

# 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.

<b>Question Paper Name :</b>	Geo Engineering and Geo Informatics 29th May 2023 Shift1
<b>Subject Name :</b>	Geo Engineering and Geo Informatics
<b>Creation Date :</b>	2023-05-29 18:27:13
<b>Duration :</b>	120
<b>Total Marks :</b>	120
<b>Display Marks:</b>	No
<b>Share Answer Key With Delivery Engine :</b>	Yes
<b>Actual Answer Key :</b>	Yes
<b>Calculator :</b>	None
<b>Magnifying Glass Required? :</b>	No
<b>Ruler Required? :</b>	No
<b>Eraser Required? :</b>	No
<b>Scratch Pad Required? :</b>	No
<b>Rough Sketch/Notepad Required? :</b>	No
<b>Protractor Required? :</b>	No
<b>Show Watermark on Console? :</b>	Yes
<b>Highlighter :</b>	No
<b>Auto Save on Console?</b>	Yes
<b>Change Font Color :</b>	No

<b>Change Background Color :</b>	No
<b>Change Theme :</b>	No
<b>Help Button :</b>	No
<b>Show Reports :</b>	No
<b>Show Progress Bar :</b>	No

## **Geo Engineering and Geo Informatics**

<b>Group Number :</b>	1
<b>Group Id :</b>	28393657
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	120
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	120
<b>Is this Group for Examiner? :</b>	No
<b>Examiner permission :</b>	Cant View
<b>Show Progress Bar? :</b>	No

## **Mathematics**

<b>Section Id :</b>	283936165
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	10
<b>Number of Questions to be attempted :</b>	10

Section Marks : 10  
Enable Mark as Answered Mark for Review and Response : Yes Clear  
Maximum Instruction Time : 0  
Sub-Section Number : 1  
Sub-Section Id : 283936165  
Question Shuffling Allowed : Yes  
Is Section Default? : null

Question Number : 1 Question Id : 2839368201 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let  $A$  be a square matrix of order 4 with  $|A| = 6$ . Then  $|2A| =$

Options :

1.  96

2.  12

3.  24

4.  6

Question Number : 2 Question Id : 2839368202 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The number of solutions of the system of equations  $x - y + 3z = 3$ ,  $2x + 3y + z = 2$  and  $3x + 2y + 4z = 5$  is

Options :

1. ✘ 0

2. ✘ 1

3. ✔ infinite

4. ✘ 3

Question Number : 3 Question Id : 2839368203 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the sum of the eigenvalues of the matrix  $A = \begin{pmatrix} 1 & 3 & 5 \\ 2 & k & 3 \\ 4 & -1 & 5 \end{pmatrix}$  is 15, then  $k =$

Options :

1. ✘ 2

2. ✔ 9

3. ✘ 6

4. ✘ -9

Question Number : 4 Question Id : 2839368204 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \rightarrow 1} \frac{nx - n}{x^n - 1} =$$

Options :

1. ✔ 1

2. ✘  $\frac{1}{n}$

3. ✘  $n^2$

4. ✘  $n$

Question Number : 5 Question Id : 2839368205 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The improper integral  $\int_0^4 \frac{dx}{\sqrt{x}}$  converges to

Options :

1. ✘ 2

2. ✓ 4

3. ✗ 0

4. ✗ 1

Question Number : 6 Question Id : 2839368206 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The directional derivative of  $f(x, y) = xy(xy^2 + 1)$  at  $(2, 1)$  in the direction of the unit  
vector which makes an angle  $\frac{\pi}{3}$  with  $x$ -axis is

Options :

1. ✗  $5 - 14\sqrt{3}$

2. ✗  $\frac{5 - 14\sqrt{3}}{2}$

3. ✓  $\frac{5 + 14\sqrt{3}}{2}$

4. ✗  $5 + 14\sqrt{3}$

Question Number : 7 Question Id : 2839368207 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The values of  $a$  and  $b$  so that the function  $f(z) = x - 2ay + i(x - by)$  is analytic are respectively

Options :

1. ✓  $\frac{1}{2}, -1$

2. ✗  $1, -1$

3. ✗  $\frac{1}{2}, 0$

4. ✗  $0, -1$

Question Number : 8 Question Id : 2839368208 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Laurent's series expansion of  $f(z) = \frac{e^z}{z^2}$  about  $z = 0$  is

Options :

1. ✗  $\sum_{n=0}^{\infty} \frac{1}{z^{n+2}}$

2. ✓  $\sum_{n=0}^{\infty} \frac{1}{n!z^{n+2}}$

3. ✗  $\sum_{n=0}^{\infty} \frac{1}{n!z^n}$

4. ✗  $\sum_{n=0}^{\infty} \frac{n!}{z^n}$

Question Number : 9 Question Id : 2839368209 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let A and B be two events such that  $P(A) = \frac{1}{2}$ ,  $P(B) = \frac{1}{3}$  and  $P(A \cap B) = \frac{1}{4}$ .

Then  $P(B/A) =$

Options :

1. ✓  $\frac{1}{2}$

2. ✗  $\frac{1}{3}$

3. ✗  $\frac{1}{4}$



4. ✘  $\frac{2}{3}$

Question Number : 10 Question Id : 2839368210 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A continuous random variable  $X$  has the p.d.f.  $f(x) = \begin{cases} \frac{1}{k}, & a \leq x \leq b \\ 0, & \text{elsewhere} \end{cases}$ .

The value of  $k$  is

Options :

1. ✘  $\frac{1}{b-a}$

2. ✔  $b-a$

3. ✘ 1

4. ✘  $\frac{1}{a-b}$

## Geo Engineering and Geo Informatics

Section Id :

283936166

Section Number :

2

Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	283936166
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 11 Question Id : 2839368211 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The flatter region beyond the reach of high tides is known as

Options :

1.  berm
2.  swash zone
3.  breaker zone
4.  surf zone

Question Number : 12 Question Id : 2839368212 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The formation where the longshore current slows and sediments accumulate is called as

Options :

1. ✘ spit
2. ✔ tombolo
3. ✘ back reef
4. ✘ fore reef

Question Number : 13 Question Id : 2839368213 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The valley formation, one which has steep step-like side slopes is called

Options :

1. ✔ canyon
2. ✘ meander
3. ✘ gorge

4. ✘ V-shaped valley

Question Number : 14 Question Id : 2839368214 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the series of smaller sinkholes come together to form into a compound sinkhole is  
called as

Options :

1. ✘ cave

2. ✔ uvala

3. ✘ lappies

4. ✘ doline

Question Number : 15 Question Id : 2839368215 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which of the following areas the geomorphology concepts are not needed?

Options :

1. ✘ natural hazards and natural resources management

2. ✘ regional planning

3. ✘ mineral exploration

4. ✔ non-engineering projects

Question Number : 16 Question Id : 2839368216 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The percentage of oxygen in the earth's crust is

Options :

1. ✘ 65%

2. ✔ 46%

3. ✘ 72%

4. ✘ 21%

Question Number : 17 Question Id : 2839368217 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How old is earth?

Options :

1. ✘ between 3.5 and 3.8 billion years
2. ✘ between 3.5 and 3.8 million years
3. ✘ between 4.5 and 4.8 million years
4. ✔ between 4.5 and 4.8 billion years

Question Number : 18 Question Id : 2839368218 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The gravitational sphere of influence of the earth is approximately

Options :

1. ✘ five times the average distance to the Moon
2. ✔ four times the average distance to the Moon
3. ✘ three times the average distance to the Moon
4. ✘ two times the average distance to the Moon

Question Number : 19 Question Id : 2839368219 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A satellite maintains its orbit by balancing

Options :

1. ✘ velocity and distance
2. ✘ gravitational pull towards earth and radius
3. ✘ radius of orbit and velocity
4. ✔ velocity and gravitational pull

Question Number : 20 Question Id : 2839368220 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum depth of Indian ocean reported is

Options :

1. ✘ 5.258 km
2. ✘ 6.258 km
3. ✔ 7.258 km

4. ✘ 8.258 km

Question Number : 21 Question Id : 2839368221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The gradient of the continental slope varies between

Options :

1. ✔ 2° to 5°

2. ✘ 5° to 8°

3. ✘ 8° to 11°

4. ✘ 11° to 13°

Question Number : 22 Question Id : 2839368222 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The shallowest part of the ocean which has an average gradient of 1° or even less is called as

Options :

1. ✘ deep sea plain



2. ✘ oceanic trench
3. ✔ continental shelf
4. ✘ submarine canyons

Question Number : 23 Question Id : 2839368223 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Mohr's hardness value of Feldspar ranges between

Options :

1. ✔ 6 and 6.5
2. ✘ 5 and 5.5
3. ✘ 4 and 4.5
4. ✘ 3 and 3.5

Question Number : 24 Question Id : 2839368224 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is correct as per the uses of corundum mineral is concerned

Options :

1.  optical and space equipment
2.  manufacture of fertilizer
3.  pigment
4.  glassmaking

Question Number : 25 Question Id : 2839368225 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Number of tetrahedrons needed to build even a small crystal are

Options :

1.  thousands
2.  lakhs
3.  millions
4.  billions

Question Number : 26 Question Id : 2839368226 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If P = precipitation, ET = evapotranspiration, G = percolation loss to ground water, Q = direct runoff and  $\Delta S$  = change in soil moisture storage then, the equation for water balance is

Options :

1. ✘  $P = ET + G + Q - \Delta S$

2. ✔  $P = ET + G + Q + \Delta S$

3. ✘  $P = ET + G - Q - \Delta S$

4. ✘  $P = ET - G - Q - \Delta S$

Question Number : 27 Question Id : 2839368227 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The energy needed to change the state of the molecules of water from liquid to vapour in the evapotranspiration process is obtained from

Options :

1. ✘ high solar radiation

2. ✘ high ambient temperature of the air

3. ✘ less solar radiation and high ambient temperature of the air

4. ✓ high solar radiation and less ambient temperature of the air

Question Number : 28 Question Id : 2839368228 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At the surface of the water table, the water pressure head is equal to

Options :

1. ✗ 10 kPa

2. ✗ 10 MPa

3. ✓ 100 kPa

4. ✗ 100 MPa

Question Number : 29 Question Id : 2839368229 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which is the incorrect one among the following as per the expertise of environmental  
geologist is concerned

Options :

1. ✗ protection and repair of wetlands

2. ✘ protection and repair of streams
3. ✘ protection and repair of rivers and shorelines
4. ✔ protection and repair of building structures founded on subsurface soil

Question Number : 30 Question Id : 2839368230 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The thickness of the troposphere is

Options :

1. ✘ 100 miles
2. ✔ 10 miles
3. ✘ 100 km
4. ✘ 10 km

Question Number : 31 Question Id : 2839368231 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following environmental component provides the basis for biotic factors?

Options :

1. ✓ biosphere
2. ✗ lithosphere
3. ✗ atmosphere
4. ✗ hydrosphere

Question Number : 32 Question Id : 2839368232 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The subject that studies complex interaction of human with nature and provides guidelines for the way forward is called

Options :

1. ✗ biogenetics
2. ✗ geomorphology
3. ✗ geoinformatics
4. ✓ environmental science

Question Number : 33 Question Id : 2839368233 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following soils have high shear strength

Options :

1. ✘ soils of density index 30%
2. ✘ soils of density index 50%
3. ✘ soils of density index 65%
4. ✔ soils of density index 75%

Question Number : 34 Question Id : 2839368234 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a soil has porosity of 0.5 and discharge velocity of  $1 \times 10^{-4}$  cm/s, then its seepage  
velocity is

Options :

1. ✔  $2 \times 10^{-4}$  cm/s
2. ✘  $1 \times 10^{-4}$  cm/s

3. ✘  $0.5 \times 10^{-4} \text{cm/s}$

4. ✘  $3.33 \times 10^{-4} \text{cm/s}$

Question Number : 35 Question Id : 2839368235 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ideal soil texture consists of

Options :

1. ✔ mix of sand, silt, and clay particles

2. ✘ mix of sand, gravel and silt particles

3. ✘ mix of gravel, clay and sand particles

4. ✘ mix of silt, clay and gravel particles

Question Number : 36 Question Id : 2839368236 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An exposure of younger strata that are completely surrounded by older strata is called

Options :



1. ✓ outlier

2. ✗ inlier

3. ✗ fissile

4. ✗ stratified formation

Question Number : 37 Question Id : 2839368237 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The units above and below the unconformity surface are parallel to each other, but not continuous in deposition are called as

Options :

1. ✗ para-conformities

2. ✗ nonconformities

3. ✗ angular conformities

4. ✓ disconformities

Question Number : 38 Question Id : 2839368238 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The deformation, a rock can undergo when subjected to stress at certain depths within the earth, where pressures and temperatures are high is called

Options :

1. ✘ laminated deformation
2. ✔ ductile deformation
3. ✘ brittle deformation
4. ✘ creep deformation

Question Number : 39 Question Id : 2839368239 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Those folds which are having interlimb angle more than  $70^\circ$  are called as

Options :

1. ✘ closed folds
2. ✘ tight folds
3. ✔ open folds

4. ✘ isoclinal folds

Question Number : 40 Question Id : 2839368240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The joints which form when the rocks expand as a result of the rapid removal of the overlying rock cover are called

Options :

1. ✘ secondary joints

2. ✔ sheet joints

3. ✘ columnar joints

4. ✘ mud joints

Question Number : 41 Question Id : 2839368241 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The rocks with a strong secondary planar fabric are known as

Options :

1. ✘ LS-tectonites

2. ✘ L-tectonites

3. ✔ S-tectonites

4. ✘ Lineations

Question Number : 42 Question Id : 2839368242 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which portion of the spherical projection, a geologist will use for crystallographic analysis?

Options :

1. ✔ bottom half

2. ✘ top half

3. ✘ both top and bottom individually

4. ✘ whole spherical projection at a time

Question Number : 43 Question Id : 2839368243 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Tectonites which allows the rock to split into rod-like shapes due to the two intersecting planes are called

**Options :**

1. ✓ L-tectonites
2. ✗ S-tectonics
3. ✗ LS – tectonites



4. SL – tectonites

Question Number : 44 Question Id : 2839368244 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The rocks which contain reasonable amounts of dynamically crystallized fine-grained material are called

Options :

1. ultramylonite
2. porphyroclasts
3. protomylonite
4. mylonitic

Question Number : 45 Question Id : 2839368245 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The combination of strike-slip and dip-slip falls under which type of shear zones?

Options :

1. oblique-slip



2.  thrust
3. reverse
4. normal

Question Number : 46 Question Id : 2839368246 Question Type : MCQ Option Shuffling : Yes





Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The shielded areas, which help shielding the matrix on the flanks of the inclusion from strain is called

Options :

1.  SC fabrics
2.  shear bands
3.  pressure shadows
4.  veins

Question Number : 47 Question Id : 2839368247 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time



: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Twinning in crystals occur when two different types of crystals share the same crystal lattice points in a

Options :

1.  symmetrical manner
2.  unsymmetrical manner
3.  both symmetrical and unsymmetrical manner
4.  random manner

Question Number : 48 Question Id : 2839368248 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The chemical formula of Muscovite is

Options :

1.   $K Al_2 (Al Si_3) O_{10} (OH, F)_3$
2.   $K Al_4 (Al Si_4) O_8 (OH, F)_2$
3.   $K Al_2 (Al Si_3) O_{10} (OH, F)_2$





4. ✘  $K Al_2 (Al Si_3) O_8 (OH, F)_2$

Question Number : 49 Question Id : 2839368249 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The property of a mineral that causes the mineral to display different colors when viewed from different angles is known as

Options :

1. dispersion
2. fluorescence
3. ✔ pleochroism
4. ✘ birefringence



Question Number : 50 Question Id : 2839368250 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For which of the following minerals, the  $Al_2 SiO_5$  is not the chemical formula



**Options :**

1.  Andalusite
2.  Sillimanite
3.  Kyanite
4.  Orthoclase

**Question Number : 51 Question Id : 2839368251 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time**

**: N.A Think Time : N.A Minimum Instruction Time : 0**

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

A rock core has RQD between 50 to 75%, then its geotechnical quality is

Options :

1. ✘ good

2. ✘ excellent

3. ✔ fair

4. ✘ poor

Question Number : 52 Question Id : 2839368252 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

From the Dorry's abrasion test on rock sample, the loss of weight is found to be 6 grams. The coefficient of hardness of rock sample is

Options :

1. ✘ 14

2. ✔ 18

3. ✘ 24

4. ✘ 30

Question Number : 53 Question Id : 2839368253 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following materials are most suitable as foundation material for dam construction?

Options :

1. ✘ shales
2. ✘ lime stones
3. ✘ laterites
4. ✔ sedimentary formations with less porosity

Question Number : 54 Question Id : 2839368254 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is desirable for tunnel construction?

Options :

1. ✘ tunnel alignment parallel to the axis of a fold
2. ✔ horizontal or gently inclined undisturbed beds
3. ✘ tunnels perpendicular to the axis of a fold

4. ✘ tunnel along strike of inclined beds

Question Number : 55 Question Id : 2839368255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The cone of exhaustion in ground water is

Options :

1. ✘ permanent fluctuation

2. ✔ temporary fluctuation

3. ✘ both permanent and temporary fluctuation

4. ✘ recovers after longer periods

Question Number : 56 Question Id : 2839368256 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The relation between unconfined compressive strength  $q_u$  and the point load index with 50 mm diameter cores  $I_{s50}$  is

Options :

1. ✘  $q_u = 21I_{s50}$

2. ✘  $q_u = 22I_{s50}$

3. ✘  $q_u = 23I_{s50}$

4. ✔  $q_u = 24I_{s50}$

Question Number : 57 Question Id : 2839368257 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of volume of open space in a rock to total volume of rock is called as

Options :

1.  porosity
2.  void ratio
3.  air content
4.  degree of saturation

Question Number : 58 Question Id : 2839368258 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following term is closely related to volcanic eruption?

Options :

1.  earthquake
2.  lahar
3.  sinkhole

4. heat wave

Question Number : 59 Question Id : 2839368259 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per the IS 10500:2012, in the absence of an alternate source of water for drinking,  
the permissible limits of chloride and total suspended solids in mg/l respectively are

Options :

1. ✘ 250 and 500

2. ✘ 250 and 2000

3. ✘ 1000 and 500

4. ✔ 1000 and 2000

Question Number : 60 Question Id : 2839368260 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0





The pumping rate and drawdown of a well are 100 gpm and 150 gpm respectively, then the specific capacity of well is

Options :

1. ✓ 66.66%
2. ✗ 150%
3. ✗ 140%
4. ✗ 56.66%

Question Number : 61 Question Id : 2839368261 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The volume of earth is

Options :

1. ✗ 0.8 trillion cubic kilometers
2. ✗ 0.9 trillion cubic kilometers
3. ✓ 1.0 trillion cubic kilometers
4. ✗ 1.1 trillion cubic kilometers

Question Number : 62 Question Id : 2839368262 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Why does earth rotate from west to east?

Options :

1.  the spin of the earth is towards the direction in the east
2.  the spin of the earth is towards the direction in the west
3.  the spin of the earth is towards the direction in the south - east



4. ✖ the spin of the earth is towards the direction in the south - west

Question Number : 63 Question Id : 2839368263 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The name of the temperature zone between the “tropic of Capricorn and Antarctica circles” is

Options :

1. ✖ Torrid temperate zone

2. ✔ South temperate zone

3. ✖ Frigid temperate zone

4. ✖ North temperate zone

Question Number : 64 Question Id : 2839368264 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The acceleration due to gravity \_\_\_\_\_, when moved from equator to pole.

Options :

1. ✖ decreases

✖

✖

2. remains constant

3. become zero

4.  increases

Question Number : 65 Question Id : 2839368265 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At what height from the surface of earth, the gravitational force will be reduced by 10%? Assume the radius of earth as 6370 km.

Options :

1.  650 km

2.  344 km

3.  450 km

4.  750 km



Question Number : 66 Question Id : 2839368266 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The flattened shape of the earth is noticed at

Options :

1. north pole and equator
2. equator and south pole
3. ✓ both south and north poles
4. ✗ only at equator

Question Number : 67 Question Id : 2839368267 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Earth's magnetic field extends from

Options :

1. ✓ the earth's interior to where it meets the solar wind
2. ✗ the earth's surface to where it meets the solar wind
3. ✗ the earth's ground water level to where it meets the solar wind
4. ✗ Anywhere from earth's groundwater table

Question Number : 68 Question Id : 2839368268 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which state the geothermal energy is found in India?

Options :

1. ✘ Kutch region in Gujarat
2. ✘ Kaleswaram region in Telangana



3. ✓ Sohana region in Haryana

4. ✘ Latur region in Maharashtra

Question Number : 69 Question Id : 2839368269 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In comparison of oceanic crust and continental crust, which of the following statement is correct?

Options :

1. ✘ thickness of oceanic crust is thicker than continental crust

2. ✓ thickness of oceanic crust is thinner than continental crust

3. ✘ the density of oceanic crust is lighter than the continental crust

4. ✘ the ratio of thicknesses of oceanic crust to continental crust is unity

Question Number : 70 Question Id : 2839368270 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The moderate angular velocity at which the earth rotates is

Options :

✘

1.  $7.2921159 \times 10^{-2}$  radians/second
2. ✘  $7.2921159 \times 10^{-3}$  radians/second
3. ✘  $7.2921159 \times 10^{-4}$  radians/second
4. ✔  $7.2921159 \times 10^{-5}$  radians/second

Question Number : 71 Question Id : 2839368271 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Electric conductivity increases with

Options :

1. ✘ decreasing iron content, increasing temperature and increasing pressure
2. ✔ increasing iron content, increasing temperature and decreasing pressure
3. ✘ increasing iron content, increasing temperature and increasing pressure
4. ✘ decreasing iron content, decreasing temperature and decreasing pressure

Question Number : 72 Question Id : 2839368272 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0



Correct Marks : 1 Wrong Marks : 0

As per the core of the earth is concerned, which of the following is correct one?

Options :

1. ✓ core of the earth is conductive
2. ✗ core of the earth is non-conductive
3. ✗ core of the earth sometimes conductive and sometimes non-conductive
4. ✗ no clarity on conductivity of core of the earth.

Question Number : 73 Question Id : 2839368273 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The magnetic intensity of the earth tends to

Options :

1. ✗ increase from the poles to the equator
2. ✗ be constant
3. ✓ decrease from the poles to the equator
4. ✗ be maximum at equator

Question Number : 74 Question Id : 2839368274 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per the Indian seismicity is concerned, which of the following seismic zones is the most risky one?

Options :

1.  zone-V
2.  zone-IV
3.  zone-III
4.  zone-II

Question Number : 75 Question Id : 2839368275 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is used to measure the motions related to the ground resulting in an earthquake?

Options :

1.  Seismogram
2.  Seismograph

3. ✘ Richter scale

4. ✘ Damper

Question Number : 76 Question Id : 2839368276 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per the modified Mercalli's earthquake intensity scale, for what intensity the ground shaking is called very strong?

Options :

1. ✘ V

2. ✘ VI

3. ✔ VII

4. ✘ VIII or higher

Question Number : 77 Question Id : 2839368277 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following peak ground acceleration value is correct corresponding to the modified Mercalli's intensity of VII?

**Options :**

1. ✘ 0.06-0.07

2. ✔ 0.10-0.15

3. ✘ 0.25-0.30

4. ✘ 0.50-0.55

**Question Number : 78 Question Id : 2839368278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time**

**: N.A Think Time : N.A Minimum Instruction Time : 0**

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

At a seismic station, which is 1200m away from the epicenter, the seismic wave velocities for P and S-wave recorded are 600 m/s and 350m/s respectively, the duration of primary tremors is

**Options :**

1. ✘ 1.228 s

2. ✘ 1.528 s

3. ✘ 1.328 s

4. ✔ 1.428 s

Question Number : 79 Question Id : 2839368279 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following seismic waves do not change the instantaneous volume of the material through which they pass?

Options :

1. ✘ P-waves

2. ✔ S-waves

3. ✘ L- wave

4. ✘ R-waves

Question Number : 80 Question Id : 2839368280 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Shallow earthquakes are produced by

Options :

1. ✔ dip-slip motion resulting in thrust faulting

2. ✘ extension or compression of plates

3. ✘ compression along the boundaries

4. ✘ tension along the boundaries

Question Number : 81 Question Id : 2839368281 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct relation between photographic scale (S) and flying height (H)?

Options :

1. ✘  $S \propto H$

2. ✔  $S \propto (1/H)$

3. ✘  $S \propto H^2$

4. ✘  $S \propto (1/H^2)$

Question Number : 82 Question Id : 2839368282 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The aerial photographs with the scale ranging between 1:15000 and 1:50000 are usually considered as

Options :

1. ✘ extra-large scale
2. ✘ smaller scale
3. ✘ large scale
4. ✔ medium scale

**Question Number : 83 Question Id : 2839368283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

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

The continuum of EMR that ranges from short wave high frequency cosmic radiations to long wavelength low frequency radio waves is called as

**Options :**

1. ✔ Electromagnetic Spectrum
2. ✘ Radio frequency spectrum
3. ✘ Solar spectrum
4. ✘ Spectral band

**Question Number : 84 Question Id : 2839368284 Question Type : MCQ Option Shuffling : Yes**

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Colour signature on standard false colour composite of earth surface feature such as water logged/or wet lands is

Options :

1. ✘ light blue
2. ✘ dark green
3. ✘ light green
4. ✔ motelled black

Question Number : 85 Question Id : 2839368285 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Example of sensors which produce their own electromagnetic radiation are

Options :

1. ✘ Micro wave instrument and LIDAR
2. ✔ LIDAR and RADAR
3. ✘ Micro wave instrument and RADAR



4. ✘ Optical fibre

Question Number : 86 Question Id : 2839368286 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per the high earth orbit is concerned, which of the following is correct?

Options :

1. ✘ high resolution
2. ✘ more information is obtained
3. ✔ used in meteorological observations
4. ✘ not used in communication purpose

Question Number : 87 Question Id : 2839368287 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following platforms cover the large area and also enables us to cover the area of interest repeatedly?

Options :

1. ✘ Aircraft

2. ✘ airborne platforms
3. ✘ ground based platforms
4. ✔ space borne platforms

Question Number : 88 Question Id : 2839368288 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The resolution which describes the ability of a sensor to define fine wavelength ranges is called as

Options :

1. ✘ radiometric resolution
2. ✘ spatial resolution
3. ✔ spectral resolution
4. ✘ temporal resolution

Question Number : 89 Question Id : 2839368289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Dendritic drainage patterns are commonly developed on

Options :

1. ✘ on or over domes
2. ✔ on flat bedded sediments
3. ✘ areas with faults
4. ✘ other structural controls

Question Number : 90 Question Id : 2839368290 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The wave length of infrared region is

Options :

1. ✘  $0.3 \mu\text{m} - 0.4 \mu\text{m}$
2. ✘  $0.4 \mu\text{m} - 0.7 \mu\text{m}$
3. ✔  $0.7 \mu\text{m} - 100 \mu\text{m}$
4. ✘  $0.03 \mu\text{m} - 0.04 \mu\text{m}$

Question Number : 91 Question Id : 2839368291 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The wavelength at which a blackbody radiation curve reaches maximum is related to

Options :

1. ✘ Stefan-Boltzmann law
2. ✔ Wien's displacement law
3. ✘ Gauss law
4. ✘ Wavelength theory

Question Number : 92 Question Id : 2839368292 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of the highest number of stream order of a basin to perimeter of the basin is  
known as

Options :

1. ✘ basin ratio
2. ✘ drainage pattern
3. ✘ drainage density

4. ✓ texture ratio

Question Number : 93 Question Id : 2839368293 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is an ISO standard for vector data format that is widely used in  
PC-based computer graphic applications?

Options :

1. ✗ ArcInfo EOO

2. ✓ CGM

3. ✗ DLG

4. ✗ GBF

Question Number : 94 Question Id : 2839368294 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the drawback of Raster systems?

Options :

1. ✗ the graphic output does not look like maps people are used to seeing

2. ✘ minor characteristics of an area may be lost.
3. ✔ linear data, such as roads, can be depicted easily
4. ✘ boundaries between units are often represented by stair steps

Question Number : 95 Question Id : 2839368295 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The science and technology dealing with the structure and character of spatial information, its capture, its classification and qualification, its storage, processing, portrayal and dissemination, including the infrastructure necessary to secure optimal use of this information is called as

Options :

1. ✘ spatial information system
2. ✔ geoinformatics
3. ✘ geographical information system
4. ✘ land information system

Question Number : 96 Question Id : 2839368296 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Rasterization errors are mainly due to

Options :

1. ✘ boundary location problems on maps and errors associated with digital representation of features
2. ✔ topological mismatch arising during approximation by grid
3. ✘ map integration resulting in spurious polygons
4. ✘ aggregation process when features are abstracted to lower scale

Question Number : 97 Question Id : 2839368297 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The GPS satellite radio signals can be refracted as they pass through the earth's atmosphere, causing the signals to slow down or speed up is due to

Options :

1. ✘ orbit errors
2. ✘ user mistakes account for most GPS errors
3. ✔ ionospheric interference

4. ✘ multipath interference

Question Number : 98 Question Id : 2839368298 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the principle of remote sensing?

Options :

1. ✘ detection of objects or surface features

2. ✘ discrimination of objects or surface features

3. ✘ different objects reflect different amount of energy in different bands

4. ✔ different objects reflect equal amount of energy in different bands

Question Number : 99 Question Id : 2839368299 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When the particles are smaller in size compared to the wavelength of the radiation, the scattering that takes place is called as

Options :

1. ✘ Mie scattering



2. ✓ Rayleigh scattering

3. ✗ Nonselective scattering

4. ✗ Rankine's scattering

Question Number : 100 Question Id : 2839368300 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of object radiant energy reflected to that of incident energy on object is called as

Options :

1. ✗ spectral density

2. ✗ spectral absorption

3. ✗ spectral transmissivity

4. ✓ spectral reflectance

Question Number : 101 Question Id : 2839368301 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The length and number of links in an Engineers chain respectively are

Options :

1. ✓ 100 feet and 100 links
2. ✗ 66 feet and 100 links
3. ✗ 33 feet and 10 links
4. ✗ 33 feet and 100 links

Question Number : 102 Question Id : 2839368302 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A level was set up at a point A and distance to the staff station B is 100 m. The net combined correction due to curvature and refraction as applied to the staff reading is

Options :

1. ✗ 0.00673 m
2. ✗ 0.000673 m
3. ✓ -0.000673 m
4. ✗ -0.00673 m

Question Number : 103 Question Id : 2839368303 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a well-conditioned triangle, no angle should be less than

Options :

1. ✓  $30^\circ$

2. ✗  $40^\circ$

3. ✗  $50^\circ$

4. ✗  $60^\circ$

Question Number : 104 Question Id : 2839368304 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The example for an obstacle, which obstructs chaining but not vision is

Options :

1. ✓ river

2. ✗ hill

3. ✗ rising ground

4. ✘ rover and hill

Question Number : 105 Question Id : 2839368305 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the fore bearing of a line is N  $26^{\circ}35'$  W, its back bearing will be

Options :

1. ✘ S  $26^{\circ}35'$  W

2. ✔ S  $26^{\circ}35'$  E

3. ✘ N  $26^{\circ}35'$  E

4. ✘ N  $26^{\circ}35'$  W

Question Number : 106 Question Id : 2839368306 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A 30 m chain was found to be 10 cm too long after chaining a distance of 250 m. The  
true length of the line is

Options :

1. ✔ 250.83 m

2. ✘ 249.16 m

3. ✘ 249.99 m

4. ✘ 250.00 m

Question Number : 107 Question Id : 2839368307 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The direction of survey lines may be defined as being:

(a) relative to each other

(b) relative to some reference direction

Options :

1. ✘ only (a) is correct

2. ✘ only (b) is correct

3. ✔ both (a) and (b) are correct

4. ✘ both (a) and (b) are wrong

Question Number : 108 Question Id : 2839368308 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following errors can be eliminated by taking the mean of both face observations?

Options :

1. ✘ error due to imperfect graduations
2. ✘ error due to eccentricity of verniers
3. ✘ error due to imperfect adjustment of plate levels
4. ✔ error due to line of collimation not being perpendicular to the horizontal axis

Question Number : 109 Question Id : 2839368309 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the magnetic bearing of a line is  $34^{\circ} 30'$  and the magnetic declination  $3^{\circ} 30'W$ , the true bearing of the line will be

Options :

1. ✔  $31^{\circ}$
2. ✘  $30^{\circ}$
3. ✘  $38^{\circ}$

4. ✘  $37^\circ$

Question Number : 110 Question Id : 2839368310 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a closed traverse, which check is more important and essential?

Options :

1. ✘  $\sum \textit{latitude} = 0$

2. ✘  $\sum \textit{departure} = 0$

3. ✔  $\sum \textit{latitude} = 0$  and  $\sum \textit{departure} = 0$

4. ✘ fore bearing – back bearing =  $180^\circ$

Question Number : 111 Question Id : 2839368311 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Setting out a simple curve by the two – theodolite method does not require

Options :

1. ✘ angular measurement

2. ✔ linear measurement

3. ✘ both linear and angular measurement

4. ✘ magnetic measurement

Question Number : 112 Question Id : 2839368312 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a curve of radius 100m and normal chord 10m, the approximate deflection angle as per the Rankine's formula is

Options :

1. ✘  $1^{\circ} 45'$

2. ✔  $2^{\circ} 51'$

3. ✘  $0^{\circ} 35'$

4. ✘  $1^{\circ} 25'$

Question Number : 113 Question Id : 2839368313 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the angle of intersection of a curve is  $60^{\circ}$ , then the deflection angle would be



**Options :**

1. ✘  $30^\circ$
2. ✔  $120^\circ$
3. ✘  $240^\circ$
4. ✘  $150^\circ$

**Question Number : 114 Question Id : 2839368314 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time**

**: N.A Think Time : N.A Minimum Instruction Time : 0**

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

If the radius of a simple circular curve is 400m and deflection angle is  $120^\circ$ , the mid ordinate is

**Options :**

1. ✘ 800m
2. ✘ 400m
3. ✔ 200m
4. ✘ 100m

**Question Number : 115 Question Id : 2839368315 Question Type : MCQ Option Shuffling : Yes**

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If D is the distance in kilometers, the correction due to refraction is given by

Options :

1.

✓  $0.0112 D^2$

2. ✗  $0.0785 D^2$

3. ✗  $0.0673 D^2$

4. ✗  $0.0012 D^2$

Question Number : 116 Question Id : 2839368316 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A backsight reading on B.M. = 100 m was 3.25m. The inverted staff reading to the bottom of a girder was 1.250m. The R.L. of the bottom of girder is

Options :

1. ✗ 101.25

2. ✗ 102.00

3. ✓ 104.50

4. ✘ 103.25

Question Number : 117 Question Id : 2839368317 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following methods of levelling eliminates the error due to curvature and refraction?

Options :

1. ✘ fly levelling

2. ✔ levelling by equalizing the distances of backsight and foresight

3. ✘ check levelling

4. ✘ precise levelling

Question Number : 118 Question Id : 2839368318 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time  
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Line of collimation is defined as

Options :

1.  line joining the intersection of cross-hair, optical center of objective and its continuation
2.  line joining the center of eyepiece and optical center of objective
3.  line tangential to the longitudinal curve of the bubble tube at its mid-point
4.  inclined line of sight

Question Number : 119 Question Id : 2839368319 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A total station is

Options :

1.  electronic theodolite
2.  combination of electronic theodolite and an EDM instrument
3.  EDM instrument
4.  combination of EDM and LCD

Question Number : 120 Question Id : 2839368320 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At what time interval the distance measurement is repeated automatically in the tracking or fast mode of distance measurement in total station

Options :

1. ✘ 10.0 seconds
2. ✘ 5.0 seconds
3. ✘ 1.0 second
4. ✔ less than 1.0 second