

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 10th
June 2024 Shift 1

Subject Name :

Geo Engineering and Geo Informatics

Creation Date :

2024-06-11 14:22:06

Duration :

120

Total Marks :

120

Display Marks:

Yes

Share Answer Key With Delivery Engine :

Yes

Actual Answer Key :

Yes

Change Font Color :

No

Change Background Color :

No

Change Theme :

No

Help Button :

No

Show Reports :

No

Show Progress Bar :

No

Geo Engineering and Geo Informatics

Group Number :

1

Group Id :

38382329

Group Maximum Duration :

0

Group Minimum Duration :

120

Show Attended Group? :

No

Edit Attended Group? :

No

Break time :

0

Group Marks :

120

Mathematics

Section Id :

38382390

Section Number :

1

Section type :

Online

Mandatory or Optional :

Mandatory

Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	38382390
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 3838234321 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

Let $A = \begin{bmatrix} 1 & -5 & 2 \\ 7 & 0 & 6 \\ 5 & -3 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 6 & 7 \\ 3 & 8 & 4 \\ 7 & 6 & 1 \end{bmatrix}$. If C and D are two 3×3 matrices such that

$A + C$ is symmetric, $A - C$ is skew-symmetric and B is transpose of D, then $(C - D^T)^T =$

Options :

1. ✖ $\begin{bmatrix} 0 & -11 & -5 \\ 4 & -8 & 2 \\ -2 & -9 & 8 \end{bmatrix}$

2. ✖ $\begin{bmatrix} 0 & -22 & -11 \\ 49 & 78 & 55 \\ 45 & 48 & 30 \end{bmatrix}$

3. ✖ $\begin{bmatrix} 2 & 13 & 12 \\ -2 & 8 & 1 \\ 9 & 12 & 8 \end{bmatrix}$

4. ✔ $\begin{bmatrix} 0 & -8 & -5 \\ 1 & -8 & 0 \\ -2 & -7 & 6 \end{bmatrix}$

Question Number : 2 Question Id : 3838234322 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

If $\overline{X_1}$ and $\overline{X_2}$ are any two eigen vectors corresponding to eigen values λ_1 and λ_2 respectively, then

Options :

1. ✖ $\exists$ a constant K such that $\overline{X_1} = K\overline{X_2}$, whenever $\lambda_1 \neq \lambda_2$
2. ✔ $\exists$ no constant K such that $\overline{X_1} = K\overline{X_2}$, whenever $\lambda_1 \neq \lambda_2$
3. ✖ $\exists$ no constant K such that $\overline{X_1} = K\overline{X_2}$, whenever $\lambda_1 = \lambda_2$
4. ✖ $\overline{X_1} = \overline{X_2}$ whenever $\lambda_1 = \lambda_2$

Question Number : 3 Question Id : 3838234323 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The equations $a_1x + b_1y + c_1z = d_1$, $a_2x + b_2y + c_2z = d_2$ and $a_3x + b_3y + c_3z = d_3$

($d_1d_2d_3 \neq 0$) represents three planes and $\frac{a_i}{a_j} \neq \frac{b_i}{b_j} \neq \frac{c_i}{c_j}$ ($i, j = 1, 2, 3$ & $i \neq j$).

Let $A = \begin{bmatrix} a_1 & b_1 & c_1 \\ a_2 & b_2 & c_2 \\ a_3 & b_3 & c_3 \end{bmatrix}$, $B = \begin{bmatrix} d_1 \\ d_2 \\ d_3 \end{bmatrix}$. If rank of A = rank of $[A : B] = 2$, then the planes are such that

Options :

1. ✖ line of intersection of any two is parallel to the third plane
2. ✖ line of intersection of any two planes cuts the third plane
3. ✔ line of intersection of any two planes lies on the third plane
4. ✖ the three planes are adjacent faces of a box

Question Number : 4 Question Id : 3838234324 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

If $|Z| > 2$ and the coefficients of Z^{12} and $\frac{1}{Z^{12}}$ in the Laurent's series expansion of

$\frac{1}{(1-Z)(2-Z)}$ are A and B respectively, then $2024 - A =$

Options :

1. ✖ B + 23

2. ✔ B - 23

3. ✖ B - 1

4. ✖ B + 1

Question Number : 5 Question Id : 3838234325 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Given $\oint_C \frac{f(z)}{z-a} dz = 0$, where $C: |z| = K$. Consider the following conclusions

I. $K < |a|$ and $f(z)$ is analytic inside and on C.

II. $f(z) = (z-a)^n g(z)$ ($n \in \mathbb{N}$) and $g(z)$ is analytic inside and on C.

Which of the following is true

Options :

1. ✖ I alone is true

2. ✔ II alone is true

3. ✖ Both I and II are true

4. ✖ Neither I nor II is true

Question Number : 6 Question Id : 3838234326 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Three students A, B and C write an entrance exam. The chance that at least one of them pass that exam is $\frac{3}{4}$. If probability that A, C pass that exam are respectively

$\frac{1}{2}, \frac{1}{4}$ then the probability that B do not pass that exam is

Options :

1. ✖ $\frac{1}{3}$

2. ✔ $\frac{2}{3}$

3. ✖ $\frac{1}{4}$

4. ✖ $\frac{3}{4}$

Question Number : 7 Question Id : 3838234327 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Correct Marks : 1

If the mean of a random variable which follows exponential distribution is $\frac{1}{3}$, then the probability that the random variable X takes the values more than r is greater than $\frac{1}{e^5}$, then

Options :

1. ✖ $r > \frac{5}{3}$

2. ✔ $r < \frac{5}{3}$

3. ✖ $r > \frac{1}{6}$

4. ✖ $r < \frac{1}{6}$

Question Number : 8 Question Id : 3838234328 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

$\vec{F}$ is an irrotational vector function. If C is the closed curve which is boundary of an open surface S, then $\oint_C \vec{F} \cdot d\vec{R} =$

Options :

1. ✖ $\iint_E \left(\frac{\partial^2 \phi}{\partial x^2} - \frac{\partial^2 \phi}{\partial y^2} \right) dx dy$, ϕ is a scalar function and E is region of C

2. ✖ $\int_S \text{div } \vec{F} dv$

3. ✔ $\int_C (\text{grad } \phi) \cdot d\vec{R} = 0$ for some scalar function ϕ

4. ✖ divergence of $\vec{F}$

Question Number : 9 Question Id : 3838234329 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

If $x + y + z = 45$ and maximum value of $x^4 y^6 z^5$ exists at $x = \alpha$, $y = \beta$ and $z = \gamma$, then

$$\frac{\alpha + \beta}{\gamma} =$$

Options :

1. ✔ 2

2. ✖ 1

3. ✖ 3

4. ✖ 4

Question Number : 10 Question Id : 3838234330 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

If it is known that $\int_0^{\infty} \frac{e^{ix}}{x} dx = \frac{\pi i}{2}$, then $\int_0^{\infty} \frac{\sin 5x}{x} dx =$

Options :

1. ✖ $\frac{\pi}{10}$
2. ✖ $\frac{5\pi}{2}$
3. ✔ $\frac{\pi}{2}$
4. ✖ $\frac{\pi}{2} + 5$

Geo Engineering and Geo Informatics

Section Id :	38382391
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	38382391
Question Shuffling Allowed :	Yes

Question Number : 11 Question Id : 3838234331 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

In which of the following stages of a river, the meanders are formed commonly?

Options :

1. ✖ youthful age
2. ✔ mature age
3. ✖ old age

4. ✖ both mature and youthful age

Question Number : 12 Question Id : 3838234332 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

An elongated sandy deposit that extends out into open water in the direction of a longshore current is called

Options :

1. ✖ fore reef

2. ✖ tombolo

3. ✔ spit

4. ✖ rip-rap

Question Number : 13 Question Id : 3838234333 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Size of the landform on the surface of the earth is

Options :

1. ✖ smallest part

2. ✔ small to medium part

3. ✖ medium part

4. ✖ medium to largest part

Question Number : 14 Question Id : 3838234334 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The point bars which form in the concave side of meanders of large rivers consists of

Options :

1. ✖ pure clayey deposits

- 2. ✖ pure sandy deposits
- 3. ✖ coarse sized deposits
- 4. ✔ mixed size of sediments

Question Number : 15 Question Id : 3838234335 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is not the basic aspects of applied geomorphology?

Options :

- 1. ✖ mapping of landforms
- 2. ✖ interpretation of aerial photographs and images
- 3. ✔ assessing the causes of sustainable changes
- 4. ✖ monitoring the environmental changes

Question Number : 16 Question Id : 3838234336 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Approximate mass of the earth is

Options :

- 1. ✔ 5.97×10^{24} kg
- 2. ✖ 5.97×10^{24} tonnes
- 3. ✖ 5.97×10^{24} N
- 4. ✖ 5.97×10^{24} kN

Question Number : 17 Question Id : 3838234337 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The average thickness of Ozone layer in India is

Options :

1. ✖ 100 Dobson
2. ✖ 200 Dobson
3. ✔ 300 Dobson
4. ✖ 400 Dobson

Question Number : 18 Question Id : 3838234338 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

When viewed from above the Northern Hemisphere, the earth orbits the sun at an average distance of

Options :

1. ✔ 149.60 million km in a counterclockwise direction
2. ✖ 149.60 million km in a clockwise direction
3. ✖ 149.60 billion km in a counterclockwise direction
4. ✖ 149.60 billion km in a clockwise direction

Question Number : 19 Question Id : 3838234339 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

For an observer at a northern latitude, when the north pole is tilted towards the Sun, the day lasts

Options :

1. ✖ longer and the Sun appears lower in the sky
2. ✖ shorter and the Sun appears higher in the sky
3. ✔ longer and the Sun appears higher in the sky
4. ✖ shorter and the Sun appears lower in the sky

Question Number : 20 Question Id : 3838234340 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

The average depth of the Indian Oceans basin is

Options :

1. ✖ 1.7 km
2. ✖ 2.7 km
3. ✖ 3.7 km
4. ✔ 4.7 km

Question Number : 21 Question Id : 3838234341 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

Indian Ocean basin surface water salinity varies between

Options :

1. ✔ 32 and 37 parts per thousand
2. ✖ 22 and 27 parts per thousand
3. ✖ 12 and 17 parts per thousand
4. ✖ 2 and 7 parts per thousand

Question Number : 22 Question Id : 3838234342 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

A mountain with pointed summits which rises from the sea floor that does not reach the surface of the ocean is called as

Options :

1. ✖ submarine canyons
2. ✔ seamount

3. ✖ atoll

4. ✖ guyots

Question Number : 23 Question Id : 3838234343 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is the cleavage of Galena mineral?

Options :

1. ✖ octahedral

2. ✔ cubic

3. ✖ irregular fracture surface

4. ✖ regular fracture surface

Question Number : 24 Question Id : 3838234344 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The luster and crystal system of a Topaz mineral respectively are

Options :

1. ✖ metallic and triclinic

2. ✖ greasy and tetragonal

3. ✖ dull and monocline

4. ✔ vitreous and orthorhombic

Question Number : 25 Question Id : 3838234345 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The diaphaneity of Gypsum mineral is

Options :

1. ✖ opaque
2. ✔ transparent to translucent
3. ✖ Opaque to translucent
4. ✖ translucent

Question Number : 26 Question Id : 3838234346 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

If Q = depth of runoff in inches, P = depth of rainfall in inches, I_a = initial abstraction in inches and S = maximum potential retention in inches, then which of the following is the correct equation for the curve number runoff?

Options :

1. ✔ $Q = \frac{(P - I_a)^2}{((P - I_a) + S)}$
2. ✖ $Q = \frac{(P + I_a)^2}{((P - I_a) - S)}$
3. ✖ $Q = \frac{(P - I_a)^2}{((P + I_a) + S)}$
4. ✖ $Q = \frac{(P - I_a)^2}{((P - I_a) - S)}$

Question Number : 27 Question Id : 3838234347 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

For any time step, when the effective precipitation (P_E) exceeds infiltration (I), the total rainfall excess (TRE) can be computed as

Options :

1. ✔ $TRE = (P_E - I)$
2. ✖ $TRE = (P_E + I)$
3. ✖ $TRE = (P_E - I)^2$

4. ✖ $TRE = (P_E + I)^2$

Question Number : 28 Question Id : 3838234348 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The boundary between the unsaturated and saturated water zones in the underground is called

Options :

- 1. ✖ vadose zone
- 2. ✔ ground water table
- 3. ✖ phreatic line
- 4. ✖ capillary zone

Question Number : 29 Question Id : 3838234349 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following doesn't come under scope of environment?

Options :

- 1. ✖ nature and natural resources
- 2. ✖ biological diversity
- 3. ✖ pollution
- 4. ✔ stabilization of soil

Question Number : 30 Question Id : 3838234350 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The component of environment which deals with soil and rock is known as

Options :

- 1. ✔ Lithosphere

2. ✖ Biosphere
3. ✖ Atmosphere
4. ✖ Hydrosphere

Question Number : 31 Question Id : 3838234351 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following exactly belongs to the abiotic component of the environment?

Options :

1. ✖ animals and water
2. ✖ plants and soil
3. ✔ water and soil
4. ✖ microorganisms and water

Question Number : 32 Question Id : 3838234352 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Out of the available fresh water on the earth, the approximate percentage of ground water is about

Options :

1. ✖ 3.0
2. ✔ 30
3. ✖ 7.0
4. ✖ 70

Question Number : 33 Question Id : 3838234353 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following soils have high permeability

Options :

1. ✘ clay
2. ✘ silt
3. ✔ loose sand
4. ✘ dense sand

Question Number : 34 Question Id : 3838234354 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

A soil has void ratio 0.50, then its porosity is

Options :

1. ✘ 3
2. ✔ $\frac{1}{3}$
3. ✘ 2
4. ✘ $\frac{1}{2}$

Question Number : 35 Question Id : 3838234355 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The size of coarse sand ranges between

Options :

1. ✘ 20 mm and 80 mm
2. ✘ 4.75 mm and 20 mm
3. ✔ 2.0 mm and 4.75 mm
4. ✘ 0.425 mm to 2.0 mm

Question Number : 36 Question Id : 3838234356 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The structure formed after the formation of host rock is called

Options :

1. ✖ geologic structure
2. ✖ tectonic structure
3. ✖ primary structure
4. ✔ secondary structure

Question Number : 37 Question Id : 3838234357 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

In an angular unconformity, the younger strata are oriented as

Options :

1. ✖ dipping 45°
2. ✖ dipping 60°
3. ✖ inclined
4. ✔ horizontal

Question Number : 38 Question Id : 3838234358 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

When denser sand sinks into less dense wet mud, the bulges which are formed in the bottom of a sandstone bed are called as

Options :

1. ✖ slump structures
2. ✖ mud cracks

3. ✓ load structures

4. ✗ convolute lamination

Question Number : 39 Question Id : 3838234359 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The line of maximum curvature on a folded surface is known as

Options :

1. ✓ hinge line

2. ✗ plunge line

3. ✗ angle line

4. ✗ fold line

Question Number : 40 Question Id : 3838234360 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Thrusts are characterized by

Options :

1. ✗ transporting younger rocks on top of older ones over a long distance

2. ✗ transporting older rocks on top of younger ones over a short distance

3. ✗ transporting younger rocks on top of older ones over a short distance

4. ✓ transporting older rocks on top of younger ones over a long distance

Question Number : 41 Question Id : 3838234361 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

In which type of rock generally, the rock cleavage can be noticed?

Options :

1. ✓ fine grained rock

2. ✖ coarse grained rock
3. ✖ both fine and coarse-grained rocks
4. ✖ acidic rocks

Question Number : 42 Question Id : 3838234362 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The lineations which are formed due to shearing of rocks during asymmetric deformation of a rock mass are known as

Options :

1. ✖ intersection lineations
2. ✖ crenulation lineations
3. ✖ mineral lineations
4. ✔ stretching lineations

Question Number : 43 Question Id : 3838234363 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which portion of the spherical projection, a mineralogist 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 : 44 Question Id : 3838234364 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Tectonites which allows the rock to split into plate-like sheets are called

Options :

1. ✖ L-tectonites
2. ✔ S-tectonics
3. ✖ LS – tectonites
4. ✖ SL - tectonites

Question Number : 45 Question Id : 3838234365 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following is not correct statements?

Options :

1. ✖ shear zones provide information about deformation
2. ✖ shear zones help us to determine amount of strain
3. ✔ shear zones help us to determine the cleavage
4. ✖ shear zones help us to determine amount of displacement

Question Number : 46 Question Id : 3838234366 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

In which of the following shear zones, the physical break cannot be noticed?

Options :

1. ✖ brittle shear zone
2. ✔ ductile shear zone
3. ✖ semi brittle shear zone
4. ✖ ductile - brittle shear zone

Question Number : 47 Question Id : 3838234367 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

The basement rocks are often

Options :

1. ✖ highly sedimentary and non-crystalline in nature
2. ✖ highly sedimentary but crystalline in nature
3. ✖ highly metamorphic and non-crystalline in nature
4. ✔ highly metamorphic and crystalline in nature

Question Number : 48 Question Id : 3838234368 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

The ratio of silicon to oxygen in pyroxenes is

Options :

1. ✖ 1:1
2. ✖ 1:2
3. ✖ 3:1
4. ✔ 1:3

Question Number : 49 Question Id : 3838234369 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes

Correct Marks : 1

Olivine mineral chemical formula is

Options :

1. ✔ $(\text{Mg, Fe})_2 \text{SiO}_4$
2. ✖ $(\text{Mg, Fe})_3 \text{SiO}_4$

3. ✖ $(\text{Mg, Fe})_4 \text{SiO}_4$

4. ✖ $(\text{Mg, Fe})_5 \text{SiO}_4$

Question Number : 50 Question Id : 3838234370 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The absolute refractive index for a mineral is defined as the refraction relative to that in air. Then its value for different minerals ranges between

Options :

1. ✖ 1 and 1.2

2. ✔ 1.3 and 2

3. ✖ 2 and 3

4. ✖ 3 and 4.5

Question Number : 51 Question Id : 3838234371 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

In a Brazilian test, the rock specimen diameter shall preferably be

Options :

1. ✔ not less than NX core size (54 mm), or at least 10 times the average grain size

2. ✖ not less than NX core size (75 mm), or at least 10 times the average grain size

3. ✖ not less than NX core size (54 mm), or at least 20 times the average grain size

4. ✖ not less than NX core size (75 mm), or at least 20 times the average grain size

Question Number : 52 Question Id : 3838234372 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The absorption value of stones is estimated corresponding to the saturation period of

Options :

1. ✖ 24 hours or until full saturation
2. ✖ 48 hours or until full saturation
3. ✔ 72 hours or until full saturation
4. ✖ 36 hours or until full saturation

Question Number : 53 Question Id : 3838234373 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

For a stone to be used in road work, the coefficient of hardness as worked out from the hardness test should be

Options :

1. ✔ more than 17
2. ✖ 15 to 17
3. ✖ 9 to 15
4. ✖ Less than 9

Question Number : 54 Question Id : 3838234374 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following orientation of beds is most suitable for dam construction?

Options :

1. ✖ beds which are faulted
2. ✖ beds which are folded
3. ✔ beds with gently inclined in upstream direction
4. ✖ beds with steep upstream dip

Question Number : 55 Question Id : 3838234375 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following minerals possesses more electrical resistivity?

Options :

1. ✓ quartz
2. ✗ granite
3. ✗ mica
4. ✗ basalt

Question Number : 56 Question Id : 3838234376 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

For a fair rock, the Rock Quality Designation (RQD) in percentage varies from

Options :

1. ✗ 0 to 25
2. ✗ 25 to 50
3. ✓ 50 to 75
4. ✗ 75 to 90

Question Number : 57 Question Id : 3838234377 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following materials is an example for aquitard?

Options :

1. ✗ sand and poorly fractured metamorphic rock
2. ✗ clay and highly fractured metamorphic rocks
3. ✗ till and highly fractured metamorphic rocks
4. ✓ poorly fractured metamorphic rock and clay

Question Number : 58 Question Id : 3838234378 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

An earthquake with a hypocenter depth exceeding 300 km is known as

Options :

1. ✖ Shallow-focus earthquake
2. ✖ Intermediate-focus earthquake
3. ✔ Deep-focus earthquake
4. ✖ Surface-focus earthquake

Question Number : 59 Question Id : 3838234379 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is the ISO standard for water quality?

Options :

1. ✔ ISO 24512: 2007
2. ✖ ISO 9001: 2015
3. ✖ ISO 27001: 2013
4. ✖ ISO 14001: 2015

Question Number : 60 Question Id : 3838234380 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is not the assumptions of Theis equation?

Options :

1. ✖ constant discharge of water
2. ✖ homogeneous and isotropic soil

3. ✓ partially penetrating well

4. ✗ water released immediately from aquifer storage

Question Number : 61 Question Id : 3838234381 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The earth's equatorial and polar radius respectively are

Options :

1. ✗ 6357 km and 6378 km

2. ✓ 6378 km and 6357 km

3. ✗ 3189 km and 3178.5 km

4. ✗ 3178.5 km and 3189 km

Question Number : 62 Question Id : 3838234382 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The angle of inclination of the axis of rotation of earth is

Options :

1. ✗ 22.0 degrees

2. ✗ 22.5 degrees

3. ✗ 23.0 degrees

4. ✓ 23.5 degrees

Question Number : 63 Question Id : 3838234383 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

How many degrees of longitude, each time zone covers?

Options :

1. ✓ 15

2. ✖ 30

3. ✖ 60

4. ✖ 180

Question Number : 64 Question Id : 3838234384 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Gravitation potential is defined as

Options :

- 1. ✖ work done by the gravitational force per unit area
- 2. ✖ work done by the gravitational force per unit volume
- 3. ✔ work done by the gravitational force per unit mass
- 4. ✖ work done by the gravitational force per unit time

Question Number : 65 Question Id : 3838234385 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The unit of the acceleration due to gravity in Newtons (N) and kilograms (kg) is

Options :

- 1. ✔ Nkg^{-1}
- 2. ✖ kgN^{-1}
- 3. ✖ Nkg
- 4. ✖ $\text{N}^{-1}\text{kg}^{-1}$

Question Number : 66 Question Id : 3838234386 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The point on the orbital of the earth which is nearest to the sun is called as

Options :

1. ✓ perihelion point
2. ✗ aphelion point
3. ✗ shortest distance point
4. ✗ highest distance point

Question Number : 67 Question Id : 3838234387 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The geomagnetic field which is present on the earth protects our planet from

Options :

1. ✗ thermal power radiation hazards
2. ✗ nuclear radiation hazards
3. ✗ seismic radiation hazards
4. ✓ cosmic radiation hazards

Question Number : 68 Question Id : 3838234388 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following minerals is a weak magnetic mineral?

Options :

1. ✗ magnetite
2. ✓ allanite
3. ✗ hematite
4. ✗ axinite

Question Number : 69 Question Id : 3838234389 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The most commonly available minerals in the oceanic crust are

Options :

1. ✓ clinopyroxene, orthopyroxene, olivine
2. ✗ quartz, feldspar, mica
3. ✗ clinopyroxene, quartz, feldspar, mica
4. ✗ orthopyroxene, feldspar, mica

Question Number : 70 Question Id : 3838234390 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The earth's circumference is nearly

Options :

1. ✗ 30075 km
2. ✗ 40075 km
3. ✓ 50075 km
4. ✗ 60075 km

Question Number : 71 Question Id : 3838234391 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following physical properties of the earth's mantle controls the transmission of geomagnetic signals from the core to the surface?

Options :

1. ✓ electrical conductivity
2. ✗ electrical voltage
3. ✗ electric rotational energy

4. ✖ electric current

Question Number : 72 Question Id : 3838234392 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The Gutenberg discontinuity is located at

Options :

1. ✖ boundary between the earth's crust and mantle
2. ✖ within the mantle zone
3. ✔ boundary between the earth's mantle and core
4. ✖ within the core zone

Question Number : 73 Question Id : 3838234393 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The earth's magnetic field approximately ranges between

Options :

1. ✖ 250 and 650 microteslas
2. ✔ 25 and 65 microteslas
3. ✖ 2.5 and 6.5 microteslas
4. ✖ 0.25 and 0.65 microteslas

Question Number : 74 Question Id : 3838234394 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following natural calamities cannot be predicted in advance very accurately?

Options :

1. ✖ famine

- 2. ✖ flood
- 3. ✖ cyclone
- 4. ✔ earthquake

Question Number : 75 Question Id : 3838234395 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is used to quantify the energy that is released during an earthquake?

Options :

- 1. ✖ seismograph
- 2. ✖ seismogram
- 3. ✔ Richter scale
- 4. ✖ damper

Question Number : 76 Question Id : 3838234396 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following magnitude of an earthquake results in serious damage?

Options :

- 1. ✖ 5.5 to 6
- 2. ✔ 7.0 to 7.9
- 3. ✖ 6.1 to 6.9
- 4. ✖ 5.1 to 5.4

Question Number : 77 Question Id : 3838234397 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The earthquake magnitude is the measure of

Options :

1. ✓ seismic wave amplitude
2. ✗ seismic wave velocity
3. ✗ seismic wave length
4. ✗ seismic wave period

Question Number : 78 Question Id : 3838234398 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

If I_0 is the intensity of an earthquake, which of the following expressions is the correct one as per the Gutenberg and Richter for local magnitude of an earthquake?

Options :

1. ✓ $M_L = (2/3) I_0 + 1$
2. ✗ $M_L = (3/2) I_0 + 1$
3. ✗ $M_L = (2/3) I_0$
4. ✗ $M_L = (3/2) I_0$

Question Number : 79 Question Id : 3838234399 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Choose the correct options from the following in relation to occurrence of liquefaction of soil

Options :

1. ✗ High ground water table, static load and loose fine sand
2. ✗ High ground water table, static load and dense coarse sand
3. ✓ High ground water table, dynamic load and loose fine sand

4. ✖ High ground water table, dynamic load and dense coarse sand

Question Number : 80 Question Id : 3838234400 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

For which of the following seismic waves the velocity is directly proportional to the shear strength of the material through which they pass?

Options :

- 1. ✖ R-waves
- 2. ✖ L-waves
- 3. ✖ P- wave
- 4. ✔ S-waves

Question Number : 81 Question Id : 3838234401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is the correct relation between photographic scale (S) and focal length (f) of the camera lens?

Options :

- 1. ✔ $S \propto f$
- 2. ✖ $S \propto (1/f)$
- 3. ✖ $S \propto f^2$
- 4. ✖ $S \propto (1/f^2)$

Question Number : 82 Question Id : 3838234402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

For the medium scale aerial photographs, the scale ranges between

Options :

- 1. ✖ 1 : 10000 and 1 : 15000

2. ✖ 1 : 30000 and 1 : 50000
3. ✔ 1 : 15000 and 1:30000
4. ✖ 1 : 50000 and 1:10000

Question Number : 83 Question Id : 3838234403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is the correct one as per the scale of aerial photograph and scale of map is concerned?

Options :

1. ✖ scale of aerial photograph is uniform throughout
2. ✔ scale of aerial photograph is non-uniform throughout
3. ✖ scale of map cannot be defined
4. ✖ scale of map is nonuniform throughout

Question Number : 84 Question Id : 3838234404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following objects reflect more energy?

Options :

1. ✖ smooth and moist object surfaces
2. ✖ rough and moist object surfaces
3. ✔ smooth and dry object surfaces
4. ✖ rough and dry object surfaces

Question Number : 85 Question Id : 3838234405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Colour signature on standard false colour composite of an earth surface feature such as turbid waterbody is

Options :

1. ✓ light blue
2. ✗ dark blue
3. ✗ light green
4. ✗ thick black

Question Number : 86 Question Id : 3838234406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Low earth orbit crosses the equator at

Options :

1. ✗ 45°
2. ✗ 60°
3. ✓ 90°
4. ✗ 105°

Question Number : 87 Question Id : 3838234407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following airborne platforms measure the wind velocity?

Options :

1. ✓ Rawinsonde
2. ✗ Radiosonde
3. ✗ Balloons based airborne platform
4. ✗ Balloons based earth system

Question Number : 88 Question Id : 3838234408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The sensors which are used to measure the temperature and study of atmosphere are called as

Options :

1. ✖ scanning sensors
2. ✔ non imaging sensors
3. ✖ non scanning sensors
4. ✖ framing sensors

Question Number : 89 Question Id : 3838234409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following refers to the arrangement and frequency of tonal variation in particular areas of an image?

Options :

1. ✔ texture
2. ✖ shape
3. ✖ pattern
4. ✖ size

Question Number : 90 Question Id : 3838234410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following element is described as 'short' in image interpretation analysis?

Options :

1. ✖ size

- 2. ✘ shape
- 3. ✘ pattern
- 4. ✔ height

Question Number : 91 Question Id : 3838234411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following is correct as per the Stefan-Boltzmann law? (where, M = total radiant emitted from the surface of a material, σ = Stefan-Boltzmann constant and T = absolute temperature)

Options :

- 1. ✔ $M = \sigma T^4$
- 2. ✘ $M = \sigma T^3$
- 3. ✘ $M = \sigma T^2$
- 4. ✘ $M = \sigma T$

Question Number : 92 Question Id : 3838234412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The ratio of the total stream length cumulated for all orders in the basin to the total area of basin is called as

Options :

- 1. ✘ basin ratio
- 2. ✘ drainage pattern
- 3. ✔ drainage density
- 4. ✘ texture ratio

In GIS, the stored information either spatial data or associated tabular data can be retrieved with the help of language called

Options :

1. ✖ C language
2. ✖ Python
3. ✔ SQL
4. ✖ FORTRAN

Question Number : 94 Question Id : 3838234414 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following data format for ArcView GIS that defines the geometry and attribute of geographically referenced objects by three specific files i.e., a main file, an index file, and a database table?

Options :

1. ✖ ArcInfo EOO
2. ✔ Shapefiles
3. ✖ ArcInfo Coverage
4. ✖ Computer Graphics Metafile

Question Number : 95 Question Id : 3838234415 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following proprietary raster format the ESRI uses in its software products such as ArcInfo and ArcView GIS?

Options :

1. ✔ GRID

2. ✖ PNG
3. ✖ GIF
4. ✖ GeoTIFF

Question Number : 96 Question Id : 3838234416 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The vector model is extremely useful for describing

Options :

1. ✖ continuously varying features
2. ✖ soil features
3. ✖ precipitation and temperature features
4. ✔ discrete features

Question Number : 97 Question Id : 3838234417 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

In a GPS system, if one of the receivers is in relative motion with respect to the other receiver, having been mounted either on a vehicle, ship or aircraft is called as

Options :

1. ✔ kinematic GPS
2. ✖ MDGPS
3. ✖ DGPS
4. ✖ Absolute GPS

Question Number : 98 Question Id : 3838234418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

A straight line between the last waypoint and the GOTO waypoint is known as

Options :

1. ✗ desired track (DTK)
2. ✗ tracklog
3. ✗ bearing (BRG)
4. ✓ active log

Question Number : 99 Question Id : 3838234419 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The electric and magnetic fields of an electromagnetic waves are

Options :

1. ✓ perpendicular to each other
2. ✗ parallel to each other
3. ✗ 45° oblique each other
4. ✗ 30° oblique each other

Question Number : 100 Question Id : 3838234420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Those areas of the frequency spectrum which are not severely influenced by atmospheric absorption and thus are extremely useful to remote sensors are called

Options :

1. ✗ remote sensing windows
2. ✓ atmospheric windows
3. ✗ ionosphere windows
4. ✗ remote sensing windows and atmospheric windows

Question Number : 101 Question Id : 3838234421 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The principle of working from whole to part is used in surveying because

Options :

1. ✗ plotting becomes easy
2. ✗ survey work can be completed quickly
3. ✓ accumulation of errors can be prevented
4. ✗ even in odd climate also surveying can be carried out

Question Number : 102 Question Id : 3838234422 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The smallest length that can be drawn on a map is

Options :

1. ✓ 0.2 mm
2. ✗ 0.5 mm
3. ✗ 10 mm
4. ✗ 15 mm

Question Number : 103 Question Id : 3838234423 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

If the intercept on a vertical staff is observed as 0.5 m from a tacheometer, the horizontal distance between tacheometer and the staff station is (assume $K=100$, $C=0$)

Options :

1. ✗ 5 m
2. ✗ 25 m

3. ✖ 75 m

4. ✔ 50 m

Question Number : 104 Question Id : 3838234424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

It is convenient to record the field notes for a closed traverse in the field book

Options :

1. ✔ from left to right

2. ✖ from right to left

3. ✖ from top to down

4. ✖ from down to top

Question Number : 105 Question Id : 3838234425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The height of the instrument is equal to

Options :

1. ✖ back sight + fore sight

2. ✖ RL of bench mark + fore sight

3. ✖ RL of bench mark + intermediate sight

4. ✔ RL of bench mark + back sight

Question Number : 106 Question Id : 3838234426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Surveys which are carried out to provide a national grid of control for preparation of accurate maps of large areas are known as

Options :

1. ✖ plane surveys
2. ✔ geodetic surveys
3. ✖ geographical surveys
4. ✖ topographical surveys

Question Number : 107 Question Id : 3838234427 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The temporary adjustments of surveyor compass involve

Options :

1. ✖ centering only
2. ✖ levelling only
3. ✔ centering and levelling
4. ✖ centering, levelling and focusing the prism

Question Number : 108 Question Id : 3838234428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

If the altitude bubble is provided both on the index frame as well as on the telescope of a theodolite, then the instrument is levelled with reference to the

Options :

1. ✖ altitude bubble on the telescope
2. ✔ altitude bubble on the index frame, if it is to be used as a level
3. ✖ altitude bubble on the telescope, if it is to be used as a level
4. ✖ laser principle

Question Number : 109 Question Id : 3838234429 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

With regard to the theodolite, which one of the following statements is correct?

Options :

1. ✖ the axis of the plate level should be parallel to the vertical axis
2. ✖ the axis of striding level must be parallel to the horizontal axis
3. ✖ the axis of the altitude level must be perpendicular to the line of collimation
4. ✔ the line of collimation must be perpendicular to the plate level axis

Question Number : 110 Question Id : 3838234430 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

If n is the number of sides of a traverse, the theoretical sum of the interior included angles of a closed traverse is

Options :

1. ✔ $(2n - 4) \times 90^\circ$
2. ✖ $(2n + 4) \times 90^\circ$
3. ✖ $(2n \pm 4) \times 90^\circ$
4. ✖ 360°

Question Number : 111 Question Id : 3838234431 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Overturning of vehicles on a curve can be avoided by using a

Options :

1. ✖ compound curve
2. ✖ vertical curve
3. ✖ reverse curve

4. ✓ transition curve

Question Number : 112 Question Id : 3838234432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The curve which deflects to the right of the direction of the progress of survey is called as

Options :

1. ✓ Right hand curve
2. ✗ Left hand curve
3. ✗ Eastward curve
4. ✗ Westward curve

Question Number : 113 Question Id : 3838234433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Transition curves are introduced at each end of a circular curve to obtain

Options :

1. ✗ gradual decrease of curvature from zero at the tangent point to a specified quantity at the junction of the transition curve with the main curve
2. ✓ gradual increase of super elevation from zero at the tangent point to a specified amount at the junction of the transition curve with the main curve
3. ✗ gradual change of gradient from zero at the tangent point to a specified amount at the junction of the transition curve with the main curve
4. ✗ gradual change of gradient from 1 in 6 at the tangent point to a specified amount at the junction of the transition curve with the main curve

Question Number : 114 Question Id : 3838234434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Perpendicular offset from the junction of a transition curve and circular curve to the tangent is equal to

Options :

1. ✖ 1 times shift
2. ✖ 0.5 times shift
3. ✖ 2 times shift
4. ✔ 4 times shift

Question Number : 115 Question Id : 3838234435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

In an external focusing telescope, the focusing of the objective is achieved by

Options :

1. ✖ movement of a negative concave lens
2. ✔ movement of objective
3. ✖ movement of cross-staff
4. ✖ double convex lens

Question Number : 116 Question Id : 3838234436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Which of the following options is the correct one as per the principle of barometric levelling

Options :

1. ✔ atmospheric pressure varies inversely with height
2. ✖ atmospheric pressure varies proportionately with height
3. ✖ atmospheric pressure varies constantly with height
4. ✖ atmospheric pressure is zero through out

Question Number : 117 Question Id : 3838234437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

In reciprocal levelling, the error which is not completely eliminated is due to

Options :

1. ✗ curvature
2. ✓ refraction
3. ✗ non-adjustment of line of collimation
4. ✗ parallax

Question Number : 118 Question Id : 3838234438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

Mathematical check for the computation of R.L. by rise and fall method is given by

Options :

1. ✗ $\Sigma FS - \Sigma BS = \text{RL of last station point} - \text{RL of first station point} = \Sigma \text{Fall} - \Sigma \text{Rise}$
2. ✗ $\Sigma BS - \Sigma FS = \text{RL of first station point} - \text{RL of last station point} = \Sigma \text{Fall} - \Sigma \text{Rise}$
3. ✓ $\Sigma BS - \Sigma FS = \text{RL of last station point} - \text{RL of first station point} = \Sigma \text{Rise} - \Sigma \text{Fall}$
4. ✗ $\Sigma BS - \Sigma FS = \text{RL of first station point} - \text{RL of last station point} = \Sigma \text{Rise} - \Sigma \text{Fall}$

Question Number : 119 Question Id : 3838234439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

The wave lengths used in various electronic distance measurement systems covers fairly the spectrum of range

Options :

1. ✗ 40 m to 450 m
2. ✗ 40 m to 450 mm

3. ✖ 40 m to 450 μ m

4. ✔ 40 m to 450 nm

Question Number : 120 Question Id : 3838234440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

After subjecting the EDM systems to the meteorological corrections, the possible accuracy range expected in short range and long range EDM systems respectively is

Options :

1. ✖ 0.15 mm to 1 mm and 0.5 mm to 1.5 mm

2. ✔ 1.5 mm to 10 mm and 5 mm to 15 mm

3. ✖ 15 mm to 100 mm and 50 mm to 150 mm

4. ✖ 150 mm to 1000 mm and 500 mm to 1500 mm