# Andhra Pradesh State Council of Higher Education

#### **Notations:**

**Change Background Color:** 

**Change Theme:** 

**Help Button:** 

**Show Reports:** 

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

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

Question Paper Name :	GEO ENGINEERING 3rd May 2024 Shift 2
Duration :	120
Total Marks :	140
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

No

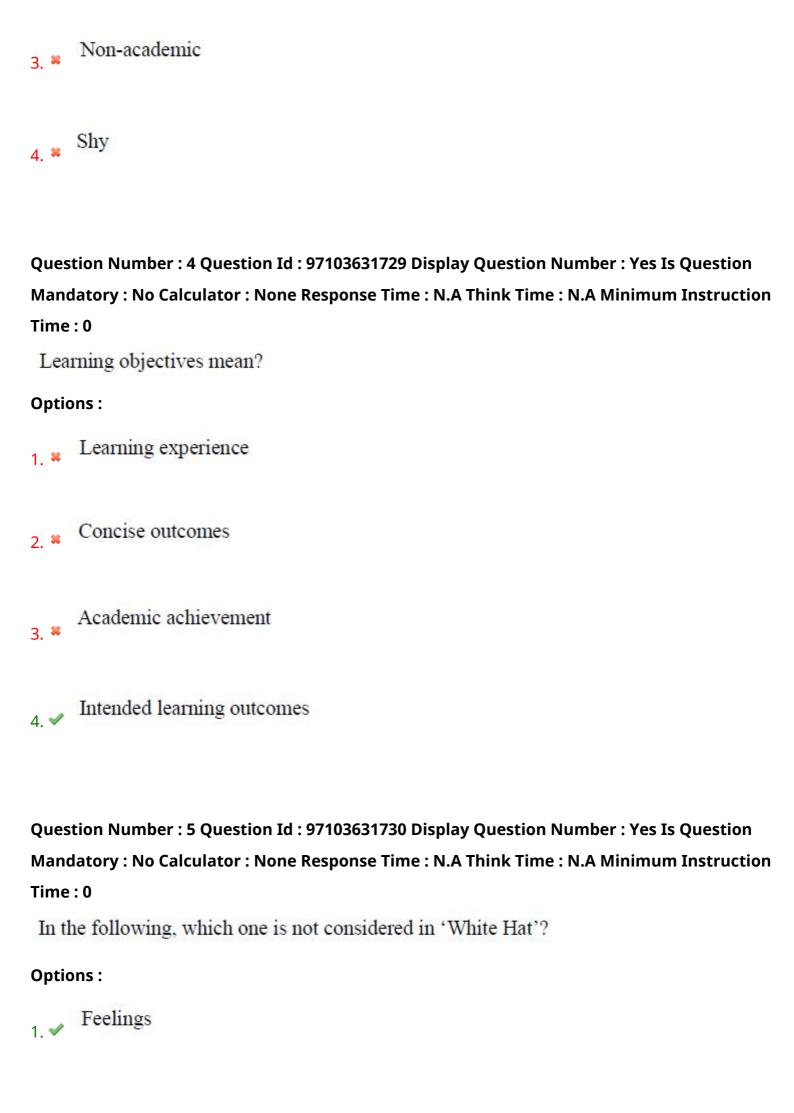
No

No

No

**Show Progress Bar:** No Is this Group for Examiner?: No **Examiner permission: Cant View Show Progress Bar?:** Nο **Research Methodology** Section Id: 971036451 **Section Number: Mandatory or Optional:** Mandatory **Number of Questions:** 66 **Section Marks:** 70 **Enable Mark as Answered Mark for Review and** Yes **Clear Response: Maximum Instruction Time:** 0 Is Section Default?: null Question Number: 1 Question Id: 97103631726 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 How does mass media influence society? **Options:** 1. \* Promotes critical thinking 2. Shapes public opinion 3. \* Limits access to information 4. \* Encourages isolation

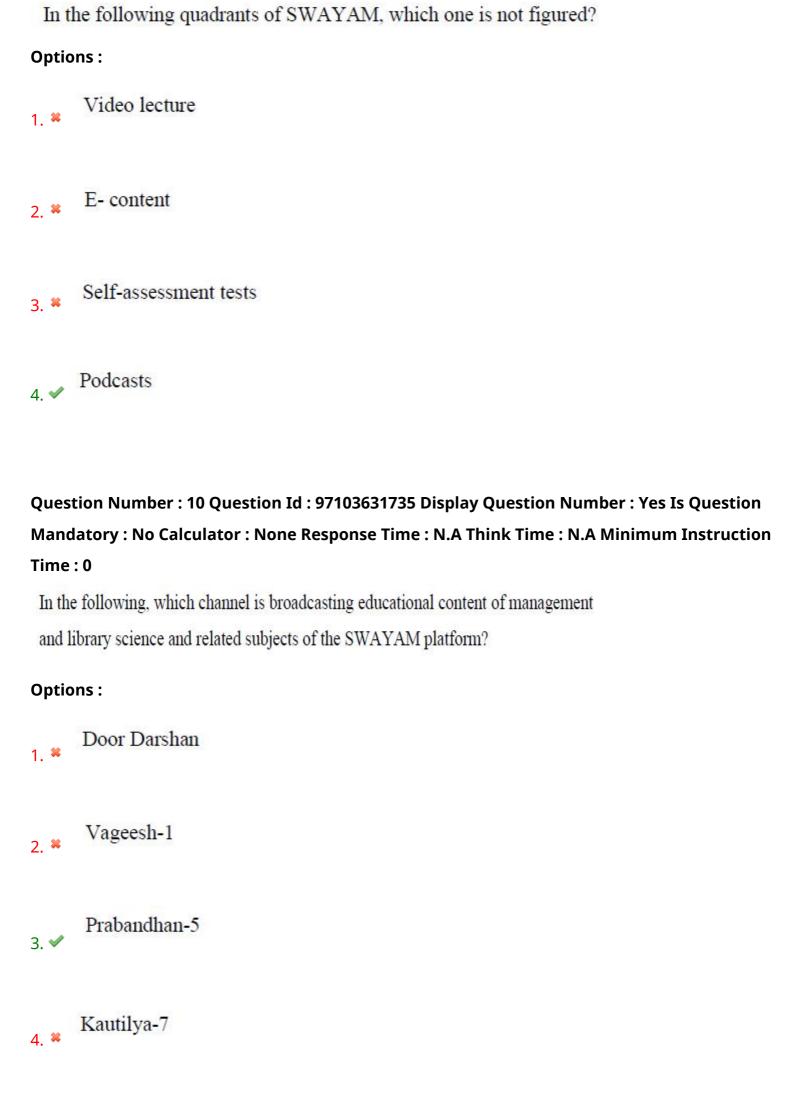
Question Number : 2 Question Id : 97103631727 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
What is an example of an online teaching platform?
Options:
1. ** Tutorial class
2. * Traditional classroom
Laboratory session
4. ✓ Swayamprabha
Question Number : 3 Question Id : 97103631728 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
Some students who do not speak often in class and who typically develop
ideas and questions in their minds before speaking arestudents.
Options:
1. ✓ Reflective
2. * Active



2. * Data gathering
Facts 3. **
Information needs
Question Number : 6 Question Id : 97103631731 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
The modern pedagogical standards are not related to
Options :
1. * Learners- focussed process
Rigid teaching plan 2. ✓
3. * Individual Students need
4. * Learner diversity
Question Number : 7 Question Id : 97103631732 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
How many domains of learning are identified by Benjamin Bloom?
Options :

	tion Number : 9 Question Id : 97103631734 Display Question Number : Yes Is Question atory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Ouest	tion Number : 9 Question Id : 97103631734 Display Question Number : Ves Is Question
4. *	Social
3. 🗸	Cognitive
2. *	Affective
1. 🕊	Psychomotor
Optio	
As p	er Bloom's taxonomy, the objective of remembering refers to
Time	: 0
	atory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Quest	tion Number : 8 Question Id : 97103631733 Display Question Number : Yes Is Question
4. *	Five
3. 🗱	Four
2. 🗸	Three
1. 🕷	Two

Time: 0



Question Number: 11 Question Id: 97103631736 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

How many quadrants are there in MOOCs?

#### **Options:**

- 1 💥 Two
- Three
- 3. V Four
- 4. Five

Question Number: 12 Question Id: 97103631737 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

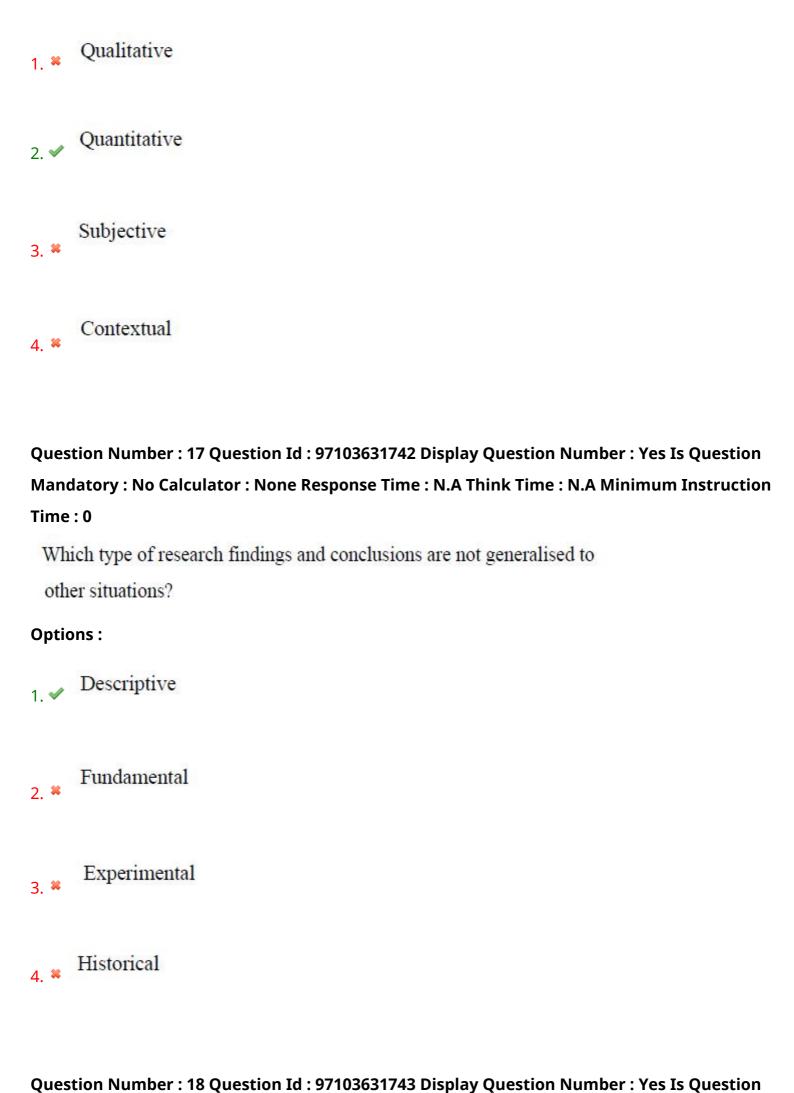
What is the best advantage of a Choice Based Credit System of education?

#### **Options:**

- Student-centric
- Flexibility for teachers

3. 🕷	Content specific
4. 🗱	Teacher-centric
	ion Number : 13 Question Id : 97103631738 Display Question Number : Yes Is Question atory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction 0
The c	omputer-based testing learning domain covers behaviour.
Option	ns:
1. *	Conative
2. 🗱	Effective
3. 🗸	Cognitive
4. *	Psychomotor
	ion Number : 14 Question Id : 97103631739 Display Question Number : Yes Is Question atory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time:	
The re	esearch activity pursuing based on observable facts is known as
Option	ns:
1. *	Ethno methodology

2. ** Constructionist
3. ✔ Positivism
4. * Manipulative
Question Number: 15 Question Id: 97103631740 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 purpose of using a Venn diagram in logic?
Options:
1. * To confuse the audience
2. ✓ To visualize logical relationships
3. * To simplify complex arguments
4. * To present factual evidence
Question Number : 16 Question Id : 97103631741 Display Question Number : Yes Is Question
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction
Time: 0
Experimental research is based on methodology.
Options :



Time: 0		
In the following approaches, which one is not quantitative research?		
Options:		
1. * Correlation		
2. Ground theory		
3. ** Experimental		
4. * Deductive		
Question Number: 19 Question Id: 97103631744 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction		
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0		
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction		
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 The National Literacy Mission was started in the year		
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 The National Literacy Mission was started in the year  Options:		
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 The National Literacy Mission was started in the year Options:  1. ** 1991		

Question Number: 20 Question Id: 97103631745 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 best remedy for the student's problems related to learning?	
Options:	
Suggestion for private tuition	
2. Suggestion for hard work	
Diagnostic teaching 3. ✓	
Suggestion to go to the library	
Is Section Default?: null	
Question Id: 97103631746 Sub Question Shuffling Allowed: Yes Group Comprehension Questions: No Question Pattern Type: NonMatrix Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0	
Question Numbers : (21 to 25)	

#### Read the Passage and answer the following questions:

If you wish to be a writer, you must learn to develop your own point of view. All good writers make us see things in a different light. You may be writing about the same thing as your classmates, but your presentation must reflect your personality and individuality. There are so many interesting subjects you can write about in different forms but here we will try to attempt writing short stories. There is a good market for the following types: humorous stories, adventurous stories, domestic stories, and mysterious stories and stories related to animals and strange experiences. Don't worry if your story turns out to be short-some of the stories are quite short. Be very careful about the climax or end of the story. It must be what the reader fears, desires, expect or best of all doesn't expect. So, get down to it. Think of a plot-make points on how the story will progress and pen it down.

#### **Sub questions**

Question Number : 21 Question Id : 97103631747 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0

The most important thing about being a writer is that

#### **Options:**

- You must have a pen and paper
- You must have a degree in writing
- You must have a painful heart
- You must learn to develop your own point of view

Question Number : 22 Question Id : 97103631748 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0		
The narrator advises the reader to write in order to		
Options :		
Earn a livelihood		
2. ✓ Encourage him to become a writer		
Make him famous among his people 3. **		
Show his intelligence to others		
Question Number : 23 Question Id : 97103631749 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0		
A successful writer's presentation must reflect		
Options:		
1. ✓ His personality and individuality		
His hand writing		
His showy nature 3. **		
4. * His superiority to others		

Question Number : 24 Question Id : 97103631750 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
The phrase 'pen it down' here means
Options :
1. * To get down
2. ✓ To write
To throw the pen
To throw it down 4. **
Question Number : 25 Question Id : 97103631751 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
According to the passage, what is essential for aspiring writers to learn?
Options :
Developing their own point of view
Writing about the same topics as classmates
Avoiding short stories 3. **

Is Section Defaเ	ult?:	null
		isplay Question Number : Yes Is Question N.A Think Time : N.A Minimum Instructior
	ntal function of SPSS software is	*
Options :		
1. * To analys	se quantitative data	
2. Managem	nent reference tool	
3. V Statistica	l Package for analysing quantitativ	ve data
4. * Useful fo	or literature review	
		isplay Question Number : Yes Is Question
Time: 0	Calculator . None Response Time .	N.A Think Time : N.A Minimum Instruction
	research refers to	
Options :		
1. Wing pr	evious data	
2. * Quoting	findings of others	
3. ✓ Unscrupt	llously copying others works	

Incorporating earlier findings of the research.

Question Number: 28 Question Id: 97103631754 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction

Time: 0

In the following, which one is considered a barrier of effective communication?

#### **Options:**

- Differences of cultural aspects
- 2. \* Active listening
- Clarity of message
- Perfect information

Question Number : 29 Question Id : 97103631755 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

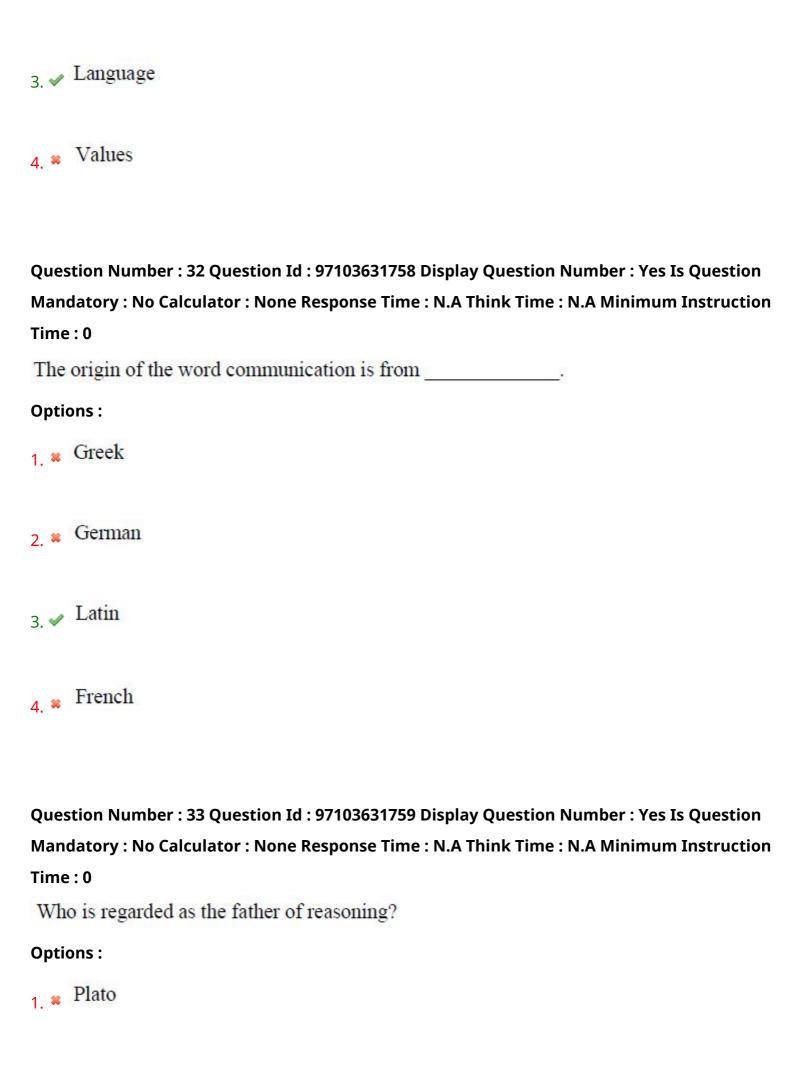
Time: 0

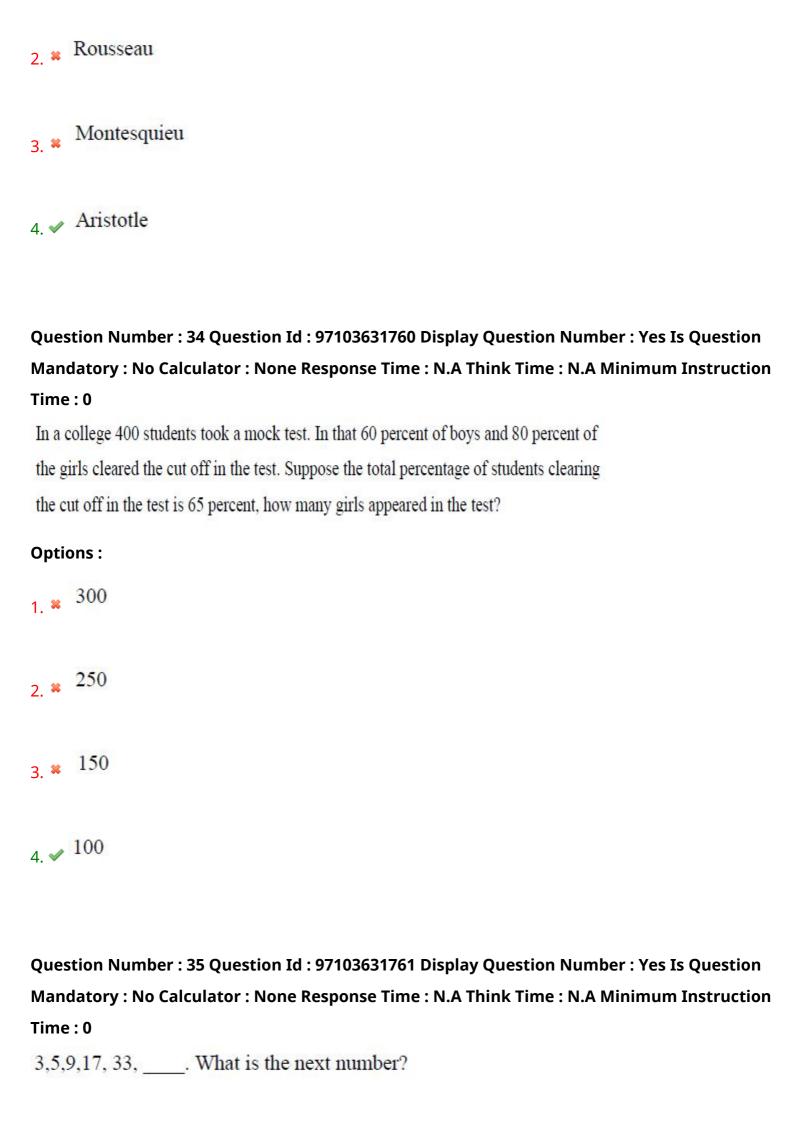
In the following communication, which one is considered as interpersonal?

#### **Options:**

- 1 Metaphorical
- 2. \* Philosophical

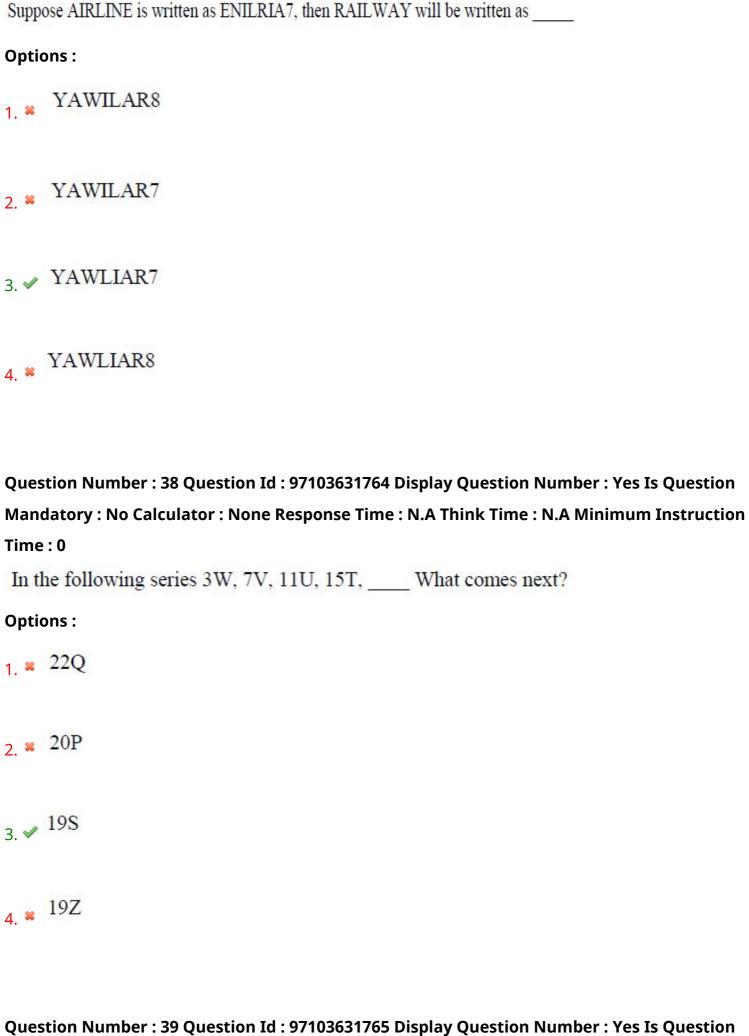
3. \* It is not participating in friendly It is both focused and unfocussed. Question Number: 30 Question Id: 97103631756 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 Which one of the following is not considered as verbal communication? **Options:** 1 \* Instruction 2. Wordless messages 3. \* Practicals 4. \* Online classes Question Number: 31 Question Id: 97103631757 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 In the following, which one is not considered a subjective aspect of culture? **Options:** 1. Belief 2. \* Attitude





Options:
1. * 45
2. * 35
3. <b>1</b> 65
4. * 75
Question Number : 36 Question Id : 97103631762 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
How many types of reasoning are there?
Options:
1. * Four
2. ✓ Two
3. * Three
4. * Five
Question Number : 37 Question Id : 97103631763 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0



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

# Time: 0 What is the sum of (71/105) and (71/420)? Options: 1. \* 83/84 2. \* 73/84 3. \* 79/84 4. 71/84 Question Number: 40 Question Id: 97103631766 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 A car can finish a certain journey in 10 hrs at a speed of 48 kmph. To cover the same distance in 8 hours, the speed of the car must be increased by **Options:** 12 kmph 2. \* 15 kmph 3. **\*** 6 kmph

4. **\*** 7.5 kmph

Question Number : 41 Question Id : 97103631767 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0

Suppose the price of the commodity is increased by 50 percent and by what fraction must its consumption be reduced to keep the same expenditure consumption?

#### Options:

1. \* 1/2

2. 🗸 1/3

3. \* 1/4

4. \* 2/3

Question Number: 42 Question Id: 97103631768 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

The selling price of a bicycle is Rs. 2,850 and the shopkeeper gains 14% profit. Suppose the profit is reduced to 8%, then the selling price will be Rs. \_\_\_\_\_.

## Options:

2,600

2,700

- 3. \* 2,800
- 4. \* 3,000

Question Number: 43 Question Id: 97103631769 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

Find out the simple interest, when principal is Rs. 3,000 at the rate of 5% per annum for 2 years?

## Options:

- 1. 300
- 2. \* 305
- 3. \* 303
- 4. \* 307

Question Number : 44 Question Id : 97103631770 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A channel marked at a price Rs. 1,600 is available at a discount of 45%. What is the discount given?

# Options:

1. \* 740

- 2. \* 800
- 3. **✓** 720
- 4. \* 760

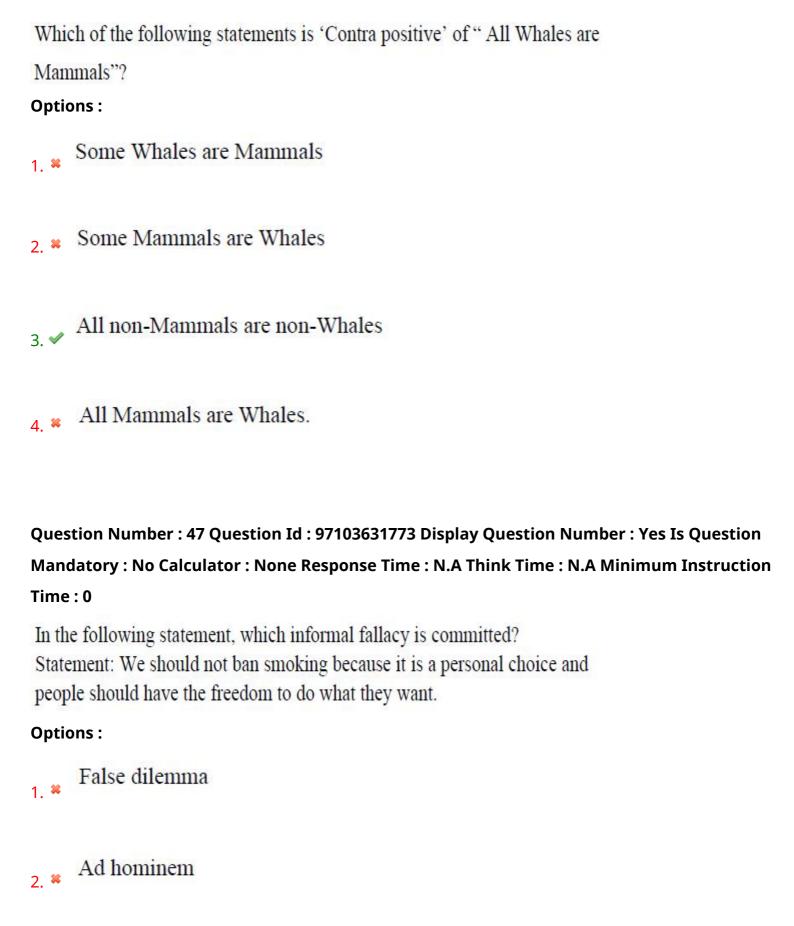
Question Number: 45 Question Id: 97103631771 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

The average marks of 25 students is 18. The average marks of first 12 students is 14 and the average marks of last 12 students is 17. What is the 13<sup>th</sup> student result?

#### **Options:**

- 1. \* 69
- 2. \* 74
- 3. **✓** 78
- 4. \* 75

Question Number: 46 Question Id: 97103631772 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0



Appeal to emotion

4. \* Equivocation

Question Number: 48 Question Id: 97103631774 Display Question Number: Yes Is Question  Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0  A word or phrase that is understood by every person in a particular culture is  known as its
Options:
1. ** Denotation
2. * Connotation
3. Sense
Reference 4. *
Question Number : 49 Question Id : 97103631775 Display Question Number : Yes Is Question
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction
Time: 0
In the following types of reasoning, in the conclusion the word 'likely' is used.
Options:
1. ✓ Inductive
2. * Deductive

3. * Analogical
4. * Syllogistic
Question Number: 50 Question Id: 97103631776 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0  Insect: Disease; War:?
Options:
1. * Arsenal
2. * Defeat
Destruction 3.
4. * Army
Question Number : 51 Question Id : 97103631777 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 meaning of 'pratyaksh'?
Options:
Inference

2. Perception
3. * Implied
Transcendental 4. **
Question Number: 52 Question Id: 97103631778 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 In Indian logic, what is the meaning of 'Anumana"?
Options:
1. * Determination
2. ** Credibility
Inference 3.   Inference
4. * Implication
Question Number : 53 Question Id : 97103631779 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
In the HTML, M refers to
Options:

1. ** Machine
2. Markup
3. * Margin
4. * Micro
Question Number : 54 Question Id : 97103631780 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
The receiving emails appear in
Options :
1. * Spam
2. * Trash
3. ✓ Inbox
4. * Archive
Question Number : 55 Question Id : 97103631781 Display Question Number : Ves Is Question

Question Number : 55 Question Id : 97103631781 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Internet standard protocol is
Options :
FTP
2. * WWW
3.  ✓ TCP/IP
4. * UDP
Question Number : 56 Question Id : 97103631782 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instructior Fime : 0
•
Γime: 0
Time: 0 In the following video-conferencing platforms, which one is popular?
Time: 0 In the following video-conferencing platforms, which one is popular?  Options:
In the following video-conferencing platforms, which one is popular?  Options:  Gmail
In the following video-conferencing platforms, which one is popular?  Options:  Gmail  Spotify

Question Number : 57 Question Id : 97103631783 Display Question Number : Yes Is Question

E-PG pathshala

Question Number : 59 Question Id : 97103631785 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following sections, which one deals with the punishment for cyber terrorism as per IT Act 2000.

#### Options:

1. **✓** 66 F

2. **\*** 67 B

3. **\*** 66 B

4. **\*** 45 F

Question Number : 60 Question Id : 97103631786 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

'Joystick' refers to \_\_\_\_\_ device.

# Options:

1. Output

2. \* Storage

3. Input

Network . \*

Question Number : 61 Question Id : 97103631787 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Which organisation is established in India to promote, review, encourage, assist and coordinate science research?

#### **Options:**

Time: 0

ICSSR

2. ✓ CSIR

3. ₩ NCAR

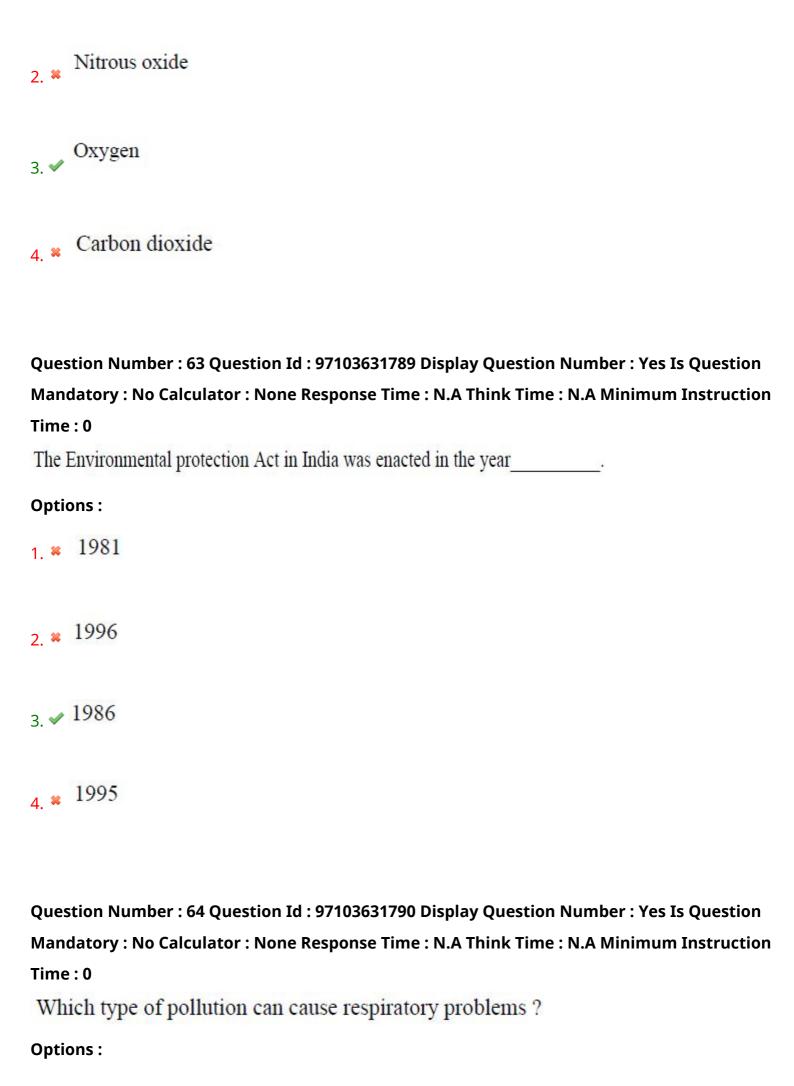
4. NCTE

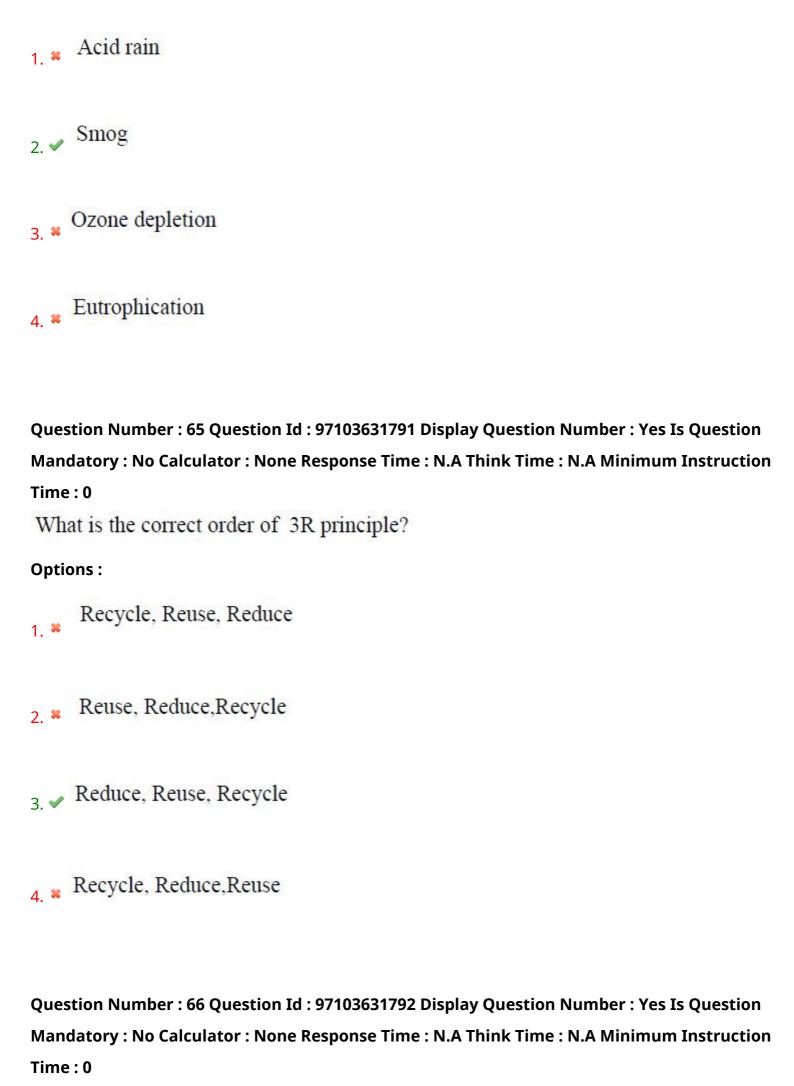
Question Number : 62 Question Id : 97103631788 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following gases, which one is not considered as 'Green House Gas'

#### Options:

1. Methane





The Forest conservation Act was passed in the year
Options :
1. * 1986
2. * 1990
3. ✓ 1980
4. * 1988
Question Number: 67 Question Id: 97103631793 Display Question Number: Yes Is Question  Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0 is an international treaty signed in 1987 to protect the ozone layer.  Options:
1. * Rio Summit
Kyoto Protocol
Vienna convention
4. Montreal Protocol

Question Number : 68 Question Id : 97103631794 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0
Study the following Table and answer the questions from:

Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the total number of employees in all the departments together?

## Options:

Question Number: 69 Question Id: 97103631795 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction

Time: 0

### Study the following Table and answer the questions from:

I	Total Number of Employees in different departments of an organisation and percentage of
	females and males.

Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the respective ratio of the number of females in production department to the number of females in the marketing department?

### Options:

- 1. \* 22:23
- 2. \* 35:33
- 3. 23:22
- 4. \* 33:35

Question Number : 70 Question Id : 97103631796 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0

### Study the following Table and answer the questions from:

Total Number of Employees in different departments of an organisation and percentage of females and males.

Department	Total number of employees	Percentage of females	Percentage of Males
IT	840	45	55
Accounts	220	35	65
Production	900	23	77
HR	360	65	35
Marketing	450	44	56
Customer Service	540	40	60

What is the total number of males in the IT and customer service departments together

### Options:

1. \* 687

2. \* 678

3. \* 768

4. 🗸 786

### **GEO ENGINEERING**

2

**Section Id:** 971036452

Section Number :

Mandatory or Optional: Mandatory

Number of Questions: 70

Section Marks: 70

**Enable Mark as Answered Mark for Review and** 

Clear Response:

Yes

**Maximum Instruction Time:** 0

Is Section Default?: null

Question Number: 71 Question Id: 97103631797 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 determinant of the 2x2 matrix [[3, 4], [1, 2]]?

**Options:** 

1. \* 2

2. \* 5

3. 🗸 6

4. \* 10

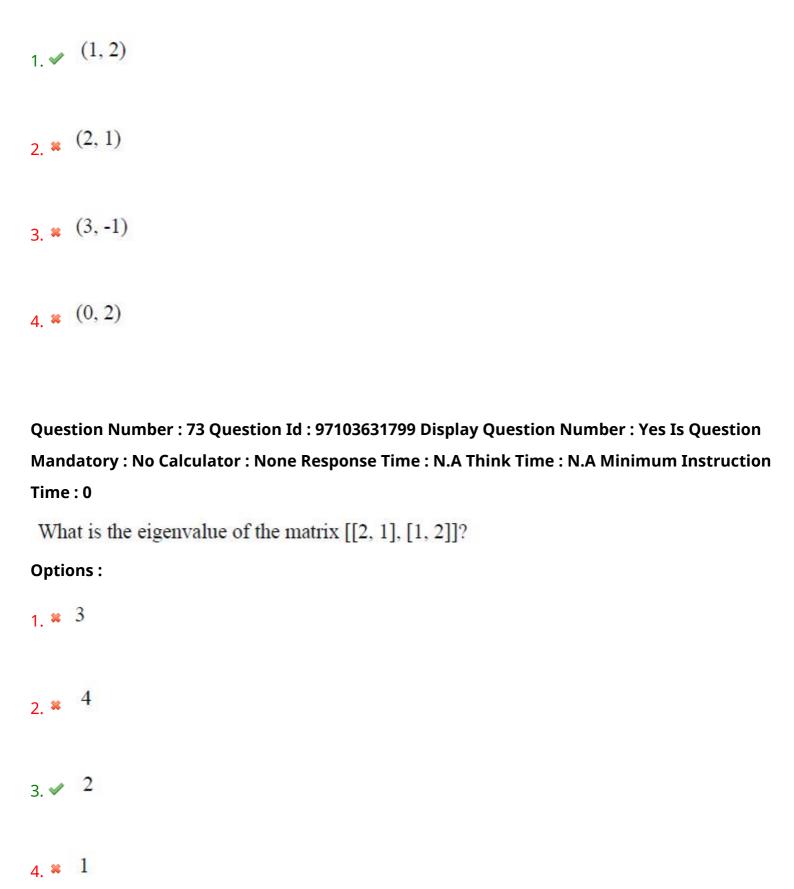
Question Number : 72 Question Id : 97103631798 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time: 0

Which of the following is a solution to the system of linear equations

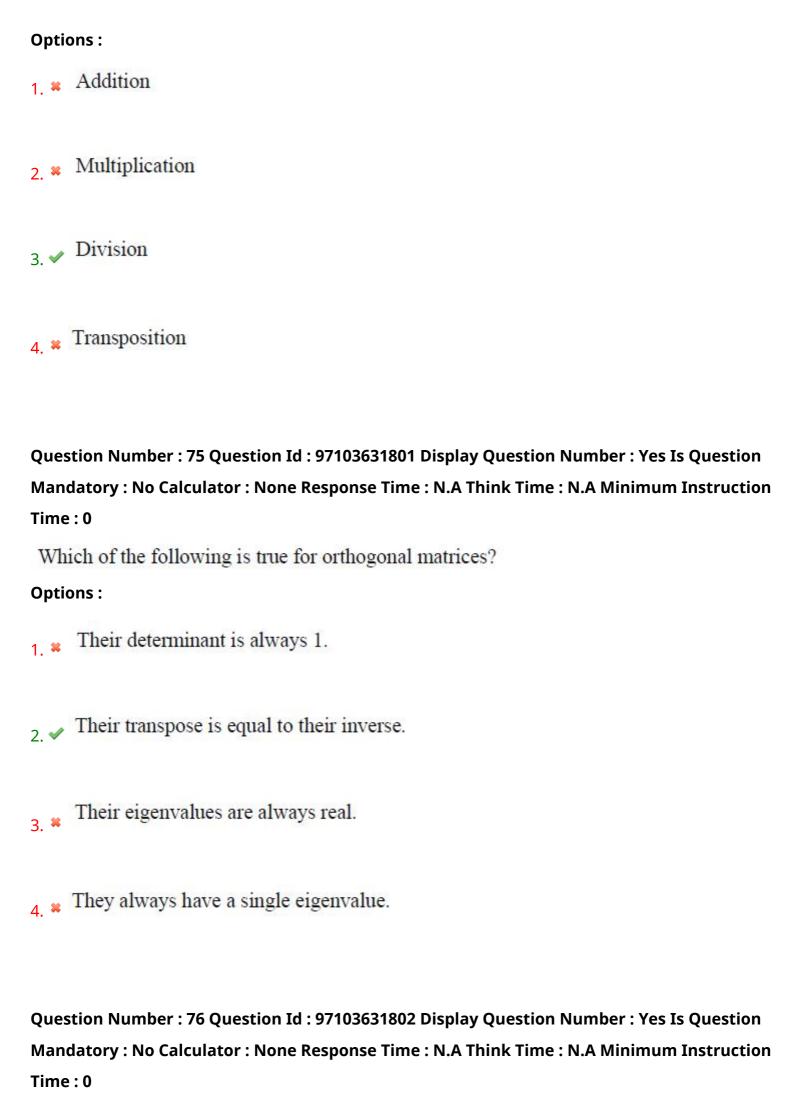
$$2x + 3y = 5$$

$$4x - y = 8$$



Question Number: 74 Question Id: 97103631800 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 operations is NOT valid for matrices?



What is the divergence of the vector field  $F(x, y, z)=(x^2, y^2, z^2)$ ?

# Options:

- 1. \* 3
- 2. ✓ 2x+2y+2z
- $2x^2+2y^2+2z^2$
- 4. \* 0

Question Number: 77 Question Id: 97103631803 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

Which theorem relates a line integral around a closed curve to the double integral over the region enclosed by the curve?

### **Options:**

- 1. \* Green's theorem
- 2. \* Gauss's theorem
- 3. 

  ✓ Stokes's theorem
- 4. ♣ Divergence theorem

Question Number: 78 Question Id: 97103631804 Display Question Number: Yes Is Question

Time: 0
What is the total derivative of the function $z = xy + \sin(x)$ at the point $(\pi/2, 0)$ in the direction of the vector $(1, 2)$ ?
Options:
1. * 1
2. * 2
3. ✓ -1
4. * -2
Question Number : 79 Question Id : 97103631805 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Which theorem is used to evaluate surface integrals over a closed surface?
Options :
1. * Green's theorem
2.  ✓ Gauss's theorem
<ul> <li>2. ✓ Gauss's theorem</li> <li>3. * Stokes's theorem</li> </ul>

Question Number : 80 Question Id : 97103631806 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 probability of rolling an even number on a fair six-sided die?

# Options:

- 1. \* 1/2
- 2. \* 1/3
- 3. 🗸 1/6
- 4. \* 2/3

Question Number: 81 Question Id: 97103631807 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

If P(A) = 0.7 and P(B) = 0.4, what is  $P(A \cap B)$  if A and B are independent events?

- 1. \* 0.28
- 2. \* 0.11
- 3. 

  0.28
- 4. \* 0.18

Question Number: 82 Question Id: 97103631808 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 standard deviation of the numbers: 2, 4, 6, 8, 10?

#### **Options:**

- 1. \* 2
- 2. \* 3
- 3. 🗸 4
- 4. \* 5

Question Number: 83 Question Id: 97103631809 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 mean of a standard normal distribution?

- 1. 🗸 0
- 2. \* 1
- 3. \* -1

» Depends on the variance

Question Number: 84 Question Id: 97103631810 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

If a random variable X follows a Poisson distribution with mean  $\lambda=3$ , what is P(X=2)?

#### **Options:**

- 1. \* 0.112
- 2. \* 0.224
- 3. 0.0498
- 4. \* 0.180

Question Number: 85 Question Id: 97103631811 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 variance of a binomial distribution with parameters n = 10 and p = 0.3?

- 1. \* 10
- 2. \* 3
- 3. 2.1

4. \* 2.2

Question Number: 86 Question Id: 97103631812 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

In a group of 50 students, the mean score on a test is 75. If the standard deviation is 10, what is the variance?

#### **Options:**

1 \* 10

2. 🗸 25

3. \* 100

4. \* 250

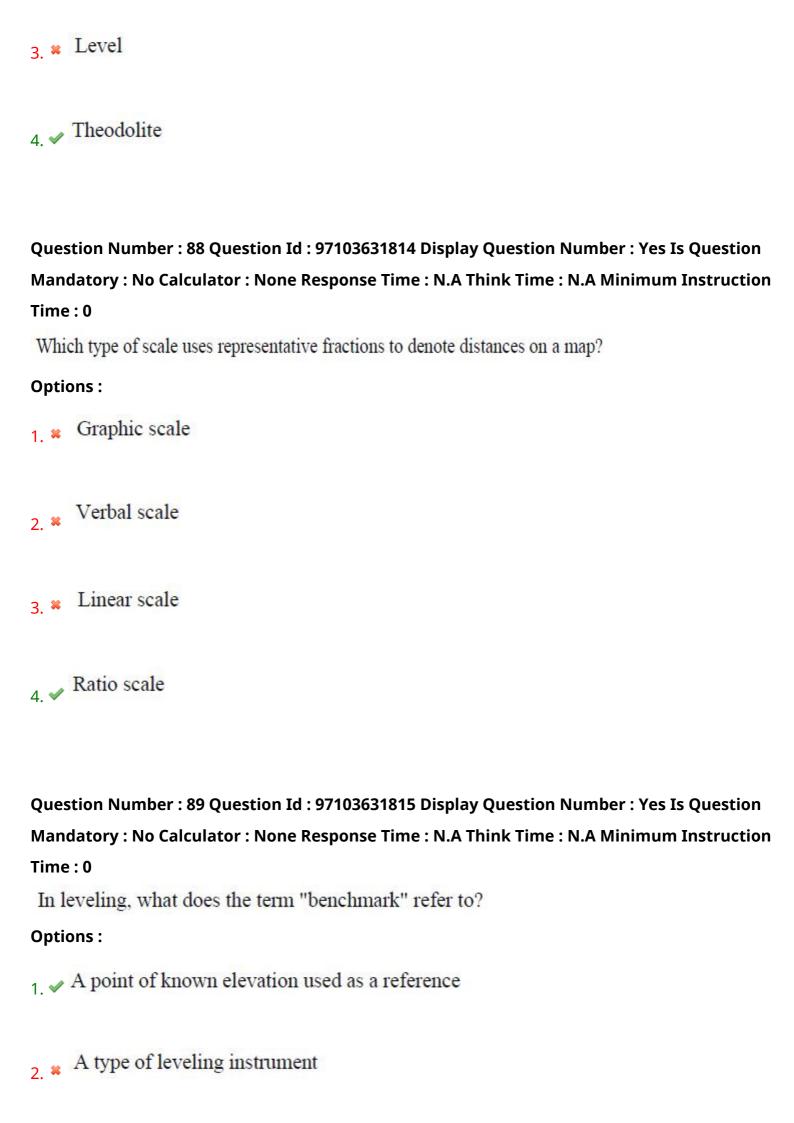
Question Number: 87 Question Id: 97103631813 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

Which of the following instruments is used to measure angles in surveying?

### **Options:**

Chain

2. Compass



3. \* A method for measuring distances 4 \* A type of contour line Question Number: 90 Question Id: 97103631816 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 In surveying, what is the purpose of a theodolite? **Options:** 1 \* To measure distances 2. \* To measure elevations To measure horizontal and vertical angles 4. \* To measure azimuths Question Number: 91 Question Id: 97103631817 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 What are the different forms of precipitation? **Options:** 1. Rain, snow, sleet, and hail

2. \* Dew, fog, and frost

3. \* Evaporation and transpiration 4 \* Condensation and sublimation Question Number: 92 Question Id: 97103631818 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 Which term describes the movement of water between Earth's surface and the atmosphere? **Options:** 1. \* Erosion 2. \* Infiltration 3. 

✓ Hydrologic cycle 4. \* Transpiration Question Number: 93 Question Id: 97103631819 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 Groundwater occurrence primarily depends on

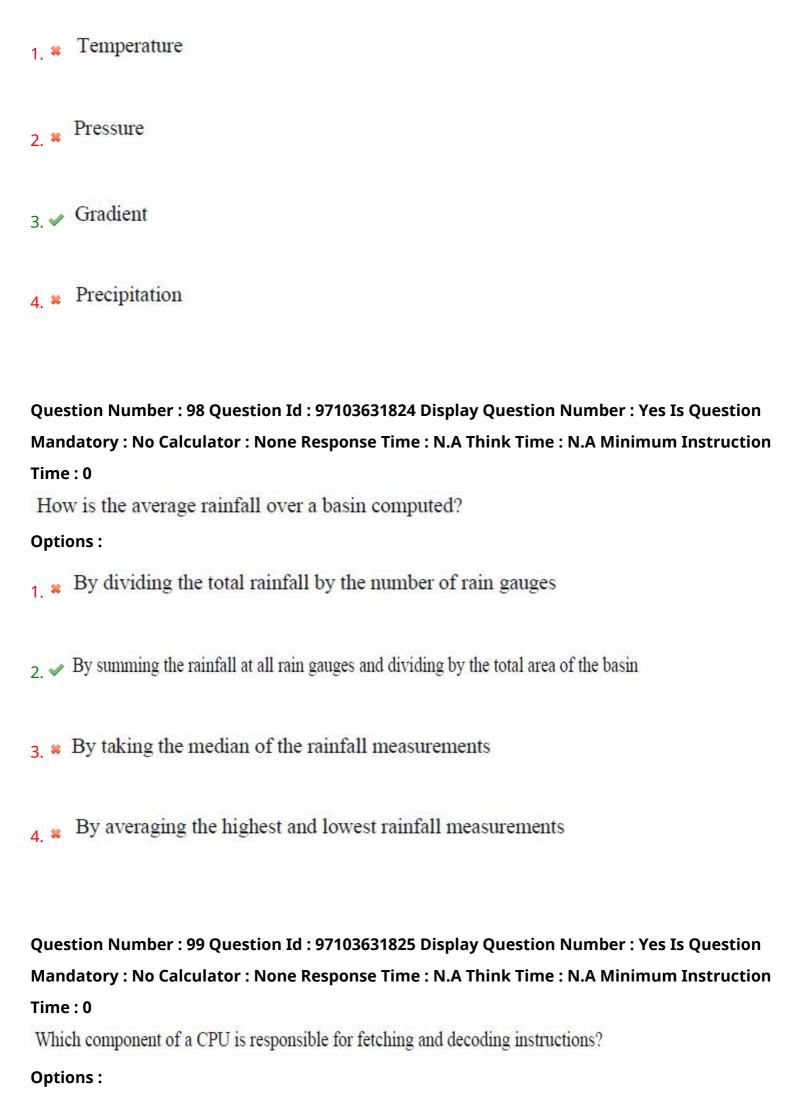
Options:

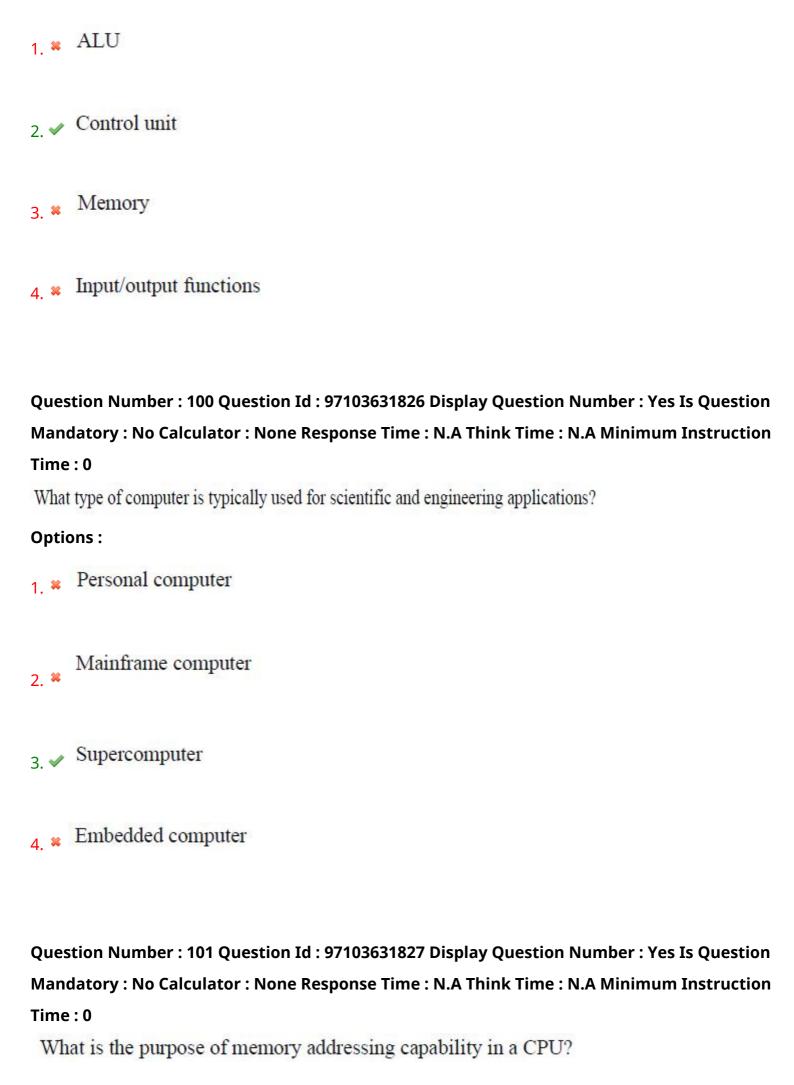
1. \* River flow

2. \* Ocean currents 3. \* Precipitation 4. 

✓ Soil type and geology Question Number: 94 Question Id: 97103631820 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 Permeability of an aquifer refers to **Options:** 1 / Its ability to transmit water The volume of water it can hold The degree of saturation with water The percentage of pore space in the rock or soil Question Number: 95 Question Id: 97103631821 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 Radial flow to wells occurs in which type of aquifer? **Options:** 1. \* Unconfined aquifer

2. * Perched aquifer
3. * Confined aquifer
4. ✓ Artesian aquifer
Question Number : 96 Question Id : 97103631822 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
Storage coefficient of an aquifer refers to
Options :
1. * Its ability to transmit water
2. ✓ The volume of water it can hold
3. * The degree of saturation with water
4. * The ratio of permeability to porosity
Question Number : 97 Question Id : 97103631823 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 primary factor affecting groundwater flow in an aquifer?
Options:





Options:
1. * To store and retrieve data from storage devices
2. * To execute instructions from the operating system
3. * To perform arithmetic and logic operations
4. ✓ To locate and access data stored in memory
Question Number: 102 Question Id: 97103631828 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 primary function of a Database Management System (DBMS)?
Options :
1. * To manage computer hardware
2. * To control access to the internet
3. ✓ To organize and manipulate data
4. * To design computer networks
Question Number: 103 Question Id: 97103631829 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction

Time: 0

What are the three levels of database architecture?
Options :
1. Logical, physical, external
Primary, secondary, tertiary
3. * Hierarchical, network, relational
4. * Centralized, distributed, cloud-based
Question Number : 104 Question Id : 97103631830 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
What are Codd's rules in the context of RDBMS?
Options :
1. * Rules for designing user interfaces
2. * Rules for ensuring data security
3. * Rules for enforcing data integrity
Rules for ensuring relational database management system quality
Question Number : 105 Question Id : 97103631831 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 purpose of an external schema in a database?

#### **Options:**

- 1. \* To provide security controls for data access
- To define the overall structure of the database
- 3 To provide an interface between the database and applications
- To manage data storage and retrieval

Question Number: 106 Question Id: 97103631832 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction

#### Time: 0

What is a primary characteristic of a relational database?

#### **Options:**

- 1. \* Data is organized in a hierarchical structure
- 2. \* Data is organized in a network structure
- Data is organized in tables with relationships defined between them
- Data is organized in a flat file structure

Question Number: 107 Question Id: 97103631833 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 a characteristic of Ethernet LAN?
Options:
1. * It uses token-passing access method
2. ✓ It operates at high-speed data rates
3. * It is primarily used in WANs
4. * It uses a ring topology
Question Number: 108 Question Id: 97103631834 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0  What is FDDI LAN?
Options:  1.   Fiber Distributed Data Interface Local Area Network
2. * Fast Data Delivery Interface Local Area Network
3. * Flexible Data Distribution Interface Local Area Network
4. * Fault Detection and Diagnostic Interface Local Area Network

Question Number : 109 Question Id : 97103631835 Display Question Number : Yes Is Question

${\bf Mandatory: No\ Calculator: None\ Response\ Time: N.A\ Think\ Time: N.A\ Minimum\ Instruction}$
Time: 0
What is TCP/IP?
Options:
1. Transmission Control Protocol/Internet Protocol
2. ** Transfer Control Protocol/Internet Protocol
3. * Transaction Control Protocol/Internet Protocol
4. * Transit Control Protocol/Internet Protocol
Question Number: 110 Question Id: 97103631836 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 primary function of a router in a network?
Options:
1. * To connect devices within the same network
To connect multiple networks together and route data between them
To amplify network signals
4. * To secure network connections

Question Number: 111 Question Id: 97103631837 Display Question Number: Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
What is a switch in networking?
Options:
1. * A device that connects LANs together
2. * A device that connects LANs to the internet
3. A device that connects multiple devices within the same LAN
4. * A device that routes data between networks
Question Number: 112 Question Id: 97103631838 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0  Which layer of the Earth is primarily composed of solid rock and extends from the crust
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0  Which layer of the Earth is primarily composed of solid rock and extends from the crust to the outer core?
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0  Which layer of the Earth is primarily composed of solid rock and extends from the crust to the outer core?  Options:
Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction  Time: 0  Which layer of the Earth is primarily composed of solid rock and extends from the crust to the outer core?  Options:  1. * Crust

Question Number: 113 Question Id: 97103631839 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 average depth of the Earth's oceans?  Options:
2. * 1,000 meters 3. * 3,000 meters
4.  ✓ 5,000 meters
Question Number: 114 Question Id: 97103631840 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0  What process is responsible for the formation of sedimentary rocks?  Options:  1. * Melting and solidification
2.  ✓ Compaction and cementation
3. * Heat and pressure
4. * Recrystallization

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Question Number : 115 Question Id : 97103631841 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
What are silicate minerals primarily composed of?
Options:
1. * Carbon
2.  ✓ Oxygen and silicon
3. * Calcium
4. * Iron
Question Number : 116 Question Id : 97103631842 Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
T: ^
Time: 0
Which layer of the Earth is divided into tectonic plates?
Which layer of the Earth is divided into tectonic plates?
Which layer of the Earth is divided into tectonic plates?  Options:
Which layer of the Earth is divided into tectonic plates?  Options:  1. ✓ Crust

Question Number: 117 Question Id: 97103631843 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 process by which sedimentary rocks are formed from the remains of plants and animals? **Options:** 1. \* Deposition 2. \* Compaction 3. \* Erosion 4. Lithification Question Number: 118 Question Id: 97103631844 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 What mineral is commonly found in sandstone? **Options:** 1. V Quartz 2. \* Calcite 3. \* Feldspar

4. \* Halite

Question Number: 119 Question Id: 97103631845 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 primary purpose of topographic surveying?

#### **Options:**

- To measure distances between objects
- 2. To create accurate maps of terrain features
- To capture aerial photographs
- 4. \* To analyze geological formations

Question Number: 120 Question Id: 97103631846 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 principal point in aerial photography?

- 1 \* The center of the lens aperture
- 2. The point where the optical axis intersects the image plane
- 3. \* The highest point in the aerial photograph

4 \* The central point of the fiducial marks Question Number: 121 Question Id: 97103631847 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0 What is Aero Triangulation? **Options:** 1 \* The process of calibrating aerial cameras 2 \* The process of determining the position of ground control points 3. \* The process of measuring the elevation of terrain surfaces The process of calculating the position of points in three-dimensional space 4. using overlapping aerial photographs Question Number: 122 Question Id: 97103631848 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 type of map projection? **Options:** Mercator

Lambert Conformal Conic

3. \* Azimuthal Equidistant

# 4. Orthogonal Parallel

Question Number: 123 Question Id: 97103631849 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 focal length of an aerial camera lens?

#### **Options:**

- The distance between the lens and the focal plane
- The distance from the principal point to the fiducial marks
- The distance from the optical axis to the lens aperture

Question Number : 124 Question Id : 97103631850 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 purpose of a lens in an aerial camera?

- 1. To capture and focus light onto the image plane
- 2. \* To store captured images

- 3. \* To regulate the exposure time
- 4 ★ To compress captured images

Question Number : 125 Question Id : 97103631851 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 purpose of fiducial marks in aerial photography?

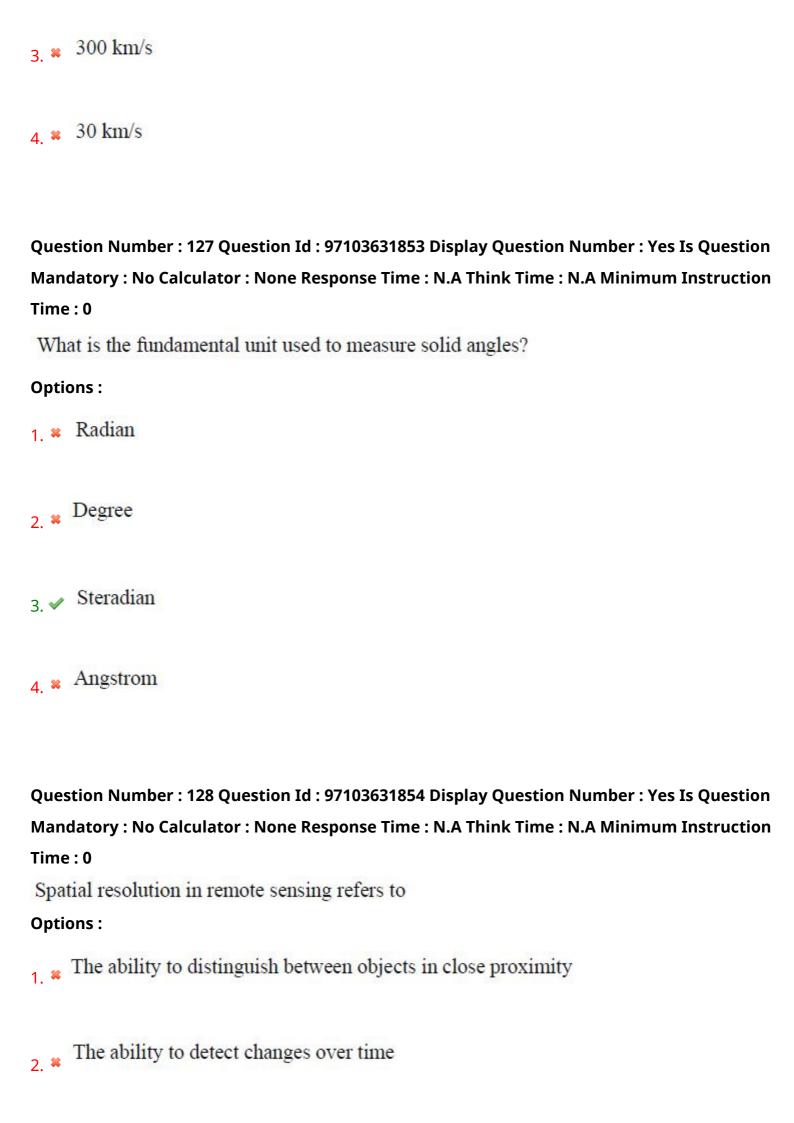
#### **Options:**

- To provide reference points for camera calibration
- 7 × To identify specific features in the landscape
- 3 \* To measure the distance between objects
- To adjust exposure settings

Question Number: 126 Question Id: 97103631852 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 velocity of electromagnetic radiation in a vacuum?

- 1. 300,000 km/s
- 2. **3**,000 km/s



- The ability to measure temperature variations
- The ability to collect data in different spectral bands

Question Number: 129 Question Id: 97103631855 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 primary function of radiometric resolution in remote sensing?

#### **Options:**

- To measure the temperature of objects
- 2. \* To detect changes in land cover over time
- 3. \* To quantify the amount of radiation received by a sensor
- To distinguish between different levels of brightness or intensity

Question Number: 130 Question Id: 97103631856 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 major advantage of using infrared sensors in remote sensing?

#### **Options:**

1. \* They provide high-resolution images

They can penetrate through clouds and fog They provide global coverage for weather monitoring Question Number: 131 Question Id: 97103631857 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 primary function of radiance in remote sensing? **Options:** To quantify the amount of radiation received by a sensor 2. \* To measure the temperature of objects To distinguish between different levels of brightness or intensity To measure the amount of reflected energy from the Earth's surface Question Number: 132 Question Id: 97103631858 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 significance of temporal resolution in remote sensing?

It determines the ability to detect small differences in wavelength

- 2. It determines the frequency of image acquisition over time
- It determines the ability to distinguish between different objects
- It determines the ability to penetrate through clouds and fog

Question Number: 133 Question Id: 97103631859 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 geosynchronous satellites?

#### **Options:**

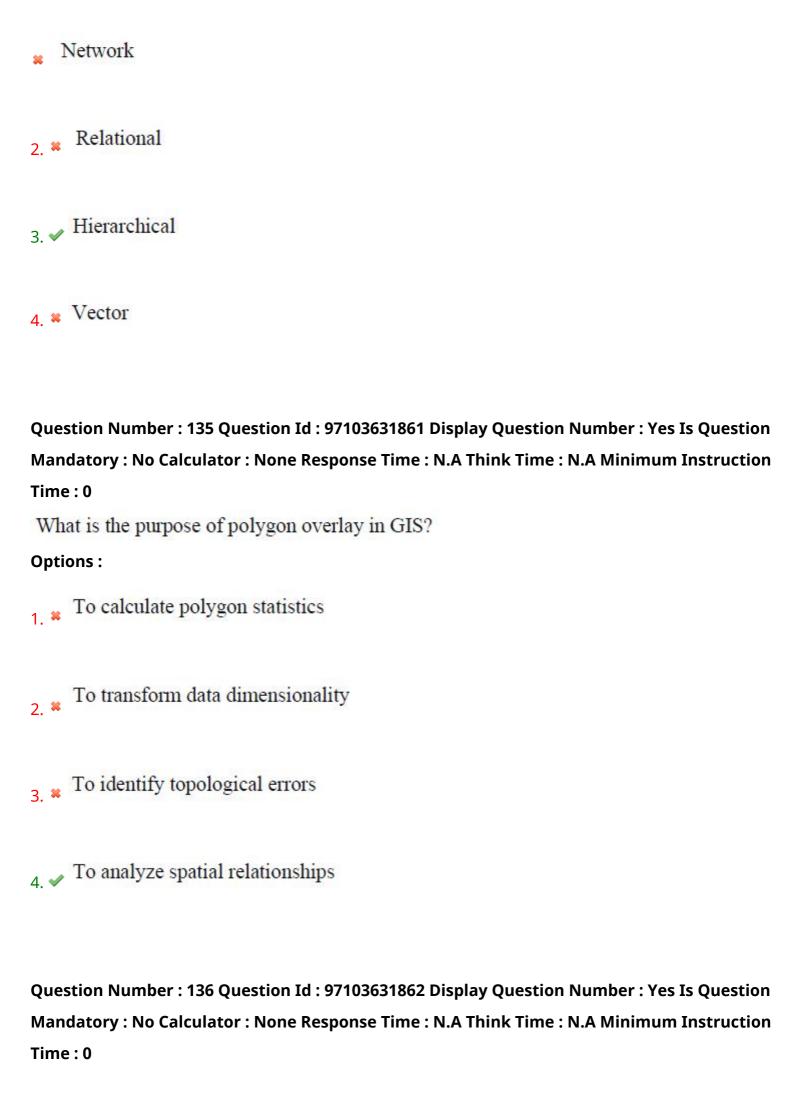
- 1. \* They provide continuous coverage of specific areas on Earth
- 2. They orbit at a low altitude for high-resolution imaging
- They are positioned above the equator
- They have a synchronous orbit with the Earth's rotation

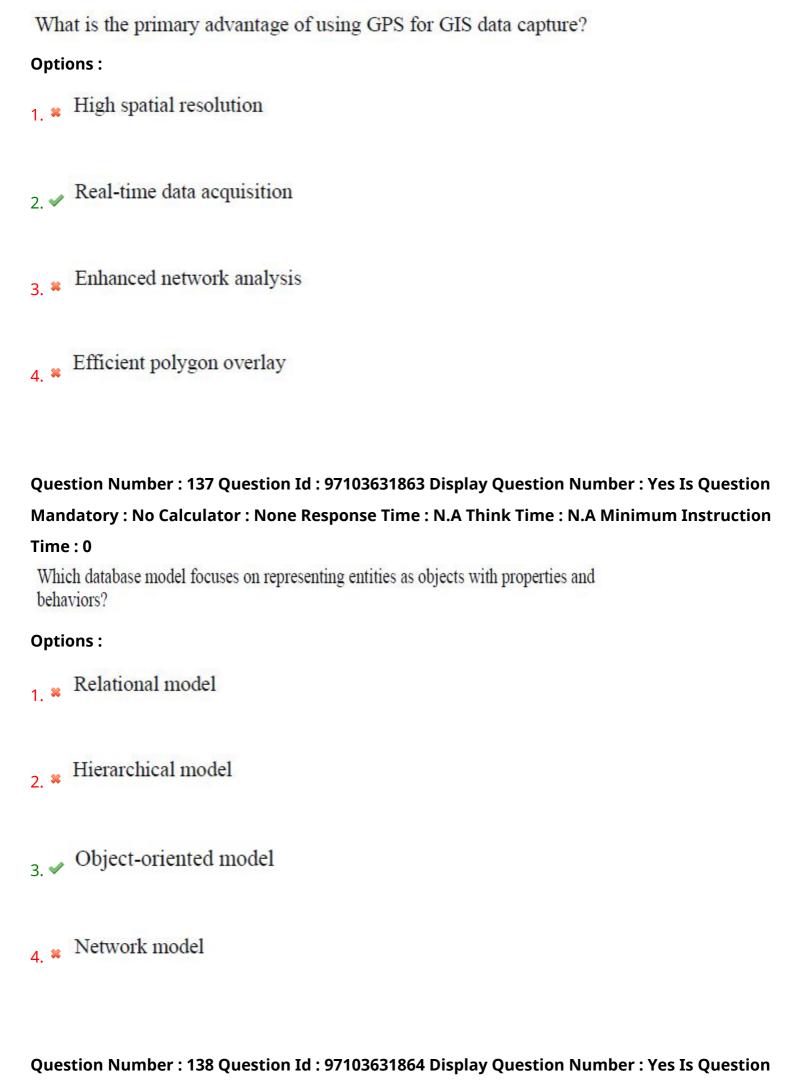
Question Number: 134 Question Id: 97103631860 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0

Which data structure in GIS is characterized by hierarchical relationships?

#### **Options:**

1.





Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
What is the purpose of a digital elevation model (DEM) in GIS?
Options:
1. * To analyze soil properties
2. * To study rainfall patterns
3.  ✓ To represent terrain elevation
4. * To manage resource data
Question Number: 139 Question Id: 97103631865 Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time: N.A Think Time: N.A Minimum Instruction Time: 0  What does the term "topological errors" refer to in GIS?
Options:
1. Frrors in spatial relationships
2. * Errors in attribute data
3. * Errors in data transformation
4. * Errors in data visualization

Question Number : 140 Question Id : 97103631866 Display Question Number : Yes Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction
Time: 0
The band width of GPS range measurements is in

# Options:

1. 2L - band frequencies

2. **≈** 3L – band frequencies

3. **\*** 2C – band frequencies

4. **≈** 3C – band frequencies