

Telangana State Council Higher Education

Notations :

1.Options shown in green color and with icon are correct.

2.Options shown in red color and with icon are incorrect.

Question Paper Name :	Geo Engineering and Geo Informatics I Ith Aug 2021 Shift I
Subject Name :	Geo Engineering and Geo Informatics
Creation Date :	2021-08-11 1 2..28..3
Duration :	120
Total Marks :	120
Display Marks:	Yes
Calculator :	None
Magnifying Glass Required? :	
Ruler Required? : No Eraser Required? : No	
Scratch Pad Required? :	
Rough Sketch/Notepad Required? :	
Protractor Required? :	No
Show Watermark on Console? : Yes Highlighter :	
Auto Save on Console? :	Yes

Geo Engineering and Geo Informatics

Group Number :	1
Group Id :	63643121
Group Maximum Duration :	
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	
Group Marks :	120

Is this Group for Examiner? :

No

Mathematics

Section Id :

63643139

Section Number :

1

Section type :

Online

Mandatory or Optional :

Mandatory

Number of Questions :

10

Number of Questions to be attempted :

10

Section Marks :

10

Enable Mark as Answered Mark for Review and Clear Response :

Yes

Sub-Section Number :

1

Sub-Section Id :

63643139

Question Shuffling Allowed :

Yes

Question Number : 1 Question Id : 6364312401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the system of equations $x + 3y + 2z = 4$, $2x - y + z = 1$ and $3x + 2y + az = b$ have no solutions, then

Options :

1. ✘ $a = 3, b = 5$

2. ✔ $a = 3, b \neq 5$

3. $8a \neq 3, b = 5$

4. 3, any value of b

Question Number : 2 Question Id : 6364312402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The sum of Eigen values of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \\ 3 & 1 & 2 \end{bmatrix}$ is

Options :

6

Question Number : 3 Question Id : 6364312403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If A is of order $m \times n$ and $ax = 0$ implies $x = 0$, then

Options :

1. ✓ $\rho(A) = n$

2. ✗ $\rho(A) = m$

A- is not unique

✗ $\text{Det}(A) = 0$

Question Number : 4 Question Id : 6364312404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $\lim_{x \rightarrow 0} \frac{(x(1+a \cos x) - b \sin x)}{x^3} = 1$, then a, b are

Options :

1. ✓ $-\frac{1}{2}, -\frac{3}{25}$

1 3

2 2

2 1

3 2

3 1

2 2

Question Number : 5 Question Id : 6364312405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If C is the curve bounded by the lines $x = \pm 1, y = \pm 1$, then $\int_C x^2 dy - y dx =$

Options :

10

Question Number : 6 Question Id : 6364312406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The directional derivative of $\phi = xy^2 + z^2x$ at $(1, -1, 2)$ in the direction of $i + 2j + 2k$ is

Options :

2

2.4 3

Question Number : 7 Question Id : 6364312407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Residue of $(1 + \frac{1}{z})$ at $z = 2$ is 2

Options :

1

4

-1

4

1

2

$\frac{-1}{2}$

4. ✓

Question Number : 8 Question Id : 6364312408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

$$\frac{dz}{1+e^z} =$$

Options :

-47ti

2. * 4 Iti

3. ✘ $2\pi i$

4. ✘ $-2\pi i$

Question Number : 9 Question Id : 6364312409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

A number is chosen at random from 1, 2, 3, ..., 100. The probability that the chosen number is a composite number is

Options :

3

4

1

3. ✔ $\frac{37}{50}$

4. $\frac{18}{25}$

Question Number : 10 Question Id : 6364312410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

If A and B are two events such that $P(A) = 0.1$, $P(B) = 0.2$, $P(A \cap B) = 0.09$, then $P(\bar{A} \cap \bar{B}) =$

Options :

78 so

79

2. ✓ $\frac{79}{80}$ so

3

SO

4. ✗ $\frac{SO}{81}$

Geo Engineering and Geo Informatics

Section Id :	63643140
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
Sub-Section Number :	1
Sub-Section Id :	63643140
Question Shuffling Allowed :	Yes

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :
11
:
0

The plutonic equivalent of phonolite

Options :

Olivine

Adamellite

Monzodiorite

Nepheline syenite

Question Number : 12 Question Id : 6364312412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Diamictites are deposited by

Options :

Biological activity

2. Eolian activity

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :

Glacial activity

Impact activity

13

:

0 Pyrite

would be expected to form in a

Options :

Oxidizing environment

Reducing environment

Both oxidizing and reducing environment

Humid environment

Question Number : 14 Question Id : 6364312414 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0 A thrust is a

Options :

1. Normal fault

Low angle reverse fault

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :

Decollement

Wrench fault

15

:

o

A landform which is raised and flat-surfaced is

Options :

1. Valley

Plain

Plateau

Hill

Question Number : 16 Question Id : 6364312416 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The seepage flow is present in

Options :

1. Surface drainage

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :

2. Sub surface drainage

3. Camber

✘ Cross slope

17

:

0

Quartz is often used as an example of which product of chemical weathering

Options :

Solutions

Gels

Secondary minerals

4. +0 egistates

Question Number : 18 Question Id : 6364312418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following pair control the density of seawater

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :

Options :

Temperature and sea depth

Temperature and salinity

3. Salinity and depth

Salinity and plankton concentration

19

:

0

Which of the following does not support the claim that rates of stone decay is unpredictable

Options :

Rocks decay in linear fashion

Environmental conditions never stable

No evidence of decay at the rock surface for a number of years

Levels of pollution varied throughout the geological history

Question Number : Question Id : 6364312411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory No Option Orientation : Vertical Correct Marks : 1 Wrong Marks :

Question Number : 20 Question Id : 6364312420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 **Why** paleomagnetism is so

important in discovering plate tectonics

Options :

It showed the location of north pole

It allowed the depth of the oceans to be measured

It has proved sea floor spreading

4 It showed the location of south pole

Question Number : 21 Question Id : 6364312421 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following are not the features associated with mid-oceanic ridges

Options :

Under water magma production

2. A central valley

Bio-chemical Activity

Widespread hydrothermal activity

Question Number : 22 Question Id : 6364312422 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

During either a full or new moon, when the Earth, Moon and Sun are all aligned, the combination of all tidal powers is called

Options :

1. Spring tides

Neap tides

Neap-to-neap tidal cycle

Spring-to-Spring tidal cycle

Question Number : 23 Question Id : 6364312423 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 Which of the following is more stable during tunnelling

Options :

1. Shale

2 Chalk

Granite

Friable sand stone

Question Number : 24 Question Id : 6364312424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Horizontal component of Earth's magnetic field always directed towards

Options :

East

West

N01th

4. South

Question Number : 25 Question Id : 6364312425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

From the Earth's topography acceleration due to gravity

Options :

Decreases with height

Increases with height

First increase and then decrease

Remains the same

Question Number : 26 Question Id : 6364312426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which one of the following is mostly associated with concave slope profiles

Options :

1. Mass movements
2. Episodic erosional activity
3. Creep, rainsplash and gelifluction

Question

MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question

Rillwash and fluvial processes

Number : 27 Question Id : 6364312427 Question Type :

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

According to the Clairut's theorem, the sum of geometric and gravitational flattenings is equal to_____times the ratio of centrifugal force to gravity at the equator

Options :

1. $4 \frac{5}{2}$

2. $2/5$

4. $3/5$

Question Number : 28 Question Id : 6364312428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why are cations attracted to clay minerals

Options :

Because no other minerals will bond with cations

Question

MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question

✘ Because of the temperature gradients

Because of electrostatic attractions

✘ Because clay minerals are the largest soil particles

Number : 29 Question Id : 6364312429 Question Type :

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A hydrograph displays

Options :

1. Variations in river discharge over time
2. Variations in snowfall over time
3. Variations in sediment concentration against river discharge
4. Variations in water temperature against discharge

Question Number : 30 Question Id : 6364312430 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

As one moves inside the spherical Earth acceleration due to gravity

Question

MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question

Options :

Decreases with depth

2. Increases with depth

First decrease and then increase

Remains the same

Number : 31 Question Id : 6364312431 Question Type :

Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following happens when waves enter shallow water

Options :

The velocity of the wave becomes weaker

Their troughs deepen

They develop flat crests

They become increasingly asymmetrical

Question

MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question

Question Number : 32 Question Id : 6364312432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 Which of the following is not a type of image

resolution that is very important in image analysis

Options :

Energy

Spectral

3. Spatial

Temporal

Question Number : 33 Question Id : 6364312433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

How old is the Earth

Options :

4.6 billion years

2 ✘ 4,00,000 years

✘ 2.3 billion years

4. 3.1 billion years

Question Number : 34 Question Id : 6364312434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Folding is which type of deformation

Options :

1. Brittle

2. Tensile

Ductile

4. Malleable

Question Number : 35 Question Id : 6364312435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What is the name of the Supercontinent to which all of the land mass on Earth was joined approximately 600 million years ago

Options :

Pangaea

Gondwanaland

3. Gaia

Laurasia

Question Number : 36 Question Id : 6364312436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What is the most common wavelength band which electro-optical scanners work within

Options :

1. ✘ 0.9 and 14 μ m

2. ✔ 0.3 and 14 μ m
0.3 and 0.9 μ m

0.9 and 12gm

Question Number : 37 Question Id : 6364312437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which one of the following about axial plane is not true

Options :

Axial plane is imaginary

Axial plane may be vertical, inclined or horizontal

Axial plane may be planar

Axial plane need not pass through all points of maximum curvature in a folded

4 •2 Sequence

Question Number : 38 Question Id : 6364312438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The International Gravity Formula calculates the undisturbed gravity field of the Earth
presuming its shape to a

Options :

1. Solid sphere

Spheroid

Hollow sphere

Semi-solid sphere

Question Number : 39 Question Id : 6364312439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If plunge is zero then the axis of the fold is

Options :

1. Horizontal

Vertical

Inclined at 30° to the vertical

Inclined at 30° to the horizontal

Question Number : 40 Question Id : 6364312440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following types of sensors uses a highly focused beam of light

Options :

1. Sonar

Ground penetrating radar

3. Laser Lidar

✘ Side-looking radar

Question Number : 41 Question Id : 6364312441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What happens when all pore spaces are filled and the water table is at the surface

Options :

1. Saturation-Excess overland flow

Infiltration-Excess overland flow

✘ Throughflow

Infiltration

Question Number : 42 Question Id : 6364312442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

When under water volcanoes erupt the lava cools rapidly and result in the formation
of which type of rounded structures

Options :

Pillow lava

Shield volcano

Gabbros

Black smokers

Question Number : 43 Question Id : 6364312443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which category of chemical weathering do nitrification processes and acidification of soil fall into

Options :

1. Solution
2. Carbonation
3. Hydrolysis

Biologically related weathering

Question Number : 44 Question Id : 6364312444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the river gauging techniques involves the use of ultra-sound
Dilution Gauging

✘ Velocity-Area Method

Acoustic Gauging

✘ Rating Curve

Question Number : 45 Question Id : 6364312445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Gravity potential of the spherical earth is maximum at

Options :

The surface

✘ 2500 km depth

✘ 5000 km depth

4. The centre

Question Number : 46 Question Id : 6364312446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The point where earthquake triggers is known as

1. Focus

✘ Epicentre

✘ Dip

4. Strike

Question Number : 47 Question Id : 6364312447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

In diamagnetic minerals the direction of induced magnetic vector is

Options :

✘ In the direction of magnetising field

2. .4 Opposite to the direction of magnetising field

3. At 45° to the magnetising field

✘ At 90° to the magnetising field

Question Number : 48 Question Id : 6364312448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What types of faults are associated with shearing forces

Stlike-slip

2. Nonnal

3. Reverse

Oblique-slip

Question Number : 49 Question Id : 6364312449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Example of paramagnetic mineral

Options :

Gamet

✘ Quartz

Gypsum

✘ Feldspar

Question Number : 50 Question Id : 6364312450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following surveying methods help to find distance between nvo
inaccessible points that are not obstmcted for vision

Options :

Chain survey

2. Compass survey

Plane table survey

Tacheometric survey

Question Number : 51 Question Id : 6364312451 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

When a P wave pass through a solid rock the particles of the rock move

Options :

1. In a circular motion

Back and forth perpendicular to the wave direction

Back and forth along the wave direction

At 90 to the wave direction

Question Number : 52 Question Id : 6364312452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Slope length of a drainage basin is mostly related to

Options :

Drainage area

2. Stream width

Drainage density

✘ Tectonic uplift

Question Number : 53 Question Id : 6364312453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Surface ocean currents are mainly caused by

Options :

Temperature gradients

2. Prevailing winds

✘ Surface water density

4. Salinity gradients

Question Number : 54 Question Id : 6364312454 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which one the following sediment that does not found in deep ocean

Options :

1. Biogenous

Linguodous

3. Hydrogenous

4. Lithogenous

Question Number : 55 Question Id : 6364312455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. 43

2

Question Number : 56 Question Id : 6364312456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Strike-slip faults have

Options :

Primarily horizontal movement

Primarily vertical movement

No appreciable displacements

✘ Oblique displacements

Question Number : 57 Question Id : 6364312457 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What is the average temperature at 10 km depth from the earth surface

Options :

1. 4 3000

2. 1050

3. 20°

4. 700

Question Number : 58 Question Id : 6364312458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Ealth's magnetic field is generated

Options :

1. In the crust

2. In the mantle

3. In the outer core

4. In the inner core

Question Number : 59 Question Id : 6364312459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The lithosphere includes

Options :

1. Crust and uppermost rigid mantle

2. Outer core and inner core

Asthenosphere and mesosphere

Outer core and lower mantle

Question Number : 60 Question Id : 6364312460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Overtlusters are caused by large-scale

Options :

Shearing forces

Tensional forces

3..2 Compressive forces

Both tensional and compressive forces

Question Number : 61 Question Id : 6364312461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks :

0 The shear modulus measures

Options :

- The resistance to change in volume of a solid
- The resistance to change in volume of a liquid
- The resistance to flow of a liquid

The resistance to change in shape

Question Number : 62 Question Id : 6364312462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The most distinctive earthquake waves are

Options :

1. P waves
2. S waves
3. Surface waves
4. Q waves

Question Number : 63 Question Id : 6364312463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following regions consists primarily of olivine and pyroxene

Options :

Upper mantle

The core

3. Continental crust

4. Oceanic crust

Question Number : 64 Question Id : 6364312464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Approximate lifetime of Geostationary satellites is

Options :

1. 35 years

2. 42 years
3. 10 years
4. 25 years

Question Number : 65 Question Id : 6364312465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is not a linear surveying methods

Options :

1. Theodolite
2. EDM Chain

Tape

Question Number : 66 Question Id : 6364312466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which region of the Earth occupies large volume

Options :

1. The crust
- The outer core

2.

The inner core

4. ...9 The mantle

Question Number : 67 Question Id : 6364312467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is a classification based on the instrument used

Options :

Topographic surveying

Cadastral surveying

Traverse surveying

Hydrographic surveying

Question Number : 68 Question Id : 6364312468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The direction of orbit in the opposite direction of earth rotation is called

Options :

Retrograde

Prograde

2.

✘ Peligee

4. Apogee

Question Number : 69 Question Id : 6364312469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks :

O The mantle consists mainly of

Options :

1. Granitic rocks
2. Basaltic rocks
3. Gabbroic rocks
4. Ultramafic rocks

Question Number : 70 Question Id : 6364312470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Low Earth Orbit satellites has the rotation period of

Options :

70 to 80 min

90 to 100 min

80 to 90 min

90 to 120 min

Question Number : 71 Question Id : 6364312471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 Which tenn is used for the surface to which elevations are referred

Options :

1. Datum

Horizontal plane

3. Level line

4. Level surface

Question Number : 72 Question Id : 6364312472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the horizontal angle which a line makes with the true meridian through one of the extremities of the line

Options :

True bearing

2. Magnetic bearing

3. DIP

Arbitrary bearing

Question Number : 73 Question Id : 6364312473 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following classes of positioning technique possess high precision

Options :

GPS

2. Viscous technique

Kinematic technique

Real time technique

Question Number : 74 Question Id : 6364312474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

GIS deals with

Options :

1. Numeric data

Binary data

3. Complex data

4. Spatial data

Question Number : 75 Question Id : 6364312475 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is not a method of levelling

Options :

Barometric levelling

Spirit levelling

Trigonometric levelling

Parabolic levelling

Question Number : 76 Question Id : 6364312476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is not a part of the prismatic compass

Options :

1. Agate cap

Brake pin

Prism cap

4. Jewel bearing

Question Number : 77 Question Id : 6364312477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Sharpness of the curve can be determined by

Options :

1. Tangent

2. Radius

Mid-ordinate

4. Starting point of the curve

Question Number : 78 Question Id : 6364312478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What will be the length of the base line in case of short baseline method of GPS
surveying

Options :

Less than 50 km

Greater than 50 km

Less than 2 km

Greater than 100 km

Question Number : 79 Question Id : 6364312479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In GIS, interpolation is possible by

Options :

Thematic Autocorrelation

Thematic Auto-connection

3.0, Spatial Autocorrelation

4. ✖ Spatial Auto-connection

Question Number : 80 Question Id : 6364312480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The largest reservoir of nitrogen on our planet is

Options :

1. Ocean

Atmosphere

3. Biosphere

4. Fossils

Question Number : 81 Question Id : 6364312481 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vegetation of tropical deciduous forest falls under which of the following categories

Options :

1. Mesothenn

Megathenn

Microthenn

Hekistothenn

Question Number : 82 Question Id : 6364312482 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The angle of a fault plane with respect to vertical is

Options :

1. Hade

2. Throw

3. Heave

4. DIP

Question Number : 83 Question Id : 6364312483 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is related to GIS

Options :

Euclidean space

2. Pythagorian space

Ramanujan space

✘ Random space

Question Number : 84 Question Id : 6364312484 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Tenaces are remnants of

Options :

1. * Rivers
2. Meanders
Flood plains

Alluvial fans

Question Number : 85 Question Id : 6364312485 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which mineral is dominant in hard water

Options :

Silica

Calcium

3. Lead

Sodium

Question Number : 86 Question Id : 6364312486 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Influent streams are

Options :

More common in arid regions

2. More common in humid regions

✘ Only found in areas of pennaafrost

Found in sinkholes

Question Number : 87 Question Id : 6364312487 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the suitable location for the constmction of dams in a folded tenain

Options :

Trough of the fold

Crest of the fold

Limbs of the fold with favourable inclination

✘ Hinge line of the fold

Question Number : 88 Question Id : 6364312488 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The point on the fault plane where slip is initiated is called

Options :

1. Epicenter

✘ Fault dip

3. Hypocenter

Footwall

Question Number : 89 Question Id : 6364312489 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The primary producers in a forest ecosystem are

Options :

Trees and plants containing chlorophyll

Herbivores

3. Carnivores

Bacteria and other micro-organism

Question Number : 90 Question Id : 6364312490 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Vv'llich are defined as free falling fragments of rocks from steep cliff or slope

Options :

1. Toppling
2. •Z Rockfalls
Debris avalanche

Earthflow

Question Number : 91 Question Id : 6364312491 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is not used in the tracking system

Options :

1. Multiple frequency
2. Dual frequency
3. Single frequency
4. Military navigation

Question Number : 92 Question Id : 6364312492 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which among the following EDM instruments is having more range

Options :

Infra-red

Visible light

Microwave

4. Gamma ray

Question Number : 93 Question Id : 6364312493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following shapes are generally considered when the area is computed by map measurements

Options :

Triangle

2. Square

Rectangle

4. Pyramidal

Question Number : 94 Question Id : 6364312494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The 'boundary model' is also called

Options :

1. Topological data model
2. Temporal data model
3. Topological discrete model
4. Temporal discrete model

Question Number : 95 Question Id : 6364312495 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 Which of the following rocks has the highest permeability

Options :

1. Un-fractured shale
2. Un-fractured limestone
3. Cemented sandstone
4. Un-cemented sandstone

Question Number : 96 Question Id : 6364312496 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0 A

disconformity is

Options :

- ✘ An erosional surface between different rock types

✘ An erosional surface between igneous and metamorphic rocks

An erosional surface between horizontal sedimentary rocks

4. A rock unit that does not contain fossils

Question Number : 97 Question Id : 6364312497 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following could be used to tell that a rock layer was right side up or up side down

Options :

1. Faults

2. Symmetrical fold

3. Asymmetrical ripple marks

4. ymmetrical ripple marks

Question Number : 98 Question Id : 6364312498 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Based on morphological characteristics, cleavages are classified into how many categories

Options :

4. 15

Question Number : 99 Question Id : 6364312499 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The Miller index of upper basal pinacoid in Gypsum type of Orthorhombic system is

Options :

1 (100)

2 (010)

3 (001)

4. (110)

Question Number : 100 Question Id : 6364312500 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The characteristic texture of komatiites is

Options :

1. Porphyritic

Sperulitic

Spinifex

Orbicular

Question Number : 101 Question Id : 6364312501 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a crushed material

Options :

1. Fault breccia

2. Mylonite

3. Kaolinite

4. Gouge

Question Number : 102 Question Id : 6364312502 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In shear zones of lower crust and upper mantle the nature of displacement is

Options :

1. Brittle

2. Ductile

3. Malleable

Question Id : 6364312503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Is No Option Orientation : Vertical
Marks

Gradual

Question Number : 103

Question Mandatory :

Correct Marks : 1 Wrong : 0

How many planes of symmetry existing in Tetragonal system

Options :

1.9 5

Question Number : 104 Question Id : 6364312504 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A silicate magma containing just sufficient silica to form the stable silicate minerals
without free quartz is termed as

Options :

Supersaturated

Question Id : 6364312503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is No Option Orientation : Vertical

Marks

Oversaturated

3. ...4 Saturated
4. Under saturated

Question Number : 105 Question

Mandatory :

Correct Marks : 1 Wrong : 0

'D' layer in mantle is located at the depth of

Options :

1. 660 km

2. 2900 km

250 km

4 400 km

Question Number : 106 Question Id : 6364312506 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Question Id : 6364312503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is No Option Orientation : Vertical

Marks

Correct Marks : 1 Wrong Marks :

O The composition of sapphire is

Options :

1. ✓ Al_2O_3

2. CaTiO_3

3. ✗ $\text{Al}_2(\text{OH})_2$

✗ AlSi_2O_5

Question Number : 107 Question

Mandatory :

Correct Marks : 1 Wrong : 0

Natural levees are built up by

Options :

Humans

Beavers

Erosion

4. .2 Floods

Question Id : 6364312503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is No Option Orientation : Vertical

Marks

Question Number : 108 Question Id : 6364312508 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Alidade is used for

Options :

1. Levelling Sighting

Drawing lines

4. Transferring point to ground

Question Number : 109 Question Id : 6364312509 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Mercator projection shows the lines of latitude and longitude as

Options :

Curved paths

Straight lines

Graphs

Round paths

Question Number : 110 Question Id : 6364312510 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Steep slopes on a topographic map are represented by

Options :

Dense contour lines

2. Distant contour lines Dotted

contour lines

Solid contour lines

Question Number : 113 Question Id : 6364312513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A map projection that shows an area between latitude and longitude equal in size to the area on the globe is known as

Options :

Cylindrical projection

Conic projection

3. Equal-Area projection

Azimuthal projection

Question Number : 112 Question Id : 6364312512 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Maximum coverage capacity of the lens used in aerial photogrammetry is

Options :

1. 650

2. ✖ 81°

930

4. 430

Question Number : 113 Question Id : 6364312513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following rock characterize deep water environments

Options :

1. * Marl

2. Sand stone

3. Loess

Carbonaceous shale

Question Number : 114 Question Id : 6364312514 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Transfonn faults are characterized by

Options :

Lateral slip of plates

2. Oblique slip of plates

Vertical slip of plates

No slip occurs

The pressure on the upper surface of an unconfined aquifer is

Question Number : 113 Question Id : 6364312513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Options :

1. a Very high

Lower than atmospheric pressure

3. Equal to atmospheric pressure

More than atmospheric pressure

Question Number : 116 Question Id : 6364312516 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An Address is _____ while pointer is a _____

Options :

Location, Variable Variable,

Location

Variable, Constant

4. Constant, Variable

Question Number : 113 Question Id : 6364312513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Output of the following program is _____

```
int main()
```

```
    signed char a = -64;
```

```
    unsigned char b = 64;
```

```
    shon int x=a, y=b;
```

```
    printf("%d,%d",x,y);
```

```
    retum 0;
```

Options :

-64,64

2 64,-64

3. -47,64

4 -65.64

Question Number : 113 Question Id : 6364312513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Is Question Mandatory : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Question Number : 118 Question Id : 6364312518 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

What is the output of the below program

```
int main() { static int var
            = 5; printf("%d
            ",var--); if(var)
            main();
```

Options :

Enor

2.4 5 4 3 2 1

3 * 1 2 3 4 5

4 * 5 3 1 0 0

Question Number : 119 Question Id : 6364312519 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which geological structure can be rectified by grouting

Options :

1. Joints

2. Folds

3. Faults

Inclined strata

Question Number : 120 Question Id : 6364312520 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

At the depth greater than 16 km, the pressure increase can be up to

Options :

1 15,000 atm

2 1,000 atm

3 4,000 atm

4 10,000 atm