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Question Paper Name: Geo Engineering and Geo Informatics 29th May 2019 Shift 1

Subject Name: Geo Engineering and Geo Informatics

Creation Date: 2019-05-28 15:38:06

Duration:120Total Marks:120Display Marks:NoShare Answer Key With DeliveryYes

Engine:

Actual Answer Key: Yes

Geo Engineering and Geo Informatics

Group Number:

Group Id: 39090041

Group Maximum Duration:

Group Minimum Duration:

Revisit allowed for view?:

No
Revisit allowed for edit?:

No
Break time:

0
Group Marks:

Mathematics

Section Id: 39090076

Section Number: 1
Section type: Online
Mandatory or Optional: Mandatory

Number of Questions:10Number of Questions to be attempted:10Section Marks:10Display Number Panel:YesGroup All Questions:No

Sub-Section Number: 1

Sub-Section Id: 39090076 **Question Shuffling Allowed:** Yes

Question Number: 1 Question Id: 3909004801 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

$$A = \begin{bmatrix} \cos x & \sin x & 0 \\ -\sin x & \cos x & 0 \\ 0 & 0 & 1 \end{bmatrix} = f(x) \text{ then } A^{-1} \text{ is } \dots$$

Options:

$$\int_{1}^{\infty} f(-x)$$

$$_2$$
 $-f(x)$

$$_4-f(-x)$$

Question Number: 2 Question Id: 3909004802 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

If
$$f(x) = \begin{vmatrix} a & -1 & 0 \\ ax & a & -1 \\ ax^2 & ax & a \end{vmatrix}$$
 then $f(2x) - f(x) =$

Options:

- 1 -1
- 2 0
- 3 1
- 4 2

 $Question\ Number: 3\ Question\ Id: 3909004803\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

For the matrix $A = \begin{bmatrix} 3 & -2 & 2 \\ 0 & -2 & 1 \\ 0 & 0 & 1 \end{bmatrix}$, one of the eigenvalues is equal to -2. Which of the

following is an eigenvector?

$$\begin{bmatrix} 3 \\ -2 \\ 1 \end{bmatrix}$$

$$\begin{bmatrix} 1 \\ -2 \\ 3 \end{bmatrix}$$

$$\begin{bmatrix} 2 \\ 0 \\ 0 \end{bmatrix}$$

$$\begin{bmatrix} 2 \\ 5 \\ 0 \end{bmatrix}$$

Question Number: 4 Question Id: 3909004804 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Value of the integral $\iint_S (x+z)dydx + (y+z)dzdx + (x+y)dxdy$ where S is the surface

of the sphere $x^2 + y^2 + z^2 = 4$ is ...

Options:

$$\frac{8\pi}{3}$$

$$\frac{16\pi}{3}$$

$$\frac{32\pi}{3}$$

$$\frac{64\pi}{3}$$

Question Number: 5 Question Id: 3909004805 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

If
$$u = (x^{1/4} + y^{1/4})(x^{1/5} + y^{1/5})$$
 then $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial x} = \cdots$

Options:

$$\frac{7}{20}u$$

$$\frac{9}{20}u$$

$$\frac{11}{20}u$$

$$\frac{13}{20}u$$

Question Number : 6 Question Id : 3909004806 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Analytic function of a complex variable z = x + iy is expressed as f(z) = u(x, y) + iv(x, y) where $i = \sqrt{-1}$. If u = xy the expression for v should be Options:

$$\frac{(y-x)^2}{2} + k$$

$$\frac{y^2 + x^2}{2} + k$$

$$\frac{y^2-x^2}{2}+k$$

$$\frac{(y+x)^2}{2} + k$$

Question Number: 7 Question Id: 3909004807 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Using Cauchy's integral theorem, the value of the $\oint_C z^2 dz$ where C is taken over the

boundary over a square with vertices $\pm 1 \pm i$ in counter-clock wise direction is ...

Options:

- 1 0
- 2 7
- 3 70
- $_{A}-\pi$

Question Number: 8 Question Id: 3909004808 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

The mean and standard deviations of the two samples are given as follows

Sample size-I($n_1 = 50$)	Mean = 54.1	Standard deviation=8
Sample size-I($n_2 = 100$)	Mean = 50.3	Standard deviation=7

Then the mean of the combined sample is...

Options:

- 1 45.65
- 2 49.56
- 3. 51.57
- 4 50.12

Question Number : 9 Question Id : 3909004809 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

If
$$f(x) = \begin{cases} \frac{e^{3x}}{4}, & 0 \le x \le b \\ 0, & elsewhere \end{cases}$$
 is a valid density function then the value of b is ...

$$\frac{1}{2}\ln(11)$$

$$\frac{1}{2}\ln(9)$$

$$\frac{1}{3}\ln(11)$$

$$\frac{1}{3}\ln(13)$$

 $Question\ Number: 10\ Question\ Id: 3909004810\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

If the chance that a bus arrives safely at a bus stand is $\frac{9}{10}$. The probability that out of

5 buses expected at least 4 buses will arrive safely is ...

Options:

$$\frac{14 \times 9^4}{10^5}$$

$$\frac{14\times10^5}{9^5}$$

$$\frac{14\times10^4}{9^5}$$

$$\frac{14 \times 9^4}{10^4}$$

Geo Engineering and Geo Informatics

Section Id : Section Number : Section type :

Mandatory or Optional:

39090077 2

Online
Mandatory

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Number of Questions:	110
Number of Questions to be attempted:	110
Section Marks:	110
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:

Sub-Section Id: 39090077 **Question Shuffling Allowed:** Yes

Question Number: 11 Question Id: 3909004811 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

A low land with faint relief with some low resistance remnants is called

Options:

Penne pane

- Monadnocks
- 3 Distributaries
- 4 Deltas

Question Number: 12 Question Id: 3909004812 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of these is not a karst features?

Options:

- 1 Uvalas
- Sink hole
- 3. Swallow hole
- 4. Alluvial fan

Question Number: 13 Question Id: 3909004813 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Study of current and past landscapes formation is known as

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1. Morphology
2. Aerology
3. Biology
4. Geomorphology
Question Number: 14 Question Id: 3909004814 Question Type: MCQ Option Shuffling: Yes Display Question Number: Ye Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Which of these exogenic forces result in Aeolian land form?
Options: Running ware
2. Glacier
3. Wind
4. Underground water
Question Number: 15 Question Id: 3909004815 Question Type: MCQ Option Shuffling: Yes Display Question Number: Ye Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Dendritic pattern develops on a
Options:
Relatively uniform bed rock
2 Isolated volcanic cones
3. Highly jointed rocks

Question Number: 16 Question Id: 3909004816 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The average width of continental shelf is

4. Alternate weak and resistant bed rock

- 1 80 km
- ₂ 120 km
- 3 150 km
- 4 40 km

 $\label{eq:Question Number: Yes Display Question Number: Yes Display Question Number: Yes Display Question Number: Yes Display Question Option: No Option Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

Which of the following factor effecting the distribution of temperature of ocean is correct?

Options:

Worm ocean currents rise the temperature in cold area while cold current increase the temperature on worm areas

- Oceans in northern hemisphere receive more heat than southern hemisphere
- Wind blowing from land towards ocean drive worm surface water toward the coast
- Temperature of surface water increases from equator to pole

Question Number: 18 Question Id: 3909004818 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Glaciated regions are associated with

Options:

- U- Shaped valley
- , V- Shaped valley
- 3 Sand dunes
- 4 Stalactites

Question Number: 19 Question Id: 3909004819 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

In which of the following areas would a radial drainage generally developed?

Options:

- Composition of volcano
- , Stream terrace
- 3 Delta
- 4. Drainage divide

 $Question\ Number: 20\ Question\ Id: 3909004820\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

Which of the following statement is true?

Options:

- Active volcanoes are always explosive
- , A volcano plug is made up of viscous lava
- Active volcanoes never become dormant
- Volcanic activity is confined to low and middle latitude

 $\label{eq:Question Number: Yes Display Question Number: Yes Display Question Number: Yes Display Question Number: Yes Display Question Option: No Option Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

Which one of these methods of Tunnel construction is not suitable for rock?

- Drift method
- Full face method
- Compressed air method
- 4 Heading and benching method

Single Line Question Option: No Option Orientation: Vertical
Which one of the following is the shield work for Tunneling?
Options:
Liner plate
2. Cutting edge
3. Stiffener
4. Trench jack
Question Number: 23 Question Id: 3909004823 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Folding is the result of
Options:
1. Orogenetic force
2. Coriolis force
Epeirogenetic force
4. Exogenetic force
Question Number: 24 Question Id: 3909004824 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 The process in which one plate is carried beneath another is called
Options:
1. Transformation
2. Subduction
3. Convergence
4 collision

TS PGECET 2019 Question Number: 25 Question Id: 3909004825 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks: 1 Wrong Marks: 0 Felsic and intrusive is property of **Options:** Granite 2 Andesite 3 Basalt 4 Lime stone Question Number: 26 Question Id: 3909004826 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Choose the correct order of earth through geologic time scale Devonian, Permian, Triassic, Cambrian, Jurassic and Cretaceous ² Triassic, Jurassic, Cretaceous, Cambrian, Devonian and Permian Cambrian, Devonian, Permian, Triassic, Jurassic and Cretaceous Jurassic, Cambrian, Devonian, Permian, Triassic and Cretaceous Question Number: 27 Question Id: 3909004827 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0

When the lithosphere plates collide then break and move atop one another along a

- 1 Transform fault
- Normal fault
- 3 trick-slip fault
- 4 Over thrust fault

Question Number: 28 Question Id: 3909004828 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which type of rocks are usually formed under the water when grains of broken rocks are glued together?

Options:

- Volcanic rocks
- 2 Sedimentary rocks
- 3 Metamorphic rocks
- 4 Igneous rocks

Question Number: 29 Question Id: 3909004829 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The grain size is classified as clay if the particle diameter is

Options:

6 mm

 $_{2}$ < 0.002 mm

3. 0.002 to 2mm

4. 2mm

Question Number : 30 Question Id : 3909004830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

The rock formed by chemical precipitation from sea water or salty inland lakes is

Options:

Coal

- 2 Lime stone
- 3 Shale
- 4. Mudstone

TS PGECET 2019 Question Number: 31 Question Id: 3909004831 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 In which type of rocks are coal and petroleum found? **Options:** Metamorphic 2 Igneous 3 Granite 4 Sedimentary Question Number: 32 Question Id: 3909004832 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Igneous rocks that have lowest content of silica are known as Mafic rock Ultramafic rocks 3 Felsic rocks 4 Prophyry Question Number: 33 Question Id: 3909004833 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Arrange the following regions according to their increasing wavelengths **Options:** Visible, Gamma rays, X rays, and Infrared

- Gamma rays, X rays, Visible and Infrared
- Gamma rays, Infrared, Visible and X rays
- Infrared, Gamma rays, Visible and X rays

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Question Number: 34 Question Id: 3909004834 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Description of smallest features in data set that can be displayed or mapped is known as
Options: 1. Accuracy
_{2.} Bias
3. Generalization
4. Resolution
Question Number: 35 Question Id: 3909004835 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Which of the following is not a component of database management system?
Options: 1. Data definition
2. Storage definition
Data base administration
synchronization 4.
Question Number : 36 Question Id : 3909004836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0
What does the total number of pixels in the region define?
Options: Perimeter 1.
2. Area
3. Intensity

4. Brightness

Question Number : 37 Question Id : 3909004837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Pick up the correct statement from the following

Options:

Phytoplankton contains photo synthetically active pigment

- An increasing Phytoplankton increases the back scattering in the green region
- 3 An increase of phytoplankton decrease the back scattering in the green region
- 4 An increase of Phytoplankton absorbs the blue region rapidly

Question Number: 38 Question Id: 3909004838 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The water bearing strata sandwiched between the impervious layers is known as Options:

Aquiclude

- 2. Aquifer
- 3 Deep well
- 4 Shallow well

Question Number : 39 Question Id : 3909004839 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

The zone of a sea lying over the continental shelf is known as the

- Bathyl zone
- Neritic zone
- 3. Abyssal zone

4 Littoral zone

Question Number : 40 Question Id : 3909004840 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Which one of the following gases is found in highest quantity in exosphere?

Options:

- 1 Hydrogen
- , Helium
- 3. Nitrogen
- 4 Oxygen

Question Number : 41 Question Id : 3909004841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

What are the reasons for the seasons?

Options :

- Earth tilt and revolution
- , Earth tilt and rotation
- Earth tilt and resolution
- 4 Earth rotation and revolution

Question Number: 42 Question Id: 3909004842 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is most destructive earthquake induced waves?

- R-waves
- 2 P- waves
- 3 L-waves

4 Surface waves

Question Number: 43 Question Id: 3909004843 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is not correct?

Options:

Rate of increase of temperature beneath the surface is decreasing towards the centre of the earth

- 2 Pressure decreases from the surface towards the centre of the ground
- 3 Density of earth's layers also gets on increasing towards the centre.

The temperature at the centre is estimated to lie somewhere between 3000°C and 5000°C

Question Number: 44 Question Id: 3909004844 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

At which value of temperature Degree Celsius (°C) and Degree foreign (°F) heat are equal

Options:

$$-40^{0}$$

$$4.100^{0}$$

Question Number : 45 Question Id : 3909004845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

The Triple point of water is

Options:

100°C

273°K ₃ 273°C 4 100°K

Question Number: 46 Question Id: 3909004846 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Percentage of fresh water on earth is

Options:

1. 5%

2.66%

3.3%

4. 75%

Question Number: 47 Question Id: 3909004847 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Earth is at the largest distance from the sun on

Options:

1. June 21st

_{2.} January 3rd

3. September 23rd

4. July 4th

Question Number: 48 Question Id: 3909004848 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

One degree of the circumference of the earth measures approximately

_{1.} 100 km
_{2.} 111 km
3. 150 km
4. 175 km
Question Number: 49 Question Id: 3909004849 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Which of the following is super continental formed 600 million years ago?
Options: 1. Rodinia
2. Laurentia
3. Pannonia
4. Pangaea
Question Number: 50 Question Id: 3909004850 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Sea waves are due to
Options: 1. Erosional and depositional forces
2. Endogenic forces
3. Sudden forces
4. Diastrophic forces
Question Number : 51 Question Id : 3909004851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Match the following

a). Glacier

i) Desert

b). Meanders

ii) River of ice

c). Sand dunes

iii) Vertical drop of river

d). Waterfalls

iv) hard bed rock

Options:

a-ii, b-iv, c-i, d-iii

2 a-i, b-iv, c-ii, d-iii

3. a-ii, b-i, c-iv, d-iii

4. a- iii, b- iv, c-i, d- ii

 $Question\ Number: 52\ Question\ Id: 3909004852\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

The axis of Earth which is an imaginary line makes an angle of

Options:

- 1. 23.5°
- 2.66°
- 3. 90°
- 4. 33°

Question Number: 53 Question Id: 3909004853 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The longest day and the shortest night occur on

Options:

₁ 21st June

- 2 22nd June
- 3. 21st July
- 4 22nd July

Question Number : 54 Question Id : 3909004854 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

The two factors that combine to keep earth and moon in their orbits are

Options:

- Gravity and axis
- 2 Gravity and speed
- 3. Gravity and inertia
- Axis and speed

Question Number : 55 Question Id : 3909004855 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Earth is formed

Options:

- 4.6 Billion years ago
- 2 4.6 Million years ago
- 2 Billion year ago
- ⁴ 2 Million years ago

Question Number : 56 Question Id : 3909004856 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Ferrites are

Options:

Paramagnetic

TS PGECET 2019
Diamagnetic 2.
3. Ferromagnetic
Non-magnetic 4.
Question Number: 57 Question Id: 3909004857 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Which of the following is called the light house of the Mediterranean Sea?
Options: Vesuvius of Italy
2. Mount pelee of West Indies
3. Stramboil of sicily
Paracutin of Mexico
Question Number: 58 Question Id: 3909004858 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 The EL Nino phenomena which sparks climatic extreme around the globe originated in the Options: Atlantic ocean sea of China
2. Indian ocean
3.

 $Question\ Number: 59\ Question\ Id: 3909004859\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

4. Pacific ocean

The Earth rotates around its axis from

- 1 Ciano bacteria
- 2. Algae
- 3 Diatoms
- 4 Phytoplankton

Question Number: 63 Question Id: 3909004863 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The Density of sea water ranges from

Options:

90 to 950 kg/m³

 $1020 \text{ to } 1030 \text{ kg/m}^3$

950 to 1000 kg/m³

₄ 1030 to 1050 kg/m³

Question Number: 64 Question Id: 3909004864 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which one among the following is responsible for the expansion of water in the ocean?

Options:

- Nitrogen dioxide
- Carbon dioxide
- Carbon monoxide
- 4 Sulphur dioxide

Question Number: 65 Question Id: 3909004865 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Choose the correct order of ocean relief from shore to sea

Options:

- Continental shelf, Abyssal plain, continental slope and continental rise
- , Continental rise Abyssal plain, Continental shelf and continental slope
- 3 Continental shelf, continental slope, continental rise Abyssal plain
- Abyssal plain, Continental shelf, continental slope and continental rise

Question Number: 66 Question Id: 3909004866 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Salinity is expressed as amount of salt in gram dissolved in sea water per

Options:

10 g

, 100 g

_{3.} 1000 g

4. 10000 g

Question Number: 67 Question Id: 3909004867 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is not a minor relief feature in ocean?

- Seamount
- , Guyots
- Trenches
- Deep sea plain

Correct Marks: 1 Wrong Marks: 0

Largest mica producing state in India is

Options:

Meghalaya

- , Mizoram
- 3. Arunachal Pradesh
- 4 Nagaland

Question Number : 69 Question Id : 3909004869 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Moh's scale is used to indicate the

Options:

- Degree of elasticity of a material
- , Degree of hardness of mineral
- 3 Degree of viscosity of a liquid
- 4 Degree of brittleness of a substance

Question Number: 70 Question Id: 3909004870 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

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Correct Marks: 1 Wrong Marks: 0

Chemical composition of Quartz is

Options:

1 SiO4

2. Al2O3

3. SiO2

4. Si₂O₃

Question Number: 71 Question Id: 3909004871 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Option: Vertical

Single Line Question Option: No Option Orientation: Vertical

Question Number: 74 Question Id: 3909004874 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Sedimentary rock

3. Stratified rock

4. Aqueous rock

Correct Marks: 1 Wrong Marks: 0

The most suitable road material from the following is

Options:

- Volcanic rocks
- Coarse grained igneous rock
- 3. Hypabyssal rock
- plutonic rock

 $Question\ Number: 75\ Question\ Id: 3909004875\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

The property of minerals that indicates how much the surface of a mineral reflects light is called

Options:

- Tenacity
- 2 Luster
- 3. Magnetism
- 4. Diaphaneity

Question Number: 76 Question Id: 3909004876 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The tendency of a crystallized mineral to break along certain directions yielding more or less smooth, plane surfaces is

- Cleavage
- 2 Hardness
- Tenacity

4. Fracture

 $Question\ Number: 77\ Question\ Id: 3909004877\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

What will be included angle of AOB if the bearing of the lines AO and OB are 130° and 40° respectively

Options:

- 1. 90°
- 2 170°
- 3. 270°
- 4. 130°

Question Number: 78 Question Id: 3909004878 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Back bearing of a line is 36°, its Fore bearing will be

Options:

- 1 200°
- 2 216°
- 3. 316°
- 4.116°

Question Number: 79 Question Id: 3909004879 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The correction for refraction as applied to staff reading is

[(R= Radius of earth (km), d= Distance of the visible horizon (m)]

$$-\frac{1}{7}\left(\frac{d^2}{2R}\right)$$

$$+\frac{1}{7}\left(\frac{d^2}{2R}\right)$$

$$-\frac{6}{7}\left(\frac{d^2}{2R}\right)$$

$$+\frac{5}{7}\left(\frac{d^2}{2R}\right)$$

 $Question\ Number: 80\ Question\ Id: 3909004880\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

The number of independent conditions required to satisfied for the adjustment of a braced equilateral in triangle survey is

Options:

1. 8

2 3

3 6

4. 4

Question Number: 81 Question Id: 3909004881 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following scales is largest one?

Options:

$$1 \text{ cm} = 50 \text{km}$$

2 1:42000

$$R. F = \frac{1}{300000}$$

$$_{4}$$
 1cm = 50m

Question Number: 82 Question Id: 3909004882 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0 Linear and angular accuracy of Total station respectively are **Options:** 1 mm&10" 10 mm & 20" 3 5 mm & 10"

4. 1 mm & 1"

Question Number: 83 Question Id: 3909004883 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The system that uses the sun as a source of electromagnetic energy and records the naturally radiated and reflected energy from the object is called

Options:

- Geographical Information system
- , Passive Remote Sensing
- Global Positioning System
- 4 Active Remote Sensing

Question Number: 84 Question Id: 3909004884 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The line joining points of equal dip is called

- Agonic lines
- Isoclinic lines
- Isogonic lines

4. Aclinic lines

Question Number: 85 Question Id: 3909004885 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

When contours of different elevations across each other, it indicates

Options:

- Overhanging cliff
- , level surface
- 3 Saddle
- 4 Vertical cliff

Question Number: 86 Question Id: 3909004886 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No. Option Orientation: Vertical

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

A hyetograph is a graphical representation of

Options:

- , Rainfall intensity and time
- , Rainfall depth and time
- Discharge and Time
- Cumulative rainfall

Question Number: 87 Question Id: 3909004887 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is not an analytical method of estimation of evaporation?

Options:

Mass transfer method

- Energy balance method
- Water budget method
- Penman's equation

Question Number: 88 Question Id: 3909004888 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

If the annual stream flow from a 10km² catchment is 10⁷ m³, it corresponding to its depth of

Options:

, 10 cm

, 10 m

₃ 100 cm

4. 0.1 m

Question Number: 89 Question Id: 3909004889 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks : 1 Wrong Marks : 0

The lowering effect on the water table about the base of the well stem is called

Options:

Speleothem

- , Cone of depression
- 3 Artesian surface
- 4. Aquiclude

Question Number: 90 Question Id: 3909004890 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

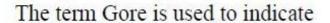
Correct Marks: 1 Wrong Marks: 0

The local water table positioned above the regional water table is said to be

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Options: Stranded
2. Perched
3. Displaced
4. Depressed
Question Number: 91 Question Id: 3909004891 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
The boundary between the saturated zone and the unsaturated zone is called
Options: 1. Water table
2. Aquifer
3. Aquiclude
4. Porosity
Question Number: 92 Question Id: 3909004892 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Direct run off is made up of
Options:
Surface runoff, Prompt interflow and channel precipitation
Surface runoff, infiltration and evapotranspiration
Overland flow and infiltration

Rainfall and evaporation

 $Question\ Number: 93\ Question\ Id: 3909004893\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$



Options:

Rectangular land

- , Perimeter of land
- Thin triangular land
- 4 A measure of distance

Question Number : 94 Question Id : 3909004894 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

A 6- hour storm had 6 cm of rainfall and resulting runoff was 3 cm. If the ϕ -index remains at the same value the runoff due to 12 cm of rainfall in 9 hours in the catchment is

Options:

1 9 cm

₂ 4.5 cm

, 6 cm

7.5 cm

 $Question\ Number: 95\ Question\ Id: 3909004895\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 1 Wrong Marks: 0

The number of seismograph stations needed to locate the epicenter of an earthquake is

Options:

1 7

, 5

, 4

4 3

Question Number : 96 Question Id : 3909004896 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Identify the Non Green house gas from the following

Options:

- Carbon monoxide
- , Methane
- 3 Nitrous Oxide
- Sulphur Hexafluoride

Question Number: 97 Question Id: 3909004897 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Dispersion of pollutants in atmosphere is maximum when

Options:

- Environmental lapse rate less than adiabatic lapse rate
- , Environmental lapse rate equal to adiabatic lapse rate
- 3. Environmental lapse rate greater than adiabatic lapse rate
- 4 Maximum mixing depth is zeros

Question Number: 98 Question Id: 3909004898 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is an example of secondary pollutants?

- Carbon dioxide
- , Nitrogen oxide

Chlorofluorocarbons

4 Ozone

Question Number: 99 Question Id: 3909004899 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Option: Vertical

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Worlds wetlands day is celebrated on

Options:

2nd February

, 21st February

3. 2nd March

21st March

Question Number: 100 Question Id: 3909004900 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Instrument used to find the wind direction is

Options:

- 1 Anemometer
- , Wing gauge
- Wind vane
- Hygrometer

Question Number: 101 Question Id: 3909004901 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Rain shadow effects is associated with

Options:

Cyclonic rainfall

- , Orographic rainfall
- Convectional rainfall
- 4 Frontal rainfall

Question Number: 102 Question Id: 3909004902 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following conceptual sphere of the environment is having the least storage capacity for matter?

Options:

- Atmosphere
- Lithosphere
- 3 Hydrosphere
- 4 Biosphere

Question Number: 103 Question Id: 3909004903 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

The environment which has been modified by human activities is called

- 1. Natural environment
- , Anthropogenic environment
- Modem environment
- Urban environment

Question Number: 104 Question Id: 3909004904 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

The ratio of volume of voids to the total volume of a given soil is

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1. Air ratio
2. Air content
3. Void ratio
4. Porosity
Question Number: 105 Question Id: 3909004905 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 A soil having particles of nearly the same size is known as Options: Well graded
2. Uniformly graded
3. Poorly graded
4. Gap graded
Question Number: 106 Question Id: 3909004906 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 A moist sample of soil weight 24 g is in tin lid. The tin lid above weighs 14g. Oven dry weight of tin and sample is 22 g. What is the water content of the soil? Options: 1. 12.5%
2 37.5%

3. 25% 4. 50%

 $Question\ Number: 107\ Question\ Id: 3909004907\ Question\ Type: MCQ\ Option\ Shuffling: Yes\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Effective angle of internal friction will be Options: 1800
Limited to maximum of 45°
3. 90°
_{4.} Zero ⁰
Question Number: 108 Question Id: 3909004908 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 The angle between the direction of failure and the direction of major principal plantics. degrees when the angle of shearing resistance is of 30°
options: degrees when the angle of shearing resistance is of 30° Options: 1. 60
2. 75
_{3.} 45
4. 70
Question Number: 109 Question Id: 3909004909 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Effective stress of the soil
Options:
Increases void ratio and decreases permeability
Decreases void ratio and increases permeability
Increases both void ratio and permeability

4. Decreases both permeability and void ratio

Question Number: 110 Question Id: 3909004910 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
The value of compression index for a remolded sample which has a liquid limit of 50%, is
Options:
1. 0.28
2. 0.028
3. 0.36
4. 0.036
Question Number: 111 Question Id: 3909004911 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Water quantity of saturated soil is 50%. If the specific gravity of the solid is 2.4,
what is its void ratio?
Options:
0.6
2.4
3. 1.2
4. 1.8
Question Number: 112 Question Id: 3909004912 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0 Which C Header files define numeric conversion function and memory allocation?
Options: 1. stddea.h
_{2.} stdlib.h
3. stdio.h

4. stdint.h

Question Number: 113 Question Id: 3909004913 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is not standard C Library?

Options:

- errno.h
- 2 tetarg.h
- signal.h
- 4. setjmp.h

Question Number: 114 Question Id: 3909004914 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No. Option Orientation: Vertical

Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 1 Wrong Marks: 0

Which of the following is not correct?

Options:

- C provides object oriented programming (OOP)
- C Programmes are collection of C Library function
- C Compiler can only identify errors
- C programmes are efficient and fast

Question Number: 115 Question Id: 3909004915 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes

Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 1 Wrong Marks: 0

A variable name cannot consists of

Options:

Digits 0-9

2. —

3. #, \$
a - z
Question Number: 116 Question Id: 3909004916 Question Type: MCQ Option Shuffling: Yes Display Question Number: Ye Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Which of the following concepts make extensive use of arrays?
Options:
1. Spatial locality
Scheduling of processes
3. Caching
Binary trees
Question Number: 117 Question Id: 3909004917 Question Type: MCQ Option Shuffling: Yes Display Question Number: Ye Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
is usually used to specify the type of functions which returns nothing
Options:
1. Character
2. Float
3. Void
4. Integer
Question Number: 118 Question Id: 3909004918 Question Type: MCQ Option Shuffling: Yes Display Question Number: Ye Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Which of the following are themselves a collection of different data types?
Options:
1. String

2. Structure
3. Char
4. Array
Question Number: 119 Question Id: 3909004919 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Which function is responsible for recording the name "s" and the replacement text "t" in a table?
Options:
install(s, t);
$_{2.}$ fix(s, t);
3. setup(s, t);
4. settle(s, t);
Question Number: 120 Question Id: 3909004920 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes
Single Line Question Option: No Option Orientation: Vertical Correct Marks: 1 Wrong Marks: 0
Which of the following is used to handle tasks such as mathematical computations.
I/O processing, string handling?
Options:
Standard library functions
2. User-defined function
3. Storage class
4. Programming pointer