

1 \* in the troposphere

2. \* in the mesosphere

3. in the stratosphere

4 \* in the thermosphere

Question Number : 40 Question Id : 3838236400 Question Type : MCQ Option Shuffling : Yes

**Display Question Number : Yes** 

**Correct Marks: 1 Wrong Marks: 0** 

Which global agreement protects the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS)

# **Options:**

1 Kyoto protocol

2 Montreal protocol

3. \* Paris agreement

4 \* Stockholm agreement

Question Number: 41 Question Id: 3838236401 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is a key component of Cation Exchange capacity of the soils?

# Options:

1 × Nitrate ions

2. \* Anions

3. Exchangeable cations

#### 4 \* Soil water content

Question Number: 42 Question Id: 3838236402 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Why is Cation Exchange capacity of the soils important in agriculture?

#### **Options:**

1 \* It influences soil color

- 2 \* It affects soil pH
- 3. It indicates nutrient-holding capacity
- 4. \* It determines soil structure

Question Number: 43 Question Id: 3838236403 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

Which of the following is a natural source of aerosols?

#### **Options:**

- 1. 

  ✓ Volcanic eruptions
- 2. \* Industrial emissions
- 3. \* Deforestation
- 4. \* Automobile exhaust

Question Number: 44 Question Id: 3838236404 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

How do aerosols contribute to air quality concerns?

# **Options:**

By reducing respiratory diseases

- 2 \* By acting as natural air purifiers
- By having no impact on human health

Question Number: 45 Question Id: 3838236405 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following human activities is a significant source of anthropogenic trace metal contamination in soils?

#### **Options:**

- 1 \* Organic farming
- Mining and industrial activities
- Reforestation projects
- 4. \* Environmental conservation efforts

Question Number: 46 Question Id: 3838236406 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

How does soil salinity affect plant growth?

#### **Options:**

- 1 \* Promotes optimal growth
- 2 Inhibits germination and growth
- 3 \* Has no impact on plants
- 4. \* Increases resistance to diseases

Question Number: 47 Question Id: 3838236407 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the purpose of adding chlorine or ozone during water treatment? **Options:** 1. \* To remove suspended particles 2. \* To neutralize pH levels 3. To kill bacteria and viruses 4. \* To enhance taste and odor Question Number: 48 Question Id: 3838236408 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 Which of the following method is not used in water purification systems? **Options:** 1 \* Filtration 2. \* Chlorination 3 \* Distillation 4. Fermentation Question Number: 49 Question Id: 3838236409 Question Type: MCQ Option Shuffling: Yes **Display Question Number: Yes** Correct Marks: 1 Wrong Marks: 0 What is the purpose of primary treatment in wastewater treatment plants?

- 1 ✓ To remove suspended solids
- 2 \* To neutralize pH levels
- 3 \* To kill harmful bacteria
- 4. \* To remove dissolved minerals

Question Number: 50 Question Id: 3838236410 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which process is commonly used in secondary treatment to break down organic matter?

# **Options:**

- 1 \* Filtration
- 2. \* sedimentation
- 3 \* Chlorination
- 4. Activated sludge process

Question Number: 51 Question Id: 3838236411 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

What is the primary function of baghouse filters in air pollution control?

#### **Options:**

- 1 \* To remove sulfur dioxide (SO<sub>2</sub>)
- 7 \* To remove nitrogen oxides (NOx)
- 3. To remove particulate matter
- 4. \* To neutralize acidic gases

 ${\bf Question\ Number: 52\ Question\ Id: 3838236412\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is a method used to control sulfur dioxide (SO<sub>2</sub>) emissions?

- 1 ✓ Wet scrubbing
- 2. \* Catalytic converters
- 3. \* Baghouse filters

# 4 \* Electrostatic precipitators

Question Number: 53 Question Id: 3838236413 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

The permissible noise level in industrial areas in India is

## **Options:**

1 × 65 dB for day time and 55 dB at night

2 75 dB for daytime and 70 dB at night

3. \* 55 dB for daytime and 45 dB at night

4 × 45 dB for daytime and 35 dB at night

Question Number: 54 Question Id: 3838236414 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which parameter is commonly measured to determine the biochemical oxygen demand (BOD) of wastewater?

#### **Options:**

1. \* Nitrate concentration

2. \* Ammonia level

3 / Dissolved oxygen

4 \* Organic content

Question Number: 55 Question Id: 3838236415 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

Which of the following is an indicator of wastewater salinity?

# **Options:**

1. Conductivity

- 2. \* Total suspended solids (TSS)
- 3. \* pH level
- 4. \* BOD level

Question Number: 56 Question Id: 3838236416 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which regulatory authority establishes the noise limits in industrial areas?

#### **Options:**

- 1. Environmental Protection Agency (EPA)
- Food and Drug Administration (FDA)
- Federal Aviation Administration (FAA)
- 4. Occupational Safety and Health Administration (OSHA)

Question Number: 57 Question Id: 3838236417 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the purpose of a catalytic converter in vehicles

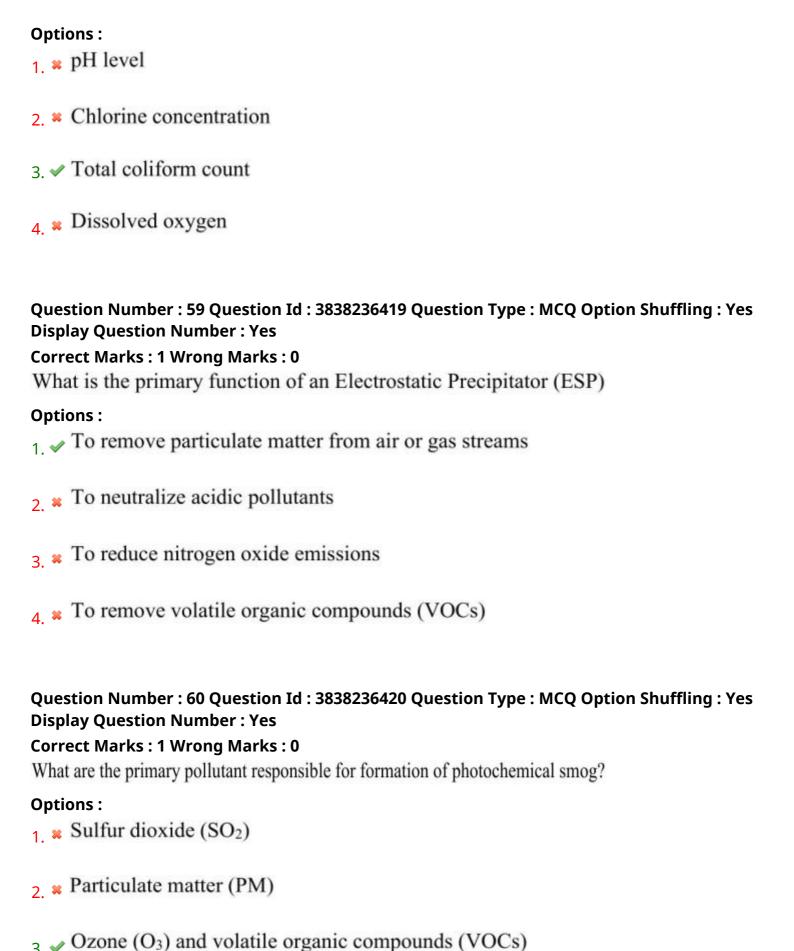
#### **Options:**

- 1. \* Increase fuel efficiency
- 2. Reduce harmful emissions
- 3. \* Improve engine performance
- 4. \* Enhance vehicle sound

Question Number: 58 Question Id: 3838236418 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which parameter is commonly measured to assess the level of pathogens in wastewater?



4. \* nitrogen oxides (NO<sub>x</sub>)

Question Number: 61 Question Id: 3838236421 Question Type: MCQ Option Shuffling: Yes

# Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

The radioactive isotope to find the Earth's age in radiometric dating of rocks is

#### **Options:**

Carbon-14

2. V Uranium-238

3. \* Potassium-40

4. \* Lead-206

Question Number: 62 Question Id: 3838236422 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following is foliated sedimentary rock?

#### **Options:**

1 - Shale

2. \* Marble

3 \* Quartz

4. \* Sandstone

Question Number: 63 Question Id: 3838236423 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

If no crystallization takes place, then the rock is

# Options:

1. \* Holocrysatlline

2. \* Plutonic

3. Glassy

4. \* Hypabyssal

Question Number: 64 Question Id: 3838236424 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which type of crust is formed when the older rocks are pushed above the younger rocks in earth's crust?

#### **Options:**

- Normal fault
- 2. \* Reverse fault
- 3. Strike-slip fault
- 4. V Thrust fault

Question Number: 65 Question Id: 3838236425 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

Which landform is formed when the glacier cuts a U-shaped valley by abrasion?

# **Options:**

- 1 / Fjords
- 2. \* Corris
- 3. \* Aretes
- 4. \* Butte

 ${\bf Question\ Number: 66\ Question\ Id: 3838236426\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

Which satellite series is operated by the French Space Agency (CNES)

- 1. \* LANDSAT series
- 2. V SPOT
- 3. \* RS

# 4. \* IKONOS

Question Number: 67 Question Id: 3838236427 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which satellite sensor is used to monitor the environmental changes like urban growth and deforestation?

#### **Options:**

- 2. \* Radar sensor
- 3 \* Magnetometer sensor
- 4 \* Infrared sensors

Question Number: 68 Question Id: 3838236428 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the temporal resolution of MODIS?

#### **Options:**

- 1. ✓1 day
- 2. \* 5 days
- 3. × 10 days
- 4. \* 14 days

Question Number: 69 Question Id: 3838236429 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

How many bands does LANDSAT 8 have?

# **Options:**

1. \* 10

- 2. \* 5
- 3. 🗸 11
- 4. \* 7

Question Number: 70 Question Id: 3838236430 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

Which colour of EM spectrum is used for LiDAR bathymetry studies?

### **Options:**

- 1. \* Yellow
- 2 \* UV
- 3. \* Red
- 4. Green

Question Number: 71 Question Id: 3838236431 Question Type: MCQ Option Shuffling: Yes

Display Question Number: Yes Correct Marks: 1 Wrong Marks: 0

If the precipitation (P) in a region is 450 mm/year, evapotranspiration (ET) is 200 mm/year, and the change in storage ( $\Delta S$ ) is 80 mm/year, what is the value of quick flow (Q)?

# **Options:**

- 1 √ 170 mm/year
- 2 × 450 mm/year
- 3. \* 250 mm/year
- 4. \* 280 mm/year

Question Number: 72 Question Id: 3838236432 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the occurrence of orographic precipitation?

#### **Options:**

- 1. When the warm air raises over a cold air mass
- 2 \* By frontal lifting of air masses
- 3. When the moist air raises over a mountain barrier
- ▲ By convection in the atmosphere

Question Number: 73 Question Id: 3838236433 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

The portion of rain fall that hits the ground through canopy is called

# **Options:**

- 1 x Interception loss
- 2. Throughfall
- 3 x Interception gain
- 4. Stem flow

 ${\bf Question\ Number: 74\ Question\ Id: 3838236434\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

If the average solar radiation received by the earth is 500 W/m<sup>2</sup> and reflects 70 W/m<sup>2</sup>, what is the available energy for absorption and heating the surface?

- 1. **×** 500 W/m<sup>2</sup>
- $2. \times 70 \text{ W/m}^2$
- 3. 430 W/m<sup>2</sup>
- 4. × 570 W/m<sup>2</sup>

Question Number: 75 Question Id: 3838236435 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Soil suction pressure and soil moisture pressure can be measured by

#### **Options:**

- 2 \* Lysimeter
- 3 \* Infiltrometer
- 4. \* Piezometers

Question Number: 76 Question Id: 3838236436 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

When a portion of rainfall does not infiltrate into the soil and becomes surface runoff, it is called as

#### **Options:**

- 1. \* Base flow
- ✓ Overland flow
- 3 \* Cover flow
- 4. \* Inter flow

Question Number: 77 Question Id: 3838236437 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

With regard to stream gauging, what for the stage-discharge curve is used?

- 1. \* To measure the width of the stream
- 2. \* To measure the depth of the stream and presence of debris in the stream
- 3 \* To find out change in velocity of the stream

△ To relate the water level of a stream to its discharge

Question Number: 78 Question Id: 3838236438 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is a falling limb of a synthetic unit hydrograph?

#### **Options:**

1 A part of hydrograph where discharge decreases

- 2 \* Peak discharge of hydrograph
- A part of hydrograph where discharge increases
- The total volume of water in the hydrograph

Question Number: 79 Question Id: 3838236439 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the size range of sleet pellets?

#### **Options:**

- 1 \* Less than 1 mm in diameter
- 2. ✓ Between 1 mm and 5 mm in diameter
- 3 \* Between 5 mm and 10 mm in diameter
- 4. \* Greater than 10 mm in diameter

Question Number: 80 Question Id: 3838236440 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

Which of the following have higher evaporation rates?

#### **Options:**

Wet soil

- 2. Dry soil
- 3 \* Grassland
- 4. \* Concrete pavement

Question Number: 81 Question Id: 3838236441 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the major factor affecting the rate of groundwater recharge?

#### **Options:**

- 1. Precipitation intensity
- 2. Soil permeability
- 3 \* Groundwater depth
- 4. \* Land use

Question Number: 82 Question Id: 3838236442 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which artificial groundwater recharge technique causes directing extra surface water to ponds or infiltration basins?

#### **Options:**

- 1 x Injection wells
- 2 \* Recharge pits
- Recharge trenches

Question Number: 83 Question Id: 3838236443 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0 Which aquifer property is associated with specific yield of the aquifer?

# **Options:**

1. Porosity

2. \* Permeability

3. \* Storativity

4. Transmissivity

Question Number: 84 Question Id: 3838236444 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

If the transmissivity of the aquifer is 650 m<sup>2</sup>/day and the thickness of the aquifer is 10 meters, then hydraulic conductivity of the aquifer is

# **Options:**

1 × 650 m/day

2. \* 65 m/day

3. **√** 10 m/day

4. × 160 m/day

 ${\bf Question\ Number: 85\ Question\ Id: 3838236445\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

In a groundwater model, the hydraulic conductivity of the aquifer is 10 m/day and the cross-sectional area perpendicular to the flow is 20 m<sup>2</sup>. The hydraulic gradient is 0.006. Calculate the flow rate (Q) using the Darcy's Law.

# Options:

1 m<sup>3</sup>/day

2. 

1.2 m³/day

3. **2** m<sup>3</sup>/day

4.  $\approx 0.12 \text{ m}^3/\text{day}$ 

Question Number: 86 Question Id: 3838236446 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the recharge mechanism of the dug well?

# **Options:**

- Direct rain fall into the well openings
- 2 \* By the lateral flow from nearby surface water bodies
- 3. \* Through seepage from the surrounding areas after rain fall
- 4 \* By artificial means such as recharge pits and collection from rooftops of houses

Question Number: 87 Question Id: 3838236447 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

What material is commonly used for casing in well construction?

# Options:

- 1 \* Steel
- 2. \* Concrete
- 3. **V** PVC
- 4. Wood

Question Number: 88 Question Id: 3838236448 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which type of aquifer has an impervious layer above and below it?

# **Options:**

✓ Confined aquifer

- 2. W Unconfined aquifer
- 3. Perched aquifer
- 4. \* Alluvial Aquifer

Question Number: 89 Question Id: 3838236449 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the relationship between porosity and specific yield?

#### **Options:**

- 1. Porosity is greater than specific yield
- 2 \* Specific yield is greater than porosity
- Porosity and specific yield are equal
- 4. \* Porosity and specific yield are independent of each other

Question Number: 90 Question Id: 3838236450 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the example of an aquitard?

# **Options:**

- Zeolite
- 2. \* Gravel
- 3. **\*** Sand
- 4 V Shale

Question Number: 91 Question Id: 3838236451 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the difference between an aquifuge and an aquitard?

#### **Options:**

- 1. \* Aquifuge has higher permeability than aquitard
- 2 Aquifuge has lower permeability than aquitard
- 3. \* Aquitard cannot store and transmit groundwater and aquifuge can store
- 4. \* Aquitard is less porous than aquifuge

Question Number: 92 Question Id: 3838236452 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the function of aquiclude in groundwater recharge systems?

# **Options:**

- 1 \* They facilitate the flow of groundwater
- They increase the recharge of the groundwater
- They act as a hindrance to ground water flow

Question Number: 93 Question Id: 3838236453 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

What was the major challenge associated with Bhakra-Nangal project?

#### **Options:**

Soil erosion

- 2 Loss of biodiversity like flora and fauna
- 3. \* Desertification
- 4. \* Deforestation

Question Number: 94 Question Id: 3838236454 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the example of unconsolidated formulation?

#### **Options:**

- 1 \* Limestone
- 2. \* Shale
- 3 # Granite
- ✓ Sandstone

Question Number : 95 Question Id : 3838236455 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

How will the degree of consolidation affect the porosity of the formation?

#### **Options:**

- 1. \* Higher degree of consolidation leads to higher porosity
- 2. \* Degree of consolidation does not affect porosity
- 3 \* It is not possible to determine the porosity by degree of consolidation
- △ Wigher degree of consolidation leads to lower porosity

Question Number: 96 Question Id: 3838236456 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks : 1 Wrong Marks : 0

What is the benefit in construction of the Narmada Sagar project?

- 1 / Enhanced flood control
- 2. \* Decrease in potential of agriculture
- 3. Reduced water availability downstream
- 4 \* Increased sediment load in the river

Question Number: 97 Question Id: 3838236457 Question Type: MCQ Option Shuffling: Yes

Display Question Number: Yes

Correct Marks: 1 Wrong Marks: 0

Which type of aquifer is more prone to contamination?

## **Options:**

- 1. Unconfined Aquifer
- 2. Confined Aquifer
- 3. Artesian Aquifer
- 4 \* Perched Aquifer

Question Number: 98 Question Id: 3838236458 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks : 1 Wrong Marks : 0

If a confined aquifer has a specific yield of 0.40, what does this value indicate about the aquifer's ability to release groundwater?

# Options:

- 1 V It can release 40% of its water under pumping
- 2. \* It can release 40% of its water without pumping
- 3. \* It can release 60% of its water under pumping
- ₄ ★ It can release 60% of its water without pumping

Question Number: 99 Question Id: 3838236459 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

The storage coefficient of aquifer represents

#### **Options:**

1. \* Ratio of specific yield to porosity

- Volume of water retained in storage per unit rise in head
- Wolume of water released from storage per unit decline in head
- A Ratio of specific retention to specific yield

Question Number: 100 Question Id: 3838236460 Question Type: MCQ Option Shuffling: Yes

Display Question Number: Yes Correct Marks: 1 Wrong Marks: 0

Measurement of specific yield of an aquifer in field is done by

#### **Options:**

- 1 Slug tests
- 2 . Grain size analysis
- 3 \* Drain tests
- 4. Pumping tests

Question Number: 101 Question Id: 3838236461 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which stage of EIA involves the identification of potential impacts and formulation of

mitigation measures?

#### **Options:**

- 1 \* Assessment of the impact
- 2. Scoping
- 3. Monitoring
- 4. Screening

 ${\bf Question\ Number: 102\ Question\ Id: 3838236462\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$ 

**Display Question Number: Yes** 

#### Correct Marks: 1 Wrong Marks: 0

According to Montreal Protocol, which is not the key aspect of the international cooperation?

#### **Options:**

- Technology transfer
- 2. \* Financial assistance
- 3. Emission trading
- Capacity building

Question Number: 103 Question Id: 3838236463 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is Green Climate Fund (GCF)?

# **Options:**

1 \* A global carbon trading platform

- A fund to compensate countries for loss and damage due to climate change
- 3. \* A technology transfer platform for climate-friendly technologies
- 4. A financial mechanism under the UNFCCC to support climate action in developing countries

Question Number: 104 Question Id: 3838236464 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

How is the effectiveness of Soil Quality Management Plan assessed?

- 1. \* Through satellite imagery of land use practices
- 2 Regular sampling and analysis of soil samples
- 3. \* Through interviews with local farmers
- 4 \* Through laboratory experiments

Question Number: 105 Question Id: 3838236465 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following international treaty aims to address the climate change by limiting global warming below 2° Celsius above pre-industrial levels?

# **Options:**

- 1 \* Montreal Protocol
- 2. Paris agreement
- 3 \* Kyoto protocol
- 4. \* Copenhagen Accord

Question Number: 106 Question Id: 3838236466 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

The Stockholm Convention aims to protect human health and environment from which types of pollutants?

## **Options:**

- Ozone-depleting substances
- Greenhouse gases
- 3 \* Heavy metals
- ✓ Persistant organic pollutants

Question Number: 107 Question Id: 3838236467 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes

Correct Marks: 1 Wrong Marks: 0

Which international agreement aims to control the transboundary transit of hazardous wastes and their disposal?

# **Options:**

1 \* Rotterdam Convention

- 2. Basel Convention
- 3 Minamata Convention
- 4. Stockholm Convention

Question Number: 108 Question Id: 3838236468 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is not included in the baseline studies conducted in EIA?

#### **Options:**

- ∠ Economic analysis
- 2 \* Air quality monitoring
- Noise level assessments
- ▲ Ecological surveys

Question Number: 109 Question Id: 3838236469 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

How can public participation improve the assessment of social and economic impacts in an EIA?

# **Options:**

- By excluding community perspectives and concerns
- 2. By promoting transparency and accountability
- 3. \* By expediting the approval process without public input
- 4. \* By ignoring the potential impacts on local economies

Question Number: 110 Question Id: 3838236470 Question Type: MCQ Option Shuffling: Yes

**Display Question Number: Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the role of Cumulative Impact Assessment (CIA) in EIA?

# **Options:**

- 1. \* CIA assesses the environmental impacts of individual projects
- 2. CIA is not a part of the EIA process
- 3. CIA assesses the combined impacts of multiple projects on the environment
- ∠ CIA is conducted after project completion

Question Number: 111 Question Id: 3838236471 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

What is the role of biogeochemistry in understanding Earth's systems?

#### **Options:**

- 1 \* To study the behavior of elements in isolation
- 2. \* To analyze only biological processes
- 3. 

  ✓ To investigate the flow and transformations of elements
- △ \* To study the behavior of elements in space

Question Number: 112 Question Id: 3838236472 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is not a physical method for controlling microorganisms?

- 1 \* Radiation
- 2. \* Filtration
- 3. Disinfection
- 4. \* Desiccation

Question Number: 113 Question Id: 3838236473 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following atmospheric pollutants is known to contribute to the formation of ozone in troposphere?

# **Options:**

- 1 \* Sulfur dioxide (SO<sub>2</sub>)
- 2. Oxides of nitrogen & volatile organic compounds
- 3. \* Carbon monoxide (CO)
- 4. Carbondioxide (CO2)

Question Number: 114 Question Id: 3838236474 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which technology utilizes electric charges to remove particulate matter from industrial flue gases?

### **Options:**

- 1 \* Flue Gas Desulfurization (FGD)
- 2. \* Selective Catalytic Reduction (SCR)
- 3 Electrostatic Precipitators (ESP)
- 4. \* Thermal Oxidizers

Question Number: 115 Question Id: 3838236475 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which technology combusts volatile organic compounds (VOCs) at high temperatures to convert them into carbon dioxide and water vapor?

# **Options:**

1. \* Vapor Recovery Systems

- 2 \* Electrostatic Precipitators (ESP)
- 3 / Thermal Oxidizers

Question Number: 116 Question Id: 3838236476 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which landform is typically created by the erosional action of rivers over geological time scales?

#### **Options:**

- 1 \* Moraine
- 2. V Delta
- 3 \* Mesa
- 4. Fjord

Question Number: 117 Question Id: 3838236477 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks : 1 Wrong Marks : 0

What distinguishes metamorphic rocks from igneous and sedimentary rocks?

#### **Options:**

- They are formed from the cooling of molten lava
- They are formed from the accumulation of sediments
- 3 They are formed from the alteration of pre-existing rocks
- 4 \* They are formed from the compression of organic remains

Question Number: 118 Question Id: 3838236478 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which type of satellite sensor captures data in various spectral bands, including visible, infrared and microwave?

# Options:

- ⊥ Lidar sensor
- 2. \* SAR sensor
- 3. Multispectral sensor
- 4. \* Hyperspectral sensor

Question Number: 119 Question Id: 3838236479 Question Type: MCQ Option Shuffling: Yes

**Display Question Number : Yes** 

Correct Marks: 1 Wrong Marks: 0

Which of the following is a basic principle of surveying?

#### **Options:**

- 1. \* Satellite imagery analysis
- 2 \* Data interpolation
- 3 V Triangulation
- 4 × Spectral analysis

Question Number: 120 Question Id: 3838236480 Question Type: MCQ Option Shuffling: Yes

Display Question Number : Yes Correct Marks : 1 Wrong Marks : 0

What is the process of measuring water discharge in rivers and streams?

- 1 Rain gauging
- 2. \* Infiltration measurement
- 3. Stream gauging
- 4. \* Transpiration monitoring