

Question Paper Preview

Notations :

- Options shown in green color and with ✓ icon are correct.
- Options shown in red color and with ✗ icon are incorrect.

Question Paper Name:	Geo Engineering and Geo Informatics 29th May 2018 Shift1
Subject Name:	Geo Engineering and Geo Informatics
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Calculator:	None
Magnifying Glass Required?:	No
Ruler Required?:	No
Eraser Required?:	No
Scratch Pad Required?:	No
Rough Sketch/Notepad Required?:	No
Protractor Required?:	No

Display Number Panel:

Yes

Group All Questions:

No

Question Number : 1 Question Id : 5113466121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If $A = \begin{bmatrix} 0 & x & -y \\ -x & 0 & z \\ y & -z & 0 \end{bmatrix}$, then $\det A =$

Options :

1. ✓ 0

2. ✗ 1

3. ✗ 2

4. ✗ 3

Question Number : 2 Question Id : 5113466122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The eigen values of $A = \begin{bmatrix} 2 & 2 \\ 2 & -1 \end{bmatrix}$ are

Options :

1. ✖ $2, -3$
2. ✖ $2, 4$
3. ✔ $-2, 3$
4. ✖ $2, 3$

Question Number : 3 Question Id : 5113466123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

A function $f(x)$ is defined by $f(x) = a+bx$, if $x < 1$, $f(1) = 4$, $f(x) = b-ax > 1$.

If $\lim_{x \rightarrow 1} f(x) = f(1)$ then values of a and b are

Options :

1. ✖ $a = 1, b = 3$
2. ✖ $a = 3, b = 1$
3. ✔ $a = 0, b = 4$
4. ✖ $a = 2, b = 2$

Question Number : 4 Question Id : 5113466124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If $u = f\left(\frac{x^2}{y}\right)$ then $\frac{\partial u}{\partial y}$ is

Options :

1. ✔ $-\frac{x^2}{y^2} f'\left(\frac{x^2}{y}\right)$
2. ✖ $-x^2 y f'\left(\frac{x^2}{y}\right)$

3. ✖ $\frac{x^2}{y^2} f'(\frac{x^2}{y})$

4. ✖ $\frac{x^2}{y} f'(\frac{x^2}{y})$

Question Number : 5 Question Id : 5113466125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If $f(x) = x^2 - 5x + 4$, satisfies all the conditions of Rolle's mean value theorem in $[1, 4]$, the value of 'c' of the mean value theorem is

Options :

1. ✖ $\frac{1}{2}$

2. ✔ $\frac{5}{2}$

3. ✖ $\frac{7}{2}$

4. ✖ $\frac{1}{3}$

Question Number : 6 Question Id : 5113466126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The greatest rate of increase of $u = xyz^2$ at $(1, 0, 3)$ is

Options :

1. ✖ 3

2. ✖ 6

3. ✔ 9

4. ✖ 10

Question Number : 7 Question Id : 5113466127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If $\mathbf{f} = (x+3y)\mathbf{i} + (y-2z)\mathbf{j} + (x+cz)\mathbf{k}$ is a solenoidal, then the value of λ is

Options :

1. ✗ 1
2. ✗ -1
3. ✗ 2
4. ✓ -2

Question Number : 8 Question Id : 5113466128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The volume V of solid generated by revolving the cardioid $r = a(1 + \cos \theta)$ about the initial line is

Options :

1. ✓ $\frac{8}{3} \pi a^3$
2. ✗ $\frac{1}{3} \pi a^3$
3. ✗ $\frac{5}{3} \pi a^3$
4. ✗ $\frac{a^2}{\pi}$

Question Number : 9 Question Id : 5113466129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If $u(x, y) = ax^2 - y^2 + xy$ is Harmonic, the value of a is

Options :

1. ✗ 0
2. ✓ 1
3. ✗ 2
4. ✗ 3

Question Number : 10 Question Id : 5113466130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The Residue of $f(z) = \frac{1}{(z^2 + a^2)^2}$ at $z = ai$ is

Options :

1. ✓ $-\frac{i}{4a^3}$

2. ✗ $\frac{i}{4a^3}$

3. ✗ $-\frac{1}{4a^3}$

4. ✗ $-\frac{i}{4a^2}$

Display Number Panel:

Group All Questions:

Yes

No

Question Number : 11 Question Id : 5113466131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Critical angle of electromagnetic radiation takes place if

Options :

1. ✓ angle of refraction is equal to 90°

2. ✗ angle of incidence is greater than the angle of refraction

3. ✗ angle of incidence is equal to angle of refraction

4. ✗ angle of incidence is equal to 90°

Question Number : 12 Question Id : 5113466132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which one of the following is a biochemical sedimentary rock?

Options :

1. ✗ Shale

2. ✖ Conglomerate
3. ✔ Coal
4. ✖ Sand material

Question Number : 13 Question Id : 5113466133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The Koenigsberger ratio is defined as

Options :

1. ✔ remanent magnetization / induced magnetization
2. ✖ induced magnetization / remanent magnetization
3. ✖ induced magnetization / 1.5
4. ✖ remanent magnetization / 3.0

Question Number : 14 Question Id : 5113466134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The most widely used antenna in GPS is

Options :

1. ✖ slotted antenna
2. ✖ paraboloid antenna
3. ✔ microstrip antenna
4. ✖ horn antenna

Question Number : 15 Question Id : 5113466135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Mechanical weathering produces

Options :

1. ✖ clay minerals
2. ✖ quartz

3. ✖ calcium carbonate

4. ✔ smaller particles

Question Number : 16 Question Id : 5113466136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following indicates the rate of cooling of magma of the rock

Options :

1. ✖ density

2. ✔ texture

3. ✖ mineralogy

4. ✖ color

Question Number : 17 Question Id : 5113466137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Oxygen built up in the Earth's atmosphere because

Options :

1. ✔ algae and other organisms employed photosynthesis

2. ✖ the oceans separated from the crust

3. ✖ oxygen settled on Earth from planets further from the sun

4. ✖ rocks weathered and released their oxygen

Question Number : 18 Question Id : 5113466138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Exfoliation is common in

Options :

1. ✖ Mountains

2. ✔ Deserts

3. ✗ Coastal areas

4. ✗ Plains

Question Number : 19 Question Id : 5113466139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Metamorphic rocks are formed under

Options :

1. ✓ High pressure and high temperature

2. ✗ Low pressure and low temperature

3. ✗ High pressure and low temperature

4. ✗ High temperature and low pressure

Question Number : 20 Question Id : 5113466140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

According to Dupuit's theory, the velocity of flow is proportional to

Options :

1. ✗ Sine of hydraulic gradient

2. ✓ Tangent of hydraulic gradient

3. ✗ Cosine of hydraulic gradient

4. ✗ Logarithm of hydraulic gradient

Question Number : 21 Question Id : 5113466141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The co-efficient of transmissibility (T) of an aquifer is related to the field of coefficient of permeability (K) and aquifer thickness (b) given by

Options :

1. ✓ $T=bK$

2. ✖ $T=b/K$

3. ✖ $T=(b-K)/2$

4. ✖ $T=K/b$

Question Number : 22 Question Id : 5113466142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Orogenic movements are responsible for

Options :

1. ✖ The formation of great continents

2. ✔ The formation of great fold mountain ranges

3. ✖ The formation of deltas

4. ✖ The formation of deserts

Question Number : 23 Question Id : 5113466143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

In cohesive soil, the pressure distribution beneath the footing is

Options :

1. ✔ Linear

2. ✖ Non linear

3. ✖ Zero

4. ✖ Stochastic

Question Number : 24 Question Id : 5113466144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The temperature within the Earth increases with depth

Options :

1. ✖ 200°C/km

2. ✖ 100°C/km
3. ✔ 30°C/km
4. ✖ 5°C/km

Question Number : 25 Question Id : 5113466145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

In most of the confined aquifers, the value of storage coefficient ranges between

Options :

1. ✖ 0.05 to 0.0005
2. ✖ 0.5 to 0.005
3. ✔ 0.00005 to 0.005
4. ✖ 0 to 5

Question Number : 26 Question Id : 5113466146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following is preferable for dam site investigations

Options :

1. ✔ Seismic refraction method
2. ✖ Seismic reflection method
3. ✖ Magnetic method
4. ✖ Self potential method

Question Number : 27 Question Id : 5113466147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which unconformity shows very less age difference between the overlying and underlying beds

Options :

1. ✓ Local unconformity
2. ✗ Disconformity
3. ✗ Non conformity
4. ✗ Angular unconformity

Question Number : 28 Question Id : 5113466148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The acceleration due to gravity at the centre of the Earth is

Options :

1. ✗ maximum
2. ✓ zero
3. ✗ 9.8 meter/sec²
4. ✗ 4.9 meter/sec²

Question Number : 29 Question Id : 5113466149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Perched water table lies

Options :

1. ✓ above water table
2. ✗ below water table
3. ✗ at the same level as water table
4. ✗ at an angle to water table

Question Number : 30 Question Id : 5113466150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The two features that control the density of seawater are

Options :

1. ✖ Salinity and plankton concentration
2. ✖ Salinity and depth
3. ✔ Temperature and salinity
4. ✖ Temperature and sea depth

Question Number : 31 Question Id : 5113466151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

New seafloor is created at

Options :

1. ✖ deep sea trench
2. ✔ mid-ocean ridge
3. ✖ subduction zone
4. ✖ transform fault

Question Number : 32 Question Id : 5113466152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

This is responsible for the Earth's internal heat engine?

Options :

1. ✔ radioactivity
2. ✖ solar energy
3. ✖ volcanoes
4. ✖ ocean tides

Question Number : 33 Question Id : 5113466153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Greenhouse effect is used to describe the

Options :

1. ✖ heating of the atmosphere by direct solar radiation
2. ✔ heating of the atmosphere by infrared radiation from the earth
3. ✖ conversion of carbon dioxide to oxygen by green plants
4. ✖ condensation of moisture to form dew

Question Number : 34 Question Id : 5113466154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The coarse grained equivalent of a basalt is a

Options :

1. ✖ Rhyolite
2. ✔ Gabbro
3. ✖ Andesite
4. ✖ Basalt

Question Number : 35 Question Id : 5113466155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The layer of the atmosphere in which weather occurs is

Options :

1. ✔ Troposphere
2. ✖ Stratosphere
3. ✖ Thermosphere
4. ✖ Mesosphere

Question Number : 36 Question Id : 5113466156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following mineral is most stable at the Earth's surface?

Options :

1. ✓ hematite
2. ✗ mica
3. ✗ olivine
4. ✗ feldspar

Question Number : 37 Question Id : 5113466157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Clouds occur when moist air is cooled by

Options :

1. ✗ expansion when it falls
2. ✓ expansion when it rises
3. ✗ compression when it falls
4. ✗ compression when it rises

Question Number : 38 Question Id : 5113466158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following is dimensionless quantity?

Options :

1. ✗ Stress
2. ✗ Young's modulus
3. ✓ Strain
4. ✗ Pressure

Question Number : 39 Question Id : 5113466159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The S-wave shadow zone is evidence that,

Options :

1. ✓ the outer core is liquid
2. ✗ the outer core is composed of iron and nickel oxides
3. ✗ the inner core is solid
4. ✗ it is very hot near the core

Question Number : 40 Question Id : 5113466160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The entire range of the electromagnetic spectrum spans over a large spectrum of wave lengths varying from

Options :

1. ✓ 10^{-10} to 10^6 m
2. ✗ 10^{-8} to 10^6 m
3. ✗ 10^{-10} to 10^{10} m
4. ✗ 10^{-8} to 10^8 m

Question Number : 41 Question Id : 5113466161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which statement best describes motion on a normal fault?

Options :

1. ✓ The hanging wall block moved downward relative to the footwall block.
2. ✗ The hanging wall block moved upward relative to the footwall block.
3. ✗ The hanging wall block moved horizontally relative to the footwall block.
4. ✗ Faults are simple breaks in the crust along which no movement has occurred.

Question Number : 42 Question Id : 5113466162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which igneous rock crystallizes near the Earth's surface?

Options :

1. ✗ Gabbro
2. ✗ Granite
3. ✗ Diorite
4. ✓ Basalt

Question Number : 43 Question Id : 5113466163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

As the amount water in a pile of quartz increases, the angle of repose will

Options :

1. ✗ Decrease
2. ✗ Increase
3. ✗ Not change
4. ✓ First increase and then decrease

Question Number : 44 Question Id : 5113466164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The boundary at which a sharp decrease in P-wave seismic velocity and increase in density occurs is

Options :

1. ✓ Outer core and lower mantle
2. ✗ Inner core-outer core
3. ✗ Upper and lower crust
4. ✗ Crust and mantle

Question Number : 45 Question Id : 5113466165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Ozone is found in

www.prepp.in

Options :

1. ✖ Mesosphere
2. ✖ Troposphere
3. ✔ Stratosphere
4. ✖ Ozonosphere

Question Number : 46 Question Id : 5113466166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Inselbergs are formed in

Options :

1. ✔ Pediplains
2. ✖ Deltas
3. ✖ Flood plains
4. ✖ Deserts

Question Number : 47 Question Id : 5113466167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Graphite is an example of

Options :

1. ✔ Igneous rock
2. ✖ Metamorphic rocks
3. ✖ Sedimentary rock
4. ✖ Plutonic rock

Question Number : 48 Question Id : 5113466168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following characteristics are shared by both good conductors of heat and electricity?

Options :

1. ✓ Free movement of electric charges between adjacent atoms
2. ✗ Close packing of electron shells surrounding the atomic nuclei
3. ✗ Net positive electric charge that promotes the flow of electrons
4. ✗ Covalent bonds that share electrons between adjacent atoms

Question Number : 49 Question Id : 5113466169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The presence of "magnetic stripes" recorded in the oceanic crust reflects

Options :

1. ✗ variation in composition of the oceanic crust
2. ✗ the rate of sea floor spreading
3. ✓ reversals in polarity of the Earth's magnetic field
4. ✗ life forms in the ocean

Question Number : 50 Question Id : 5113466170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The Earth's lithosphere is broken into how many large rigid plates

Options :

1. ✗ 2
2. ✗ 25
3. ✓ 12
4. ✗ 40

Question Number : 51 Question Id : 5113466171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. ✖ Cylindrical projection
2. ✖ Conic projection
3. ✖ Azimuthal projection
4. ✔ Equal-Area projection

Question Number : 52 Question Id : 5113466172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which stone is objectionable for use in moist conditions

Options :

1. ✖ Granite
2. ✖ Marble
3. ✖ Gabbro
4. ✔ Limestone

Question Number : 53 Question Id : 5113466173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following measures are not used to describe a region?

Options :

1. ✖ Mean and median of grey values
2. ✖ Minimum and maximum of grey values
3. ✔ Number of pixels alone
4. ✖ Number of pixels above and below mean

Question Number : 54 Question Id : 5113466174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Barchans are formed due to

Options :

1. ✗ River erosion
2. ✗ Wind erosion
3. ✓ Wind deposition
4. ✗ Glacial erosion

Question Number : 55 Question Id : 5113466175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The ability of a mineral to break along preferred directions is called as

Options :

1. ✗ Fracture
2. ✗ Crystal form
3. ✓ Cleavage
4. ✗ Hardness

Question Number : 56 Question Id : 5113466176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The acceleration due to gravity calculated by Clairaut's theorem is valid for

Options :

1. ✗ Geoid
2. ✓ Spheroid
3. ✗ Earth's topography
4. ✗ Circle

Question Number : 57 Question Id : 5113466177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

When the wind is deflected due to the rotation of the Earth, it is called as

Options :

1. ✖ Polar wind
2. ✖ Westerlies
3. ✔ Geostrophic wind
4. ✖ Trade winds

Question Number : 58 Question Id : 5113466178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The chemical composition of the feldspar group is

Options :

1. ✖ Oxide
2. ✖ Aluminates
3. ✖ Silicates
4. ✔ Aluminosilicates

Question Number : 59 Question Id : 5113466179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

SDI stands for

Options :

1. ✖ Spatial Data Interface
2. ✔ Spatial Data Infrastructure
3. ✖ Spatial Data Intention
4. ✖ Spatial Data International

Question Number : 60 Question Id : 5113466180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Crystal system having maximum number of classes is

Options :

1. ✓ Hexagonal system
2. ✗ Tetragonal system
3. ✗ Cubic system
4. ✗ Orthorhombic system

Question Number : 61 Question Id : 5113466181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Magnetic declination at any place

Options :

1. ✗ remains constant
2. ✗ changes abruptly
3. ✓ does not remain constant
4. ✗ is zero

Question Number : 62 Question Id : 5113466182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The isometric crystallographic system is characterized by

Options :

1. ✗ 3 axes of 4 fold symmetry
2. ✗ 6 axes of 5 fold symmetry
3. ✓ 4 axes of 3 fold symmetry
4. ✗ 2 axes of 4 fold symmetry

Question Number : 63 Question Id : 5113466183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Generally preferred method for contouring an undulating area is

Options :

1. ✗ chain surveying
2. ✗ plane table surveying
3. ✗ compass surveying
4. ✓ tacheometrical surveying

Question Number : 64 Question Id : 5113466184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

What are the maximum number of planes of symmetry found in known crystal systems

Options :

1. ✗ 5
2. ✗ 6
3. ✓ 9
4. ✗ 11

Question Number : 65 Question Id : 5113466185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Straight, parallel and widely spaced contours represent

Options :

1. ✗ a flat surface
2. ✓ an inclined plane surface
3. ✗ curved surface
4. ✗ a steep surface

Question Number : 66 Question Id : 5113466186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Number of links per meter length of a chain are

Options :

1. ✗ 2

2. ✖ 10

3. ✔ 5

4. ✖ 6

Question Number : 67 Question Id : 5113466187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Orbital radius of GPS satellites is approximately

Options :

1. ✔ 26,600 km

2. ✖ 36,000 km

3. ✖ 18,400 km

4. ✖ 36,400 km

Question Number : 68 Question Id : 5113466188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following are used as receivers in GPS

Options :

1. ✖ Electronic clocks

2. ✖ Atomic clocks

3. ✔ Quartz clocks

4. ✖ Mechanical clocks

Question Number : 69 Question Id : 5113466189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The infrared portion of electromagnetic radiation lies between

Options :

1. ✖ 0.7 - 1.3 μm

2. ✓ 0.7 to 14 μm
3. ✗ 0.5 mm to 1 m
4. ✗ 0.4 - 0.7 μm

Question Number : 70 Question Id : 5113466190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The refractive index of the ocean water

Options :

1. ✗ Decreases with temperature
2. ✗ Increases with temperature
3. ✓ Increases with salinity
4. ✗ Decreases with salinity

Question Number : 71 Question Id : 5113466191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Coherence of two electromagnetic waves takes place if their phase difference is

Options :

1. ✓ Constant in time and space
2. ✗ Constant in time
3. ✗ Constant in space
4. ✗ Coherence never takes place

Question Number : 72 Question Id : 5113466192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The capillary rise will be high in

Options :

1. ✗ Gravel

- 2. ✓ Clay
- 3. ✗ Loam
- 4. ✗ Fine sand

Question Number : 73 Question Id : 5113466193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Stoke's law states that the velocity at which a grain settles out of suspension, the other factors remaining constant, is dependent upon

Options :

- 1. ✗ Shape of grain
- 2. ✗ Weight of grain
- 3. ✗ Size of grain
- 4. ✓ Shape, size and weight of grain

Question Number : 74 Question Id : 5113466194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following is not derived data type in 'c'?

Options :

- 1. ✗ Function
- 2. ✗ Pointer
- 3. ✓ Enumeration
- 4. ✗ Array

Question Number : 75 Question Id : 5113466195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The internal molecular attraction of a soil, the cohesion

Options :

1. ✓ is more in well compacted clays
2. ✗ increases as the moisture content decreases
3. ✗ depends upon the external applied load.
4. ✗ decreases as the moisture content increases

Question Number : 76 Question Id : 5113466196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The specific yield of a material is always

Options :

1. ✗ Equal to the porosity
2. ✓ Less than the porosity
3. ✗ More than porosity
4. ✗ Remains constant

Question Number : 77 Question Id : 5113466197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Smallest element of an array is called

Options :

1. ✗ Middle bound
2. ✓ Lower bound
3. ✗ Upper bound
4. ✗ Range

Question Number : 78 Question Id : 5113466198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which one of the following waves is the slowest

Options :

1. ✗ P waves

- 2. ✖ S waves
- 3. ✖ Surface waves
- 4. ✔ Tsunami waves

Question Number : 79 Question Id : 5113466199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Considering the earth as a solid sphere rotating with an angular velocity 'w' then the centrifugal force exerted on a unit mass located on its surface at a radial distance 'r' from the axis of rotation is

Options :

- 1. ✖ r^2w
- 2. ✖ zero
- 3. ✖ r/w
- 4. ✔ rw^2

Question Number : 80 Question Id : 5113466200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

What is meaning of `int *ptr[20]`

Options :

- 1. ✖ Integer Array to Integer Pointers having size 20
- 2. ✔ Array of Integer Pointers of size 20
- 3. ✖ Integer Array of size 20 pointing to an Integer Pointer
- 4. ✖ Array of Integer Pointers of size 19

Question Number : 81 Question Id : 5113466201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Abiotic environment does not include

Options :

1. ✖ Air
2. ✖ Soil
3. ✔ Plants
4. ✖ Water

Question Number : 82 Question Id : 5113466202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following is integral data type?

Options :

1. ✖ float
2. ✖ double
3. ✔ char
4. ✖ void

Question Number : 83 Question Id : 5113466203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The capillary rise of water

Options :

1. ✖ increases as the size of the soil particles increases
2. ✖ is less in wet soil than in dry soil
3. ✔ depends upon the force responsible
4. ✖ decreases as the size of the soil particles decreases

Question Number : 84 Question Id : 5113466204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

To store address of integer variable to integer pointer in a 32 bit compiler what will be the size of integer pointer?

Options :

1. ✗ 6 Bytes
2. ✗ 4 Bytes
3. ✓ 2 Bytes
4. ✗ 10 Bytes

Question Number : 85 Question Id : 5113466205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The unit of resistivity is

Options :

1. ✗ Ohm
2. ✗ Mohs
3. ✓ Ohm.m
4. ✗ Ohm/m

Question Number : 86 Question Id : 5113466206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The centrifugal force due to the rotation of Earth is maximum at

Options :

1. ✓ Equator
2. ✗ 45° latitude
3. ✗ poles
4. ✗ it remains the same at all latitudes

Question Number : 87 Question Id : 5113466207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Dendritic drainage pattern generally developed in

Options :

1. ✓ Regions of flat laying sedimentary rocks
2. ✗ Regions of folded strata
3. ✗ Along the flanks of isolated volcanoes
4. ✗ Regions underlain by regularly spaced joints and faults

Question Number : 88 Question Id : 5113466208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The altitude of a geostationary satellite from the earth is about

Options :

1. ✓ 36, 000 km
2. ✗ 20, 000 km
3. ✗ 44, 000 km
4. ✗ 14, 000 km

Question Number : 89 Question Id : 5113466209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following is NOT considered a physical property of minerals?

Options :

1. ✗ Hardness
2. ✗ Streak
3. ✗ Luster
4. ✓ Silicate structure

Question Number : 90 Question Id : 5113466210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The desert which experiences very high temperature in the world is

Options :

1. ✗ Iranian
2. ✗ Turkmen
3. ✓ Pantagonian
4. ✗ Taklamakan

Question Number : 91 Question Id : 5113466211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If the length of a current carrying electric conductor is halved its resistivity

Options :

1. ✗ becomes half
2. ✗ becomes double
3. ✓ does not change
4. ✗ becomes zero

Question Number : 92 Question Id : 5113466212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Blind valleys are found in

Options :

1. ✗ Aeolian topography
2. ✗ Glacier topography
3. ✓ Karst topography
4. ✗ Granitic terrain

Question Number : 93 Question Id : 5113466213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

What is the unit of compactness of a region?

Options :

1. ✗ Meter
2. ✗ Meter²
3. ✗ Meter⁻¹
4. ✓ No units

Question Number : 94 Question Id : 5113466214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

River erosion is responsible for the formation of

Options :

1. ✗ Sink holes
2. ✗ Kames
3. ✓ Pot holes
4. ✗ Swallow holes

Question Number : 95 Question Id : 5113466215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Diamagnetic minerals acquire feeble magnetism

Options :

1. ✗ in the same direction that of magnetizing field
2. ✓ opposite to the direction of magnetizing field
3. ✗ diagonal to the magnetizing field
4. ✗ with no specific direction

Question Number : 96 Question Id : 5113466216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which one of the following is a property of quartz that is a major cause for its predominance in river sands and other non-coastal inland settings?

Options :

1. ✖ Low melting point
2. ✖ High tendency to fracture
3. ✖ High specific gravity
4. ✔ Low chemical reactivity

Question Number : 97 Question Id : 5113466217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Specific yield of unconfined aquifer indicates

Options :

1. ✔ Water capacity
2. ✖ Volume of water
3. ✖ Water retained
4. ✖ Nature of cementing material

Question Number : 98 Question Id : 5113466218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

If the failure occurs along a surface of sliding that intersect the slope at its toe, the slide is known as

Options :

1. ✖ Base failure
2. ✔ Slope failure
3. ✖ Face failure
4. ✖ Top failure

Question Number : 99 Question Id : 5113466219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following pairs of intrusive and extrusive rocks have the same chemical composition?

Options :

1. ✖ granite and andesite
2. ✖ diorite and basalt
3. ✔ gabbro and basalt
4. ✖ gabbro and rhyolite

Question Number : 100 Question Id : 5113466220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Apparent resistivity is defined as

Options :

1. ✖ the true resistivity of the bottommost formation
2. ✔ the true resistivity of a homogeneous fictitious layer
3. ✖ average of all the true resistivities of the formations
4. ✖ the true resistivity of the topmost formation

Question Number : 101 Question Id : 5113466221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The hanging masses of limestone in a cavern from the roof are called

Options :

1. ✖ Stalagmites
2. ✔ Stalactites
3. ✖ Grip stones
4. ✖ Gem stones

Question Number : 102 Question Id : 5113466222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Electric field is defined as

Options :

1. ✓ Force/unit charge
2. ✗ Force x unit charge
3. ✗ Force/unit volume
4. ✗ Force/unit area

Question Number : 103 Question Id : 5113466223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The particle motion in an compressional wave is

Options :

1. ✓ in the direction of propagation
2. ✗ opposite to the direction of propagation
3. ✗ perpendicular to the direction of propagation
4. ✗ no motion at all

Question Number : 104 Question Id : 5113466224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Lateral offset in drainage lines is commonly associated with

Options :

1. ✗ normal faults
2. ✗ reverse faults
3. ✗ thrust faults
4. ✓ strike-slip faults

Question Number : 105 Question Id : 5113466225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

One of the most effective ways to stabilize a slope is to

Options :

1. ✗ Increase the rate of compaction by adding water
2. ✓ Control and remove water
3. ✗ Remove all excess vegetation
4. ✗ Plant more trees

Question Number : 106 Question Id : 5113466226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The maximum depth of ocean floor occurs in

Options :

1. ✗ Rift valleys
2. ✓ Oceanic trenches
3. ✗ Submarine canyons
4. ✗ Abyssal plains

Question Number : 107 Question Id : 5113466227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following soil contains finest grain particles

Options :

1. ✓ Clay
2. ✗ Coarse sand
3. ✗ Fine sand
4. ✗ Silt

Question Number : 108 Question Id : 5113466228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

On which of the following operations of an image, the topology of the region changes?

Options :

1. ✗ Stretching
2. ✗ Rotation
3. ✓ Folding
4. ✗ Change in distance measure

Question Number : 109 Question Id : 5113466229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Clay minerals are common examples of which silicate structures

Options :

1. ✓ sheet silicates
2. ✗ isolated tetrahedral
3. ✗ single chains
4. ✗ framework

Question Number : 110 Question Id : 5113466230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The more the closer a satellite is to Earth, its speed becomes

Options :

1. ✓ more faster
2. ✗ more slower
3. ✗ zero
4. ✗ constant value

Question Number : 111 Question Id : 5113466231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which of the following rock type possesses very high compressive strength?

Options :

1. ✓ Igneous
2. ✗ Sedimentary
3. ✗ Metamorphic
4. ✗ Both sedimentary and metamorphic

Question Number : 112 Question Id : 5113466232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Minerals that contain a combination of silicon and oxygen are known as

Options :

1. ✗ Nonsilicate minerals
2. ✗ Organic minerals
3. ✗ Synthetic minerals
4. ✓ Silicate minerals

Question Number : 113 Question Id : 5113466233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The most ideal conditions for the chemical weathering are found in

Options :

1. ✓ Hot and humid regions
2. ✗ Hot and dry regions
3. ✗ Cold and humid regions
4. ✗ Cold and dry regions

Question Number : 114 Question Id : 5113466234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Majority of minerals crystallizes in

Options :

1. ✖ Cubic system
2. ✔ Monoclinic system
3. ✖ Tetragonal system
4. ✖ Orthorhombic system

Question Number : 115 Question Id : 5113466235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The shear modulus measures

Options :

1. ✔ The resistance to change in shape
2. ✖ The resistance to flow of a liquid
3. ✖ The resistance to change in volume of a solid
4. ✖ The resistance to change in volume of a liquid

Question Number : 116 Question Id : 5113466236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

At mid-ocean ridges, two plates are

Options :

1. ✖ moving towards each other
2. ✔ moving away from each other
3. ✖ sliding along each other
4. ✖ stationary

Question Number : 117 Question Id : 5113466237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Surface tension is greatest when

Options :

1. ✖ Sand is saturated with water
2. ✖ Sand is dry
3. ✔ Sand is moist but not saturated with water
4. ✖ Sand is over saturated with water

Question Number : 118 Question Id : 5113466238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Impermeable geologic formation is termed as

Options :

1. ✖ An aquifer
2. ✔ An aquiclude
3. ✖ An artesian
4. ✖ A phreatic aquifer

Question Number : 119 Question Id : 5113466239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Which plate margins thrust faults are normally associated with

Options :

1. ✖ Passive
2. ✖ Transform
3. ✖ Spreading center
4. ✔ Continental/ocean convergent

Question Number : 120 Question Id : 5113466240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Acoustic impedance is defined as

Options :

1. ✓ Velocity X density
2. ✗ Velocity/density
3. ✗ Resistivity X density
4. ✗ Density X susceptibility

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