

Andhra Pradesh State Council of 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 28th May 2023 Shift 1
Duration :	120
Total Marks :	120
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No

Show Progress Bar :	No
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Geo Engineering and Geo Informatics

Section Id :	78773217
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	120
Section Marks :	120
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 7877321921 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the following statements:

- a. Continental crust is lighter than ocean crust
- b. The boundary between the Mantle and Core is demarcated by Gutenberg discontinuity.

Options :

1. ✘ Only 'a' is correct

2. ✘ Only 'b' is correct

3. ✓ Both 'a' and 'b' are correct

4. ✘ Both 'a' and 'b' are incorrect

Question Number : 2 Question Id : 7877321922 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not a division of ocean floors?

Options :

1. ✘ Deep sea plain

2. ✘ Continental slopes

3. ✘ Continental shelf

4. ✓ Continental deeps

Question Number : 3 Question Id : 7877321923 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What percentage of the oceans' water does the deep layer hold?

Options :

1. ✓ 50%

2. ✘ 60%

3. ✘ 80%

4. ✘ 30%

Question Number : 4 Question Id : 7877321924 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following is true?

Options :

1. ✔ The crust constitutes by 1% by volume of earth

2. ✘ The innermost layer over the earth's surface is called crust

3. ✘ The mantle is responsible for earth magnetic field

4. ✘ India is divided into seven earthquake zones (seismic zones)

Question Number : 5 Question Id : 7877321925 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Sequence of layers starting from Earth surface

- i. Troposphere
- ii. Exosphere
- iii. Stratosphere
- iv. Thermosphere
- v. Mesosphere

Options :

1. ✘ i, ii, v, iv, iii

2. ✘ iii, ii, i, iv, v

3. ✔ i, iii, v, iv, ii

4. ✘ i. iv, v, ii, iii

Question Number : 6 Question Id : 7877321926 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is direct source of information about the interior of the earth

Options :

1. ✘ Mining activities

2. ✔ Seismic activities and Volcanic activities

3. ✘ Deep ocean drilling activities

4. ✘ Infrastructure activities

Question Number : 7 Question Id : 7877321927 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ is the extended margin of each continent occupied by relatively shallow seas and gulf

Options :

1. ✘ Deep sea plain

2. ✔ Continental shelf

3. ✘ Continental slope

4. ✘ Oceanic deeps

Question Number : 8 Question Id : 7877321928 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Match the following:

Associated with	Ocean
a) Largest and deepest ocean	i) Indian ocean
b) 'S' shaped ocean	ii) Atlantic Ocean
c) Madagascar is located	iii) Pacific Ocean

Options :

1. ✘ a-i b-ii c-iii

2. ✘ a-ii b-i c-iii

3. ✘ a-i b-iii c-ii

4. ✔ a-iii b-ii c-i

Question Number : 9 Question Id : 7877321929 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ layer extends from 6000 m to the bottom of the deepest parts of the ocean.

Options :

1. ✔ Hadalpelagic Zone

2. ✘ Abyssopelagic zone

3. ✘ Pelagic zone

4. ✘ Neritic zone

Question Number : 10 Question Id : 7877321930 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which unit is used to measure astronomical distance

Options :

1. ✘ Leap year

2. ✘ Second year

3. ✘ Century

4. ✔ Light year

Question Number : 11 Question Id : 7877321931 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following rock exhibits highest compressive strength

Options :

1. ✘ Granite

2. ✘ Laterite

3. ✘ Limestone

4. ✔ Gneiss

Question Number : 12 Question Id : 7877321932 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Sand stone is generally weak in

Options :

1. ✘ Hardness

2. ✔ Abrasion

3. ✘ Compression

4. ✘ Tension

Question Number : 13 Question Id : 7877321933 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Granite is mainly composed of

Options :

1. ✓ Quartz and feldspar
2. ✘ Quartz and clay
3. ✘ Quartz and sandstone
4. ✘ Feldspar and clay

Question Number : 14 Question Id : 7877321934 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following physical properties is likely to be most useful in identifying a mineral

Options :

1. ✘ Streak
2. ✘ Density
3. ✓ Hardness
4. ✘ Lustre

Question Number : 15 Question Id : 7877321935 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

_____ of the stone can be determined by subjecting it to a hammering blow

Options :

1. ✘ Hardness
2. ✔ Toughness
3. ✘ Attrition
4. ✘ Dressing

Question Number : 16 Question Id : 7877321936 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ rocks are formed by cooling of the molten lava on or inside the earth's surface during the volcanic eruption

Options :

1. ✘ Calcareous rock
2. ✘ Metamorphic rock
3. ✘ Sedimentary rock
4. ✔ Igneous rock

Question Number : 17 Question Id : 7877321937 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following rocks are those which exhibits distinct layers which can be separated

Options :

1. ✘ Argillaceous rock
2. ✔ Stratified rock
3. ✘ Calcareous rock
4. ✘ Sedimentary rock

Question Number : 18 Question Id : 7877321938 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the group of silicate minerals that have perfect cleavage, so that they split in to thin plates.

Options :

1. ✘ Feldspar
2. ✘ Gypsum

3. ✓ Mica

4. ✘ Quartz

Question Number : 19 Question Id : 7877321939 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following mineral made up of a pure element

Options :

1. ✘ Coal

2. ✘ Glass

3. ✓ Copper

4. ✘ Quartz

Question Number : 20 Question Id : 7877321940 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Halite dominantly occurs within sedimentary rocks where it has formed from the _____

Options :

1. ✘ Cooling of magma

2. ✓ Evaporation of seawater or salty lake water

3. ✘ Cooling of lava

4. ✘ Crystallization of hot water solution on the ocean floor

Question Number : 21 Question Id : 7877321941 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ describes the light is highly reflected from the mineral surface.

Options :

1. ✘ Streak

2. ✘ Density

3. ✘ Fluorescence

4. ✓ Lustre

Question Number : 22 Question Id : 7877321942 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the colour of a mineral in powdered form called?

Options :

1. ✘ Lustre

2. ✔ Streak

3. ✘ Density

4. ✘ Hardness

Question Number : 23 Question Id : 7877321943 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following metamorphic rock has most weather resisting characteristics?

Options :

1. ✘ Marble

2. ✘ Slate

3. ✔ Quartzite

4. ✘ Lime stone

Question Number : 24 Question Id : 7877321944 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following can be obtained by performing Smith test

Options :

1. ✘ Durability
2. ✔ Soluble and clay matter
3. ✘ Water absorption
4. ✘ Hardness

Question Number : 25 Question Id : 7877321945 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Kaolin is chemically classified as _____ rock

Options :

1. ✘ Siliceous
2. ✔ Argillaceous
3. ✘ Metamorphic
4. ✘ Calcareous

Question Number : 26 Question Id : 7877321946 Display Question Number : Yes Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The representation of difference in elevation between two points is called as

Options :

1. ✘ Topography
2. ✔ Relief
3. ✘ Level line
4. ✘ Ridge line

Question Number : 27 Question Id : 7877321947 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Locating the details of rivers, streams, lakes, roads, mountains and contours in which of the following survey?

Options :

1. ✘ Cadastral survey
2. ✘ Astrological survey
3. ✔ Topological survey
4. ✘ Tachometric survey

Question Number : 28 Question Id : 7877321948 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the following statements:

- a. Size of Theodolite is governed by lower plate
- b. Shifting head help in accurate centering of instrument

Options :

- 1. ✘ Only 'a' is correct
- 2. ✘ Only 'b' is correct
- 3. ✔ Both 'a' and 'b' are correct
- 4. ✘ Both 'a' and 'b' are incorrect

Question Number : 29 Question Id : 7877321949 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following instrument is designed for the measurement of horizontal and vertical angles?

Options :

- 1. ✘ Dumpy level

2. ✘ Crass staff

3. ✔ Theodolite

4. ✘ Invar tape

Question Number : 30 Question Id : 7877321950 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The vertical circle is a circular graduated arc attached to the following axis of the telescope?

Options :

1. ✘ Inner axis

2. ✘ Outer axis

3. ✘ Line of sight

4. ✔ Trunnion axis

Question Number : 31 Question Id : 7877321951 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Presence of artificial manmade tank in toposheet with an embankment shows _____

Options :

1. ✘ scanty rainfall in the area
2. ✔ water is being stored in off season and is used for irrigation through canals
3. ✘ advancement of science and technology
4. ✘ people of the area need extra water

Question Number : 32 Question Id : 7877321952 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the full form of DEM

Options :

1. ✘ Discrete elevation model
2. ✘ Data elevation model
3. ✔ Digital elevation model
4. ✘ Decision enterprise method

Question Number : 33 Question Id : 7877321953 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

As the height of a satellite orbit gets lower, the speed of the satellite _____
by keeping other characteristics are same.

Options :

1. ✓ Increases
2. ✗ Decreases
3. ✗ Remains same
4. ✗ Zero

Question Number : 34 Question Id : 7877321954 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The apparent moment of point under observation with respect to the reference system
caused by the moment of the camera position is known as?

Options :

1. ✓ Parallax
2. ✗ Photo interpretation
3. ✗ Mosaic
- 4.

✘ Tilted photograph

Question Number : 35 Question Id : 7877321955 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ provides height or depth to the object in the photograph as it would have been seen by the human eye.

Options :

1. ✘ Terrestrial photography

2. ✘ Mirror

3. ✔ Stereoscopic vision

4. ✘ Aerial photography

Question Number : 36 Question Id : 7877321956 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following is the best mapping procedure?

Options :

1. ✔ Aerial photogrammetry

2. ✘ Elite photogrammetry

3. ✘ Terrestrial photogrammetry

4. ✘ Plane table photogrammetry

Question Number : 37 Question Id : 7877321957 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which projection is mainly used in aerial photographs.

Options :

1. ✔ Central projection

2. ✘ Parallel projection

3. ✘ Orthogonal projection

4. ✘ Oblique projection

Question Number : 38 Question Id : 7877321958 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is wrong statement

Options :

1. ✘ A map is geometrical correct representation of part of the earth projection
2. ✔ Map is a central projection
3. ✘ Scale of the map is uniform throughout the map extent
4. ✘ Map is an orthogonal projection

Question Number : 39 Question Id : 7877321959 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The foot of the perpendicular drawn from the camera lens on the ground plane is known as _____

Options :

1. ✔ Nadir point or photographic Nadir
2. ✘ Interpretative point
3. ✘ Homologous point
4. ✘ Iso-centre

Question Number : 40 Question Id : 7877321960 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following covers the entire area in short span?

Options :

1. ✘ Aerial photogrammetry
2. ✘ Theodolite photogrammetry
3. ✔ Terrestrial photogrammetry
4. ✘ Traversing surveying

Question Number : 41 Question Id : 7877321961 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Optical center of camera through which all rays of light pass is called as

Options :

1. ✔ Perspective center
2. ✘ Isocentre
3. ✘ Tilt
4. ✘ Nadir point

Question Number : 42 Question Id : 7877321962 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The perpendicular distance between the camera lens and negative plane is known as _____

Options :

1. ✘ Map distance
2. ✘ Ground distance
3. ✔ Focal length
4. ✘ Flying height

Question Number : 43 Question Id : 7877321963 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The shift in an object's image position caused by its elevation above a particular datum is known as _____

Options :

1. ✘ Radial displacement
2. ✘ Vertical displacement

3. ✓ Relief displacement

4. ✘ Parallax

Question Number : 44 Question Id : 7877321964 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The art, science and technology of making maps together with their study as scientific documents and work of art known as

Options :

1. ✘ Demography

2. ✘ Bibliography

3. ✘ Stenography

4. ✓ Cartography

Question Number : 45 Question Id : 7877321965 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The distance between two points on an aerial photograph is measured as 2 centimetres.

The known distance between the same two points on the ground is 1 km. Compute the scale of the aerial photograph.

Options :

1. ✘ 1:100000

2. ✔ 1:50000

3. ✘ 1:20000

4. ✘ 1:5000

Question Number : 46 Question Id : 7877321966 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which imaging system use conventional type camera

Options :

1. ✔ Multispectral

2. ✘ Thermal

3. ✘ Infra red

4. ✘ Microwave

Question Number : 47 Question Id : 7877321967 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Reconnaissance survey is advantage in case of _____

Options :

1. ✘ Vertical photograph
2. ✔ Low oblique photograph
3. ✘ Medium scale photograph
4. ✘ Small scale photograph

Question Number : 48 Question Id : 7877321968 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For measuring horizontal angle between two lines with better accuracy than that given by the Vernier method commonly used is

Options :

1. ✘ Reiteration
2. ✘ Double centering
3. ✘ Double sighting

4. ✓ Repetition

Question Number : 49 Question Id : 7877321969 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The most significant systematic error in GPS observable is

Options :

1. ✗ Cycle slip
2. ✓ Receiver clock error
3. ✗ Ionospheric error
4. ✗ Integer ambiguity

Question Number : 50 Question Id : 7877321970 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Planimeter is an instrument which is used for the following reason

Options :

1. ✗ Sighting parallel and perpendicular points to station
2. ✓ Measuring area of plan

3. ✘ Transforming points from paper to ground

4. ✘ Simpsons one third rule

Question Number : 51 Question Id : 7877321971 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A vertical line in the direction of gravity pass through perspective centre and meet on the ground known as

Options :

1. ✔ Plumb line

2. ✘ Oblique line

3. ✘ Focal line

4. ✘ Fiducial line

Question Number : 52 Question Id : 7877321972 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following does not include in lens of aerial photogrammetry

Options :

1. ✘ Filter
2. ✔ Azimuth
3. ✘ Diaphragm
4. ✘ Shutter

Question Number : 53 Question Id : 7877321973 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which traversing that is used for running survey lies of a closed or open survey

Options :

1. ✘ Plane table survey
2. ✘ Topographical survey
3. ✘ Compass surveying
4. ✔ Theodolite survey

Question Number : 54 Question Id : 7877321974 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Global Positioning System uses 24 satellites in _____ number of orbits

Options :

1. ✘ Two
2. ✘ Twelve
3. ✘ Thirty two
4. ✔ Six

Question Number : 55 Question Id : 7877321975 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is commonly used for applications involved with archaeology, Geomorphology, and civil engineering

Options :

1. ✘ Tilted or oblique photographs
2. ✘ vertical photographs
3. ✘ Near vertical photographs
4. ✔ Horizontal or terrestrial photographs

Question Number : 56 Question Id : 7877321976 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following proves that electromagnetic waves are transverse?

Options :

1. ✓ Phenomenon of Polarisation
2. ✘ Phenomenon of Interference
3. ✘ Phenomenon of Diffraction
4. ✘ Phenomenon of Reflection

Question Number : 57 Question Id : 7877321977 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The science of acquiring the information about earth surface without actually being in contact with it is known as?

Options :

1. ✘ Geomorphology
2. ✘ Geographical Information System
3. ✘ Global Positioning system

4. ✓ Remote Sensing

Question Number : 58 Question Id : 7877321978 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Relation between the velocity of propagation (V), the wavelength (λ), and wave frequency (f) is

Options :

1. ✘ $V = 0.5 f \lambda$

2. ✘ $V = 2 f \lambda$

3. ✓ $V = f \lambda$

4. ✘ $V = 0.1 f \lambda$

Question Number : 59 Question Id : 7877321979 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The full form of NASA is

Options :

1. ✘ National Aerospace and Space Administration

2.

✘ National Aerospace and satellite Administration

3. ✘ National Aeronautics and Space Academy

4. ✔ National Aeronautics and Space Administration

Question Number : 60 Question Id : 7877321980 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Identify the infrared portion of electromagnetic radiation lies in between

Options :

1. ✘ $0.4 \mu\text{m} - 0.7 \mu\text{m}$

2. ✘ $0.3 \mu\text{m} - 0.5 \mu\text{m}$

3. ✘ $0.4 \mu\text{m} - 14 \mu\text{m}$

4. ✔ $0.7 \mu\text{m} - 14 \mu\text{m}$

Question Number : 61 Question Id : 7877321981 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which resolution has the capability to view the same targets under similar condition at regular interval.

Options :

1. ✘ Spectral
2. ✘ Radiometric
3. ✘ Spatial
4. ✔ Temporal

Question Number : 62 Question Id : 7877321982 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Consider the following statements:

- a. The narrower the bands, the lower the spectral resolution.
- b. Spectral resolution refers to the specific wave length intervals in the electromagnetic spectrum that a sensor can record.

Options :

1. ✘ Only 'a' is correct
2. ✔ Only 'b' is correct
3. ✘ Both 'a' and 'b' are correct

Both 'a' and 'b' are incorrect

4. ✘

Question Number : 63 Question Id : 7877321983 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which resolution relates to how much information is perceived by a satellite's sensor.

Options :

1. ✘ Spectral resolution

2. ✔ Radiometric resolution

3. ✘ Spatial resolution

4. ✘ Temporal resolution

Question Number : 64 Question Id : 7877321984 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following waves are used in Remote sensing technique

Options :

1. ✘ Electric waves

2. ✘ Sound waves

3. ✘ Wind waves

4. ✔ Electromagnetic waves

Question Number : 65 Question Id : 7877321985 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Polar orbit satellites has an inclination of about _____ degrees to the body's equator.

Options :

1. ✔ 60 -90

2. ✘ 60 -100

3. ✘ 60 -110

4. ✘ 60 -125

Question Number : 66 Question Id : 7877321986 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not considered under land cover category

Options :

1. ✔ Agriculture

2. ✘ Forest

3. ✘ Rivers

4. ✘ Hills

Question Number : 67 Question Id : 7877321987 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which sensor that measures the intensity of electromagnetic radiation emanating from all objects with in its field of view and wave length range.

Options :

1. ✔ Radiometer

2. ✘ Photometer

3. ✘ Sensor

4. ✘ Radiation

Question Number : 68 Question Id : 7877321988 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which sensing system that generates and uses its own energy to illuminate the target.

Options :

1. ✘ Passive sensing system
2. ✔ Active sensing system
3. ✘ Radioactive sensing system
4. ✘ Piezo electric sensing system

Question Number : 69 Question Id : 7877321989 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Arrange the electromagnetic waves according to their increasing order of wave lengths

Options :

1. ✘ Gamma rays, Infrared, Ultraviolet and X- Rays
2. ✔ Gamma rays, X- Rays, Ultraviolet and Infrared
3. ✘ X- Rays, Ultraviolet, Gamma rays and Infrared
4. ✘ Infrared, Gamma rays, X- Rays and Ultraviolet

Question Number : 70 Question Id : 7877321990 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not a characteristic of Remote sensing?

Options :

1. ✘ Radiometric resolution
2. ✘ Spatial resolution
3. ✔ Mercator resolution
4. ✘ Spectral resolution

Question Number : 71 Question Id : 7877321991 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

By which of the following agency launched Radarsat-1 on November 28, 1995.

Options :

1. ✔ Canadian space agency
2. ✘ Indian space agency
3. ✘ European space agency
4. ✘

Japan space agency

Question Number : 72 Question Id : 7877321992 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The process of examining a remote sensing image and manually identifying features in the image is called _____

Options :

1. ✘ Image building
2. ✔ Image interpretation
3. ✘ Image classification
4. ✘ Image compression

Question Number : 73 Question Id : 7877321993 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the 1986, SPOT French earth satellite provided first time spatial resolution at

Options :

1. ✘ 40 m PAN and 50 m multispectral
2. ✔ 10 m PAN and 20 m multispectral

3. ✘ 20 m PAN and 30 m multispectral

4. ✘ 30 m PAN and 30 m multispectral

Question Number : 74 Question Id : 7877321994 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is considered as fourth dimension of the remote sensing

Options :

1. ✘ Location

2. ✘ Scale

3. ✔ Time

4. ✘ Space

Question Number : 75 Question Id : 7877321995 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

IFOV is angular cone of visibility of the following_____

Options :

1. ✔ Sensor

2. ✘ Image

3. ✘ Scanner

4. ✘ Satellite

Question Number : 76 Question Id : 7877321996 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The energy captured by remote sensing sensor is called as _____

Options :

1. ✘ Emissivity

2. ✔ Radiance

3. ✘ Reflectance

4. ✘ Irradiance

Question Number : 77 Question Id : 7877321997 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which index can be calculated using the band ratio

$(\text{Band 3} - \text{Band 7}) / (\text{Band 3} + \text{Band 7})$ of Landsat 8?

Options :

1. ✘ NDVI
2. ✘ NDII
3. ✔ NDWI
4. ✘ EVI

Question Number : 78 Question Id : 7877321998 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following remote sensing technique is used for the identification of dense forest.

Options :

1. ✔ Thermal image
2. ✘ Microwave image
3. ✘ Aerial photograph
4. ✘ High resolution optical image

Question Number : 79 Question Id : 7877321999 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a Minimum Noise Factor (MNF) transformed satellite image, noise has _____

Options :

1. ✓ Unit variance
2. ✗ Multi variance
3. ✗ Two standard deviation
4. ✗ Zero variance

Question Number : 80 Question Id : 7877322000 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The characteristic of electromagnetic radiation are particularly important to understand _____ in the remote sensing.

Options :

1. ✗ Wave length
2. ✗ Frequency
3. ✓ Wave length and frequency

Band width

4. ✘

Question Number : 81 Question Id : 7877322001 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Write down full form of DGPS?

Options :

1. ✔ Differential Global Positioning System

2. ✘ Difference Global Posting system

3. ✘ Differential Global Posting system

4. ✘ Difference Global Positioning system

Question Number : 82 Question Id : 7877322002 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Among the following _____ can be expressed as an example of hardware component.

Options :

1. ✘ Auto cad

2. ✘ Arc GIS

3. ✘ Digitalization

4. ✔ Keyboard

Question Number : 83 Question Id : 7877322003 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Pick odd one out with respect to key activities in urban planning.

Options :

1. ✔ Drafting

2. ✘ Mapping

3. ✘ Monitoring

4. ✘ Management

Question Number : 84 Question Id : 7877322004 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is the main purpose of Geostationary satellite?

Options :

1. ✘ Global positioning

2. ✓ Telecommunication and weather monitoring

3. ✘ Remote sensing

4. ✘ Temporal resolution

Question Number : 85 Question Id : 7877322005 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A cell with 1 metre Spatial resolution covers an area 1 m^2 where as a pixel with 0.1 m spatial resolution covers an area of

Options :

1. ✘ 0.1 m^2

2. ✘ 0.001 m^2

3. ✓ 100 cm^2

4. ✘ 0.1 cm^2

Question Number : 86 Question Id : 7877322006 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The part radiation due to scattered/diffused radiation entering the field of view of remote sensor other than that from required target

Options :

1. ✘ Increases the contrast of image but reduce the sharpness
2. ✔ Reduces the contrast of image and also its sharpness
3. ✘ Increases the contrast of image and sharpness
4. ✘ reduce the contrast of image but increases the sharpness

Question Number : 87 Question Id : 7877322007 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Purpose of Geo referencing is,

Options :

1. ✘ Converting data to a future classes
2. ✘ Combining two data set
3. ✔ Assigning geographic information
4. ✘ Projecting your data so that it has no destruction

Question Number : 88 Question Id : 7877322008 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The orbital radius of GPS satellites is nearer to

Options :

1. ✘ 15000 km
2. ✘ 18000 km
3. ✘ 36000 km
4. ✔ 26600 km

Question Number : 89 Question Id : 7877322009 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following is Unsupervised classified technique?

Options :

1. ✘ Use training sets has numerical interpretation keys
2. ✔ Aggregate pixel in to natural spectral groupings/clusters
3. ✘ Pixel categorisation being supervised

4. ✘ Based in look like most concept

Question Number : 90 Question Id : 7877322010 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A special query in GIS is related to the following_____

Options :

1. ✘ Pixels

2. ✔ Attributes

3. ✘ Coordinates

4. ✘ Buffering

Question Number : 91 Question Id : 7877322011 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In false colour composite (FCC) image healthy vegetation generally appears_____

Options :

1. ✘ Blue colour

2. ✔ Red Colour

3. ✘ Green Colour

4. ✘ Orange colour

Question Number : 92 Question Id : 7877322012 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The working/operation of the Global positioning system is based on the following.

Options :

1. ✘ Obliteration

2. ✘ Transmission

3. ✔ Trilateration

4. ✘ Globalisation

Question Number : 93 Question Id : 7877322013 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not an example of special data

Options :

1. ✘ Points showing location of discrete objects

2. ✘ Lines showing the route of linear objects
3. ✘ Polygon showing the area occupied by the particular land use
4. ✔ Time of particular

Question Number : 94 Question Id : 7877322014 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

GPS user solution depends on which of the following?

Options :

1. ✔ Space vehicle
2. ✘ Satellite vehicle
3. ✘ Relative positioning
4. ✘ Absolute positioning

Question Number : 95 Question Id : 7877322015 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In Global positioning system, topology is implemented through data

Options :

1. ✘ Storage
2. ✘ Raster model
3. ✘ Collection
4. ✔ Structure

Question Number : 96 Question Id : 7877322016 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The digital land surveying control stations are obtained through

Options :

1. ✘ Total station
2. ✘ Conventional method of surveying
3. ✔ Global positioning system
4. ✘ Astronomical observations

Question Number : 97 Question Id : 7877322017 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Topology describe the following relationship between adjacent features

Options :

1. ✘ Spectral

2. ✔ Spatial

3. ✘ Especial

4. ✘ Special

Question Number : 98 Question Id : 7877322018 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many satellites are required to measure two dimensional position, the longitude and latitude

Options :

1. ✔ Three

2. ✘ Two

3. ✘ Four

4. ✘ One

Question Number : 99 Question Id : 7877322019 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not a thematic layer?

Options :

1. ✘ Vector layer showing ground water depth
2. ✘ Vector layer showing state wise population of India
3. ✘ Vector layer showing the coal mines in India
4. ✔ Satellite image over India

Question Number : 100 Question Id : 7877322020 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following best suits “meta data”

Options :

1. ✘ Mono data
2. ✔ Data about data
3. ✘ Meteorological data

Contour data

4. ✘

Question Number : 101 Question Id : 7877322021 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which is the tendency of minerals to split along crystallographic planes as a result of structural locations of atoms and ions in the crystal, creating planes of relative weakness

Options :

1. ✔ Cleavage

2. ✘ Density

3. ✘ Fluorescence

4. ✘ Lustre

Question Number : 102 Question Id : 7877322022 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among the following rocks are formed, when minerals are deposited and accumulated in the strata's

Options :

1. ✘ Sedimentary rock

2. ✓ Metamorphic rock

3. ✘ Igneous rock

4. ✘ Siliceous rock

Question Number : 103 Question Id : 7877322023 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one out of the following is plutonic rock

Options :

1. ✘ Gypsum

2. ✘ Genesis

3. ✓ Granite

4. ✘ Basalt

Question Number : 104 Question Id : 7877322024 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which imaging system use conventional type camera

Options :

1. ✓ Multispectral

2. ✘ Thermal

3. ✘ Infrared

4. ✘ Microwave

Question Number : 105 Question Id : 7877322025 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Expand IRNSS

Options :

1. ✘ Indian Regional Navy Satellite System

2. ✘ Indian Recreational Navigation Satellite System

3. ✓ Indian Regional Navigation Satellite System

4. ✘ Indian Recreational Navy Satellite System

Question Number : 106 Question Id : 7877322026 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which instrument is used for duplicating a motion or copying a geometric shape to a reduced or enlarged scale?

Options :

1. ✓ Pantograph
2. ✗ Planimeter
3. ✗ Hydrograph
4. ✗ Photograph

Question Number : 107 Question Id : 7877322027 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ is the ability of a sensor to recognize finer wavelengths, which is having narrower bandwidths

Options :

1. ✓ Spectral resolution
2. ✗ Electromagnetic spectrum
3. ✗ Radiometry
4. ✗ Repetitively

Question Number : 108 Question Id : 7877322028 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

NavIC signals will consist of

Options :

1. ✘ Only Standard Positioning Service.
2. ✘ Only Restricted Service.
3. ✘ No signal
4. ✔ Both Standard Positioning Service and a Restricted Service.

Question Number : 109 Question Id : 7877322029 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Cartosat-3 is an advanced Indian Earth Observation satellite built and developed by

Options :

1. ✘ NASA
2. ✘ DRDO
3. ✔ ISRO
4. ✘

Question Number : 110 Question Id : 7877322030 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which among following defines 'Radiance' in remote sensing?

Options :

1. ✘ An active sensor that uses radio waves to measure the distance to an object
2. ✔ A measure of the light or heat emitted from a target object.

The means by which you display the coordinate system and your data on a flat surface

3. ✘

The orientation of an electromagnetic wave

4. ✘

Question Number : 111 Question Id : 7877322031 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

One of the eigen value of $\begin{bmatrix} 7 & 4 & -4 \\ 4 & -8 & -1 \\ 4 & -1 & -8 \end{bmatrix}$ is -9 . Find the other two eigen values.

Options :

1. ✘ 5, -5

2. ✓ 7, -7

3. ✗ 3, -3

4. ✗ 2, -2

Question Number : 112 Question Id : 7877322032 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

For what values of a, b the following equations $x + 2y + z = 8$, $2x + y + 3z = 13$,
 $3x + 4y - az = b$ have a unique solution?

Options :

1. ✓ $a \neq -11/3, \forall b$

2. ✗ $a = -11/3, \forall b$

3. ✗ $a \neq 11/3, \forall b$

4. ✗ $a = 11/3, \forall b$

Question Number : 113 Question Id : 7877322033 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The value of $\iint x^2 dx dy$, where the region bounded by hyperbola $xy = 4$, $y = 0$, $x = 1$, $x = 4$ is

Options :

1. ✘ 10

2. ✘ 20

3. ✔ 30

4. ✘ 40

Question Number : 114 Question Id : 7877322034 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $\bar{r} = x\mathbf{i} + y\mathbf{j} + z\mathbf{k}$ then, $\text{grad } r =$

Options :

1. ✘ $-\frac{\bar{r}}{r}$

2. ✘ $\frac{2}{r}$

3. ✘ $\frac{1}{r}$

4. ✔ $\frac{\bar{r}}{r}$

Question Number : 115 Question Id : 7877322035 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The general solution of $(x + y + 1) \frac{dy}{dx} = 1$

Options :

1. ✘ $x - y = C e^y - 2$

2. ✔ $x + y = C e^y - 2$

3. ✘ $x + y = C e^x - 2$

4. ✘ $x + y = C x e^y - 2$

Question Number : 116 Question Id : 7877322036 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The general solution of $x^2 \frac{d^2y}{dx^2} - 2x \frac{dy}{dx} - 4y = 0$

Options :

1. ✘ $y = C_1x^{-1} + C_2x^{-4}$

2. ✘ $y = C_1x + C_2x^{-4}$

3. ✘ $y = C_1x + C_2x^4$

4. ✔ $y = C_1x^{-1} + C_2x^4$

Question Number : 117 Question Id : 7877322037 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The value of $\oint_C \frac{\cos z}{z(z^2 + 8)} dz$, where $C : |z| = 1$ is

Options :

1. ✔ $\frac{\pi i}{4}$

2. ✘ $\frac{\pi i}{2}$

3. ✘

πi

$2\pi i$

4. ✘

Question Number : 118 Question Id : 7877322038 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $f(z) = \frac{z^2 + 1}{z^2 - z}$, then the residue at $z = 0$ is

Options :

1. ✘ 0

2. ✘ 1

3. ✔ -1

4. ✘ 2

Question Number : 119 Question Id : 7877322039 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A fair coin is tossed repeatedly till both head and tail appear at least once. The average number of tosses required is

Options :

1. ✘ 0

2. ✔ 3

3. ✘ 2

4. ✘ 1

Question Number : 120 Question Id : 7877322040 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If $\frac{dy}{dx} = 1 + xy$ and $y(0) = 1$ then using Picard's method the value of $y^{(1)}(1)$ is

Options :

1. ✘ 1

2. ✘ 1.5

3. ✓ 2.5

4. ✘ 2