



# Andhra Pradesh State Council of Higher Education

## Notations :

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

<b>Question Paper Name :</b>	Mathematics Urdu 13th July 2022 Shift 1
<b>Duration :</b>	120
<b>Total Marks :</b>	150
<b>Display Marks:</b>	No
<b>Share Answer Key With Delivery Engine :</b>	Yes
<b>Calculator :</b>	None
<b>Magnifying Glass Required? :</b>	No
<b>Ruler Required? :</b>	No
<b>Eraser Required? :</b>	No
<b>Scratch Pad Required? :</b>	No
<b>Rough Sketch/Notepad Required? :</b>	No
<b>Protractor Required? :</b>	No
<b>Show Watermark on Console? :</b>	Yes
<b>Highlighter :</b>	No
<b>Auto Save on Console?</b>	Yes
<b>Change Font Color :</b>	No
<b>Change Background Color :</b>	No
<b>Change Theme :</b>	No
<b>Help Button :</b>	No
<b>Show Reports :</b>	No
<b>Show Progress Bar :</b>	No
<b>Is this Group for Examiner? :</b>	No
<b>Examiner permission :</b>	Cant View
<b>Show Progress Bar? :</b>	No

## General English

<b>Section Id :</b>	264490591
<b>Section Number :</b>	1
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	21
<b>Section Marks :</b>	25
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0

**Question Id : 26449017970 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

### Question Numbers : (1 to 5)

Read the following passage and answer the questions based on it.

Many great inventions are initially greeted with ridicule and disbelief. The invention of the airplane was no exception. Although many people who heard about the first powered flight on December 17, 1903 were excited and impressed, others reacted with peals of laughter. The idea of flying an aircraft was repulsive to some people. Such people called Wilbur and Orville Wright, the inventors of the first flying machine, impulsive fools.

Negative reactions, however, did not stop the Wrights. Impelled by their desire to succeed, they continued their experiments in aviation.

Orville and Wilbur Wright had always had a compelling interest in aeronautics and mechanics. As young boys they earned money by making and selling kites and mechanical toys. Later, they designed a newspaper-folding machine, built a printing press, and operated a bicycle-repair shop. In 1896, when they read about the death of Otto Lilienthal, the brothers' interest in flight grew into a compulsion.

Lilienthal, a pioneer in hang-gliding, had controlled his gliders by shifting his body in the desired direction. This idea was repellent to the Wright brothers, however, and they searched for more efficient methods to control the balance of airborne vehicles. In 1900 and 1901, the Wrights tested numerous gliders and developed control techniques. The brothers' inability to obtain enough lift power for the gliders almost led them to abandon their efforts.

### Sub questions

**Question Number : 1 Question Id : 26449017971 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, the idea of flying an aircraft was \_\_\_\_\_ to some people.

**Options :**

1. ✖ needless
2. ✖ uninteresting
3. ✔ distasteful
4. ✖ unacceptable

**Question Number : 2 Question Id : 26449017972 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

People of their days thought that the Wright brothers had

**Options :**

1. ✖ acted in a negative way
2. ✖ acted under negative influence
3. ✖ acted irresponsibly
4. ✔ acted without thinking

**Question Number : 3 Question Id : 26449017973 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

By the end of the 18<sup>th</sup> century, the Wright brothers' interest in flight grew into

**Options :**

1. ✖ an Action Plan

2. ✖ a foolish thought
3. ✔ a need to act
4. ✖ an unfulfilled desire

**Question Number : 4 Question Id : 26449017974 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Lilienthal's idea about controlling airborne vehicles was \_\_\_\_\_ the Wrights.

**Options :**

1. ✔ disliked by
2. ✖ accepted by
3. ✖ disproved by
4. ✖ proved by

**Question Number : 5 Question Id : 26449017975 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The wright brothers almost abandoned their efforts on the gliders due to their

**Options :**

1. ✖ Ability to design new gliders
2. ✖ Inability to test the power of the glides

3. ✖ Ability to develop control techniques

4. ✔ Inability to obtain required life power for the gliders

**Question Number : 6 Question Id : 26449017976 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

He has been working for the company \_\_\_\_\_ January, 2005

**Options :**

1. ✖ during

2. ✔ since

3. ✖ before

4. ✖ after

**Question Number : 7 Question Id : 26449017977 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

\_\_\_\_\_ the last rainy season, many houses collapsed in the hilly areas.

**Options :**

1. ✖ In

2. ✖ Around

3. ✔ During

4. ✖ By

**Question Number : 8 Question Id : 26449017978 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

John's elderly parents always prefer to travel \_\_\_\_ car.

**Options :**

1. ✔ by

2. ✖ inside

3. ✖ in

4. ✖ on

**Question Number : 9 Question Id : 26449017979 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Tilak is \_\_\_\_ university student.

**Options :**

1. ✖ the

2. ✓ a

3. ✗ an

4. ✗ No article required.

**Question Number : 10 Question Id : 26449017980 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Sarojini Naidu is \_\_\_\_\_ Nightingale of India.

**Options :**

1. ✓ the

2. ✗ an

3. ✗ a

4. ✗ No article required.

**Question Number : 11 Question Id : 26449017981 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the synonym for the word INDOLENT from the below given words.

**Options :**

1. ✗ mindful

2. ✓ lazy

3. ✖ deadly

4. ✖ significant

**Question Number : 12 Question Id : 26449017982 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Add appropriate question tag to the given below sentence.  
She attends the meeting

**Options :**

1. ✖ Isn't She?

2. ✖ Does She?

3. ✖ Isn't it ?

4. ✔ Doesn't she?

**Question Number : 13 Question Id : 26449017983 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

**Rekha reached the airport after the flight \_\_\_\_\_.**

**Options :**

1. ✖ has departed

2. ✖ was departed



3. ✓ had departed

4. ✗ have departed

**Question Number : 14 Question Id : 26449017984 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The principal \_\_\_\_\_ for a walk in the school ground every day.

**Options :**

1. ✗ is going

2. ✗ gone

3. ✓ goes

4. ✗ went

**Question Number : 15 Question Id : 26449017985 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

When the tourists \_\_\_\_\_ themselves the flower show yesterday, it started to rain.

**Options :**

1. ✗ enjoyed

- 2. ✖ have been enjoying
- 3. ✖ have enjoyed
- 4. ✔ were enjoying

**Question Number : 16 Question Id : 26449017986 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The Governor \_\_\_\_\_ the national flag at 8 a.m. tomorrow and \_\_\_\_\_ the awardees.

**Options :**

- 1. ✔ hoists, honors
- 2. ✖ will hoist, will honor
- 3. ✖ is hoisting, is honoring
- 4. ✖ would hoist, would honor

**Question Number : 17 Question Id : 26449017987 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

A number of soldiers \_\_\_\_\_ during the war last month.

**Options :**

1. ✓ were injured
2. ✗ are injured
3. ✗ have injured
4. ✗ have been injured

**Question Number : 18 Question Id : 26449017988 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The Minister, along with his officials \_\_\_\_\_ the press every Saturday.

**Options :**

1. ✗ is meeting
2. ✗ are meeting
3. ✓ meets
4. ✗ meet

**Question Number : 19 Question Id : 26449017989 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

One of the doors of the bank \_\_\_\_\_ by the thief who attempted a burglary.

**Options :**

1. ✖ is damaged
2. ✔ was damaged
3. ✖ are damaged
4. ✖ were damaged

**Question Number : 20 Question Id : 26449017990 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Neither John nor Peter \_\_\_\_\_ this book.

**Options :**

1. ✔ has read
2. ✖ have read
3. ✖ were reading
4. ✖ have been reading

**Question Number : 21 Question Id : 26449017991 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 options best expresses the given sentence in Active/Passive Voice?

Sentence: The invigilator was reading out the instructions clearly.

Options :

1. ✖ The instructions have been read out by the invigilator clearly.
2. ✖ The instructions are being read out by the invigilator clearly.
3. ✔ The instructions were being read out by the invigilator clearly.
4. ✖ The instructions has been read out by the invigilator clearly.

Question Number : 22 Question Id : 26449017992 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 options best expresses the given sentence in Active/Passive Voice?

Sentence: A small boy could not have carried this big parcel.

Options :

1. ✖ This big parcel could not be carried by a small boy.
2. ✖ This big parcel could not been carried by a small boy.

3. ✓ This big parcel could not have been carried by a small boy.

4. ✗ This big parcel could not being carried by a small boy.

**Question Number : 23 Question Id : 26449017993 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 options best expresses the given sentence in Direct/Indirect Speech?

Sentence: The teacher told the boy that he was not studying well.

Options :

1. ✓ The teacher said to the boy," You are not studying well".

2. ✗ The teacher told to the boy," You are not studying well".

3. ✗ The teacher said to the boy," He is not studying well".

4. ✗ The teacher told to the boy," He was not studying well".

**Question Number : 24 Question Id : 26449017994 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 options best expresses the given sentence in Direct/Indirect Speech?

Sentence: The manager said to the clerk, "Have you completed the work?"

Options :

1. ✖ The manager asked the clerk if he has completed the work.
2. ✔ The manager asked the clerk if he had completed the work.
3. ✖ The manager asked the clerk if the work has been completed.
4. ✖ The manager asked the clerk if he have completed the work.

Question Number : 25 Question Id : 26449017995 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 words best expresses the meaning of the underlined words in the given sentence?

Sentence: It rained cats and dogs last night.

Options :

1. ✖ moderately
2. ✖ lightly
3. ✖ intermittently
4. ✔ heavily

## General Knowledge

Section Id :	264490592
Section Number :	2
Mandatory or Optional :	Mandatory
Number of Questions :	15
Section Marks :	15
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0

Question Number : 26 Question Id : 26449017996 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

On which day of the year is the National Education Day observed in India?

ہندوستان میں قومی یوم تعلیم کے طور پر سال کی کس دن منایا جاتا ہے؟

Options :

March 6

1. ✖ 6 مارچ

January 14

2. ✖ 14 جنوری

September 8

3. ✖ 8 ستمبر



November 11

4. ✓ 11 نومبر

Question Number : 27 Question Id : 26449017997 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Internet is a

انٹرنیٹ ایک — ہے

Options :

Network

1. ✗ نیٹ ورک

Network of Networks

2. ✓ نیٹ ورک آف نیٹ ورکس

Software

3. ✗ سافٹ ویئر

Server

4. ✗ سرور

Question Number : 28 Question Id : 26449017998 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

When was India's capital shifted from Calcutta to Delhi?

ہندوستان کا دارالخلافہ کلکتہ سے دہلی کب منتقل کیا گیا؟

Options :

1. ✖ 1935
2. ✖ 1900
3. ✔ 1911
4. ✖ 1929

Question Number : 29 Question Id : 26449017999 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

MOOC stands for

MOOC کا مقف ہے۔

Options :

Mobile Open and Online Course

1. ✖ موبائل اوپن اینڈ آن لائن کورس

Massive Open Online Course

2. ✓ ماسیو اوپن آن لائن کورس

Media-based Open Online Course

3. ✖ میڈیا بیسڈ اوپن آن لائن کورس

Machine-based Open Online Course

4. ✖ مشن بیسڈ اوپن آن لائن کورس

Question Number : 30 Question Id : 26449018000 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Kangaroo's abdominal pouch is known as

کنگارو کے پیٹ کی تھیلی کو یہ کہتے ہیں۔

Options :

Placenta Pouch

1. ✖ پلاسینٹا تھیلی

Guttural Pouch

گٹورل تھیلی

2. ✖

Marsupium

مارسپیم

3. ✔

Synovial Membrane

زلالی جھلی

4. ✖

Question Number : 31 Question Id : 26449018001 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

“One class one TV Channel” programme of PM e-vidya expanded from 12 to.

پی۔ایم ای۔ ودیا کا "ون کلاس ون ٹی۔ وی۔ چینل" پروگرام کو 12 چینل سے کتنے چینل تک بڑھا دیا گیا؟

Options :

1. ✖ 120

2. ✔ 200

3. ✖ 140

4. ✖ 150

Question Number : 32 Question Id : 26449018002 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Gateway of India in Mumbai was built in honor of

ممبئی میں اگیٹ وے آف انڈیا ان کے اعزاز میں بنایا گیا۔

Options :

King George

1. ✔ کنگ جارج

Lord Mountbatten

2. ✖ لارڈ ماؤنٹ بیٹن

Queen Elizabeth

3. ✖ ملکہ ایلزبتھ

Lord Macaulay

4. ✖ لارڈ میکالے

Question Number : 33 Question Id : 26449018003 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The book "Origin of Species" was authored by

آر جن آف اسپیس کتاب کے مصنف ہیں۔

Options :

Charles Dickens

چارلس ڈکنس

1. ✖

Charles Darwin

چارلس ڈارون

2. ✔

Charles Babbage

چارلس بیج

3. ✖

Charles Lamb

چارلس لمب

4. ✖

Question Number : 34 Question Id : 26449018004 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The name of the virus that caused Covid-19 in the early days of the pandemic is

عالمی وبا کے ابتدائی دنوں میں کووڈ-19 پھیلانے والے وائرس کا نام

Options :

1. ✓ SARS-CoV-2
2. ✗ SARS-Covid19-2
3. ✗ Cov-SARS-1
4. ✗ SARS-Covi-D2

Question Number : 35 Question Id : 26449018005 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Who among the following was given the Oscar Honorary for Life Time Achievement in 1992?

1992 میں آسکر کا اعزاز لائف ٹائم اچیومنٹ کس کو دیا گیا؟

Options :

1. ✗ DadasahebPhalke  
دادا صاحب پھالکے
2. ✓ Satyajit Ray  
ستیا جیت رے

Aparna Sen

3. ✖ اپرنا سین

Rituparno Ghosh

4. ✖ رتوپرنا گھوش

Question Number : 36 Question Id : 26449018006 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Union Budget 2022 focuses on how many areas

بجٹ 2022 میں کتنے شعبوں پر توجہ مرکوز کی گئی؟

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

Question Number : 37 Question Id : 26449018007 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0



Who is considered the inventor of World Wide Web (www)?

ورلڈ وائڈ ویب کا موجد کون ہے؟ (www)

Options :

Tim Berners-Lee

1. ✓ ٹیم برنرز-لی

Bill Gates

2. ✗ بل گیٹس

Larry Page

3. ✗ لیری پیج

Jimmy Wales

4. ✗ جمی ویلس

Question Number : 38 Question Id : 26449018008 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The term Grand Slam is associated with

گرانڈ سلام کس سے منسلک ہے؟

Options :

Lawn Tennis

لان ٹینس

1. ✓

Billiards

بلیئرڈ

2. ✗

Chess

شطرنج

3. ✗

Basket Ball

باسکٹ بال

4. ✗

Question Number : 39 Question Id : 26449018009 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The SardarSarovar Dam is a terminal dam built on the river

سردار سرووڑ ڈیم ایک ٹرمینل ڈیم ہے جو اس ندی پر تعمیر کیا گیا؟

Options :

Sutlej

سٹلج

1. ✗

Ganga

2. ✖ گنگا

Narmada

3. ✔ نرمدہ

Brahmaputra

4. ✖ برہماپترا

Question Number : 40 Question Id : 26449018010 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 theme of the 'Earth Day 2022'?

یوم زمین 2022 کا مرکزی خیال کیا ہے؟

Options :

Covid and Planet

1. ✖ کووڈ اور سیارہ

No to Pollution

2. ✖ آلودگی نہیں

Sustainable Living

پائیدار زندگی

3. ✖

Invest in our Planet

ہمارے سیارے میں سرمایہ لگائیں

4. ✔

## Teaching Aptitude

Section Id :	264490593
Section Number :	3
Mandatory or Optional :	Mandatory
Number of Questions :	10
Section Marks :	10
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0

Question Number : 41 Question Id : 26449018011 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Good Classroom Communication will ensure a

عمدہ کمرے جماعت کی ترسیل اس بات کی یقین دلاتی ہے

Options :

supportive classroom climate

1. ✔

کمرہ جماعت کے ماحول کا تعاون

good learning environment

2. ✖ اچھا سیکھنے کا ماحول

activity-based classroom

3. ✖ سرگرمی پر مبنی کمرہ جماعت

joyful learning experiences

4. ✖ خوشگوار سیکھنے کے تجربات

Question Number : 42 Question Id : 26449018012 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A teacher discussing the academic problems of students with other colleagues in the school is

ایک استاد جو اسکول میں دوسرے ساتھیوں کے ساتھ طلباء کے تعلیمی مسائل پر گفتگو کرنا

Options :

Upward Communication

1. ✖ عروجی ترسیل

Downward Communication

2. ✖ زوالی ترسیل

Horizontal Communication

3. ✓ افقی ترسیل

Grapevine Communication

4. ✗ انگوری ترسیل

Question Number : 43 Question Id : 26449018013 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

One can become a popular teacher among students by

طلبا کے درمیان ایک اچھا استاد بننے کے لیے کیا کرنا ہوگا؟

Options :

awarding good marks

1. ✗ اچھے نمبرات دینا

handling special classes

2. ✗ خصوصی کلاس کا اہتمام کرنا

helping them solve their problems

3. ✓ طلباء کے مسائل حل کرنے میں مدد کرنا

giving learning materials

تدریسی مواد فراہم کرنا

4. ✖

Question Number : 44 Question Id : 26449018014 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The best way to maintain discipline in the class is to deal with the students

کمرہ جماعت میں نظم و ضبط برقرار رکھنے کے لیے طلباء کے ساتھ کیا معاملہ کیا جائے؟

Options :

affectionately

1. ✖ شفقت

strictly and friendly

2. ✖ سختی اور دوستانہ رویہ

strictly and authoritatively

3. ✖ سختی اور حاکمانہ طریقہ

politely, but firmly

4. ✔ شائستگی سے، لیکن مضبوطی سے

Question Number : 45 Question Id : 26449018015 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 element of teaching is

تدریس کا اہم عنصر

Options :

Teacher's Knowledge in the subject

1. ✖ مدرس کی علمی قابلیت

Teacher-Student Relationship

2. ✔ مدرس اور طالب علم کا رشتہ

Teaching Techniques

3. ✖ تدریسی تکنیک

Technological Aids for Teaching

4. ✖ تدریس کی لیے تکنیکی امدادی اشیا

Question Number : 46 Question Id : 26449018016 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Effective classroom environment can be ensured by

کمرہ جماعت کو موثر بنانے کے لیے کیا کیا جائے؟

Options :



lively student-teacher interactions

1. ✓ فعال طالب علم - معلم کی باہمی گفتگو

advanced technological gadgets

2. ✗ اعلیٰ درجے کی تکنیکی آلے

pin-drop silence in the class

3. ✗ کمرہ جماعت میں بالکل خاموشی

high-cost infrastructure

4. ✗ اعلیٰ قیمت کا انفراسٹرکچر

Question Number : 47 Question Id : 26449018017 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If one wants to become the best teacher, he or she should

اگر کوئی بہترین مدرس بننا چاہے تو وہ —————

Options :

control the class effectively

1. ✗ کمرہ جماعت کو موثر طریقہ سے قابو میں رکھے

correct the test papers and assignments strictly

2. ✖ ٹیسٹ پیپرس اور اسائنمنٹس کی جانچ سختی سے کرے

handle the classes humorously

3. ✖ مزاحیہ انداز میں کلاس سنبھالے

motivate the students to learn

4. ✔ سکھنے کی لیے طلباء کی حوصلہ افزائی کرے

Question Number : 48 Question Id : 26449018018 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The primary purpose of punishing a student is to

ایک طالب علم کو سزا دینے کا بنیادی مقصد — ہے۔

Options :

show the teacher's authority

1. ✖ استاد کی بالادستی دکھلانا

correct the offender

2. ✔ مجرم کو درست کرنا

threaten the other students

3. ✖ دوسرے طلباء کو ڈرانا

enforce discipline in the class

4. ✖ کمرہ جماعت میں نظم و ضبط قائم کرنا

Question Number : 49 Question Id : 26449018019 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the students show lack of interest in the subject, a teacher should

اگر طالب علم مضمون میں عدم دلچسپی ظاہر کرتا ہے تو استاد کو کیا کرنا چاہئے؟

Options :

make his or her teaching more interesting

1. ✖ تدریس میں مزید دلچسپی پیدا کرے

teach with real life examples

2. ✖ حقیقی زندگی کے مثالوں کے ساتھ پڑھائیں

attempt to find out the reason for lack of interest

3. ✔ عدم دلچسپی کی وجہ جاننے کی کوشش کریں

teach with stories and songs

کہانیوں اور گانوں کے ساتھ پڑھائیں

4. ✖

Question Number : 50 Question Id : 26449018020 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A teacher can learn the nuances of teaching the subject and dealing with students from

مدرس مضمون کی درسی باریکیاں اور طلباء سے سلوک ان سے سیکھ سکتا ہے۔

Options :

Students

1. ✓ طلباء

Fellow Teachers

2. ✖ ساتھی اساتذہ

Senior Teachers

3. ✖ بزرگ اساتذہ

Principals

4. ✖ پرنسپل

## Mathematics

Section Id :	264490594
Section Number :	4
Mandatory or Optional :	Mandatory
Number of Questions :	100
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0

Question Number : 51 Question Id : 26449018021 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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

$$x \frac{dy}{dx} = y (\log y - \log x + 1)$$

Options :

1. ✖  $v = cx$

2. ✔  $\log v = cx$

3. ✖  $v = \frac{c}{x}$

4. ✖  $\log v = \log cx$

Question Number : 52 Question Id : 26449018022 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The solution of  $ydx - xdy = 3x^2e^{x^3}y^2dx$  is

کامل  $ydx - xdy = 3x^2e^{x^3}y^2dx$

Options :

1. ✓  $x = ye^{x^3} + cy$

2. ✗  $y = ye^{x^3} + cx$

3. ✗  $y = xe^{x^3} + cx$

4. ✗  $xy = ce^{x^3} + cx$

Question Number : 53 Question Id : 26449018023 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The integrating factor of  $x \frac{dy}{dx} + 2y - x^2 \log x = 0$  \_\_\_\_\_

\_\_\_\_\_ کا تکمیل شدہ جز ضربی  $\frac{xdy}{dx} + 2y - x^2 \log x = 0$  ہے۔

Options :

1. ✓  $x^2$

2. ✗  $\frac{1}{x^2}$

3. ✗  $\frac{1}{x}$

4. ✗  $x^3$

Question Number : 54 Question Id : 26449018024 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The singular solution of  $y = Px + (a/p)$  is

← \_\_\_\_\_ کا دراصل  $y = Px + (a/p)$

Options :

1. ✗  $y = x$

2. ✗  $y^2 = 2ax$

3. ✓  $y^2 = 4ax$

$$y = 2ax$$

4. ✖

Question Number : 55 Question Id : 26449018025 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 equation is not in Clairaut's form?

مندرجہ ذیل کون سی مساوات کلاریٹ کی شکل میں نہیں ہے؟

Options :

$$y = px + p - p^2$$

1. ✖

$$(1 - x^2 y^2) dx = y dx + x dy$$

2. ✔

$$(xp - y)^2 = p^2 - 1$$

3. ✖

$$\sin p x \cos y = \cos p x \sin y + p$$

4. ✖

Question Number : 56 Question Id : 26449018026 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  $p = \log(px - y)$  where  $p = \frac{dy}{dx}$  is \_\_\_\_\_

\_\_\_\_\_  $p = \frac{dy}{dx}$  کا عمومی حل، جہاں  $p = \log(px - y)$



Options :

1. ✖  $y = cx + e^c$

2. ✖  $y = cx^2 - e^c$

3. ✔  $y = cx - e^c$

4. ✖  $y = cx^2 + e^c$

Question Number : 57 Question Id : 26449018027 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The solution of  $(D^2 + 1)y = 0$  is

سؤال  $(D^2 + 1)y = 0$

Options :

1. ✔  $A \cos x + B \sin x$

2. ✖  $e^x(A \cos x + B \sin x)$

3. ✖  $(A_1 + A_2) \cos x + (A_3 + A_4) \sin x$

$$(A_1 + A_2) \cos x + (A_3 + A_4 x) \sin x$$

4. ✖

Question Number : 58 Question Id : 26449018028 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The differential equation  $x(1 + y^2)dx + y(1 + x)dy = 0$  is

تفرقی مساوات  $x(1 + y^2)dx + y(1 + x)dy = 0$  ہے۔

Options :

Homogeneous equation

متجانس مساوات

1. ✖

Linear equation

خطی مساوات

2. ✖

Bernouli equation

برنولی مساوات

3. ✖

Exact equation

قطع مساوات

4. ✔

Question Number : 59 Question Id : 26449018029 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The complementary function on of  $\frac{d^3x}{dt^3} - 2\frac{d^2x}{dt^2} - 3\frac{dx}{dt} = e^x$  is

\_\_\_\_\_ کی تکمیلی مساوات  $\frac{d^3x}{dt^3} - \frac{2d^2x}{dt^2} - \frac{3dx}{dt} = e^x$  ہے۔

Options :

1. ✓  $c_1 + c_2 e^{3t} + c_3 e^{-t}$

2. ✗  $c_1 + c_2 e^{2t} + c_3 e^{3t}$

3. ✗  $c_1 e^t + c_2 e^{-2t} + c_3 e^{-3t}$

4. ✗  $c_1 + c_2 e^{-2t} + c_3 e^{3t}$

Question Number : 60 Question Id : 26449018030 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The particular integral of  $(D^2 - 2D + 5)y = e^{-x}$  is

\_\_\_\_\_ کا خصوصی تگملہ  $(D^2 - 2D + 5)y = e^{-x}$  ہے۔

Options :

1. ✓  $\frac{1}{8}e^{-x}$

2. ✗  $\frac{1}{4}e^{-x}$

3. ✗  $\frac{1}{8}e^x$

4. ✗  $\frac{1}{4}e^x$

Question Number : 61 Question Id : 26449018031 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The two linearly independent solutions of  $(D^2 - 3D + 2)y = \sin e^{-x}$  are

کے دو خطی غیر تابع حل  $(D^2 - 3D + 2)y = \sin e^{-x}$

Options :

1. ✗  $y_1 = e^{-2x}, y_2 = e^x$

2. ✗  $y_1 = e^x, y_2 = xe^x$

3. ✓  $y_1 = e^x, y_2 = e^{2x}$

4. ✗  $y_1 = e^x, y_2 = xe^{2x}$

Question Number : 62 Question Id : 26449018032 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The particular integral of  $(D^3 - D^2 - D + 1)y = 1 + x^2$  is \_\_\_\_\_

\_\_\_\_\_ کا مخصوص تکملہ  $(D^3 - D^2 - D + 1)y = 1 + x^2$

Options :

1. ✓  $x^2 + 2x + 5$

2. ✗  $x^2 - 2x + 5$

3. ✗  $x^2 + 3x + 4$

4. ✗  $x^2 - 2x - 5$

Question Number : 63 Question Id : 26449018033 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The homogenous differential equation  $M(x, y)dx + N(x, y)dy = 0$  can be reduced to a  
Differential equation in which the variables are separated by the substitution

متجانس تفرقی مساوات  $M(x, y)dx + N(x, y)dy = 0$  کو تفرقی مساوات میں تحلیل کیا گیا، جس میں متغیرات کو استبدال  
طریقے سے الگ کیا جاتا ہے۔

Options :

1. ✓  $Y = Vx$

2. ✗  $xy = v$

3. ✗  $x + y = v$

4. ✗  $x - y = v$

Question Number : 64 Question Id : 26449018034 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The intercept on the x-axis of the plane  $x + y + z = 1$  is

$x + y + z = 1$  مستوی کا x محور پر مقطع

Options :

1. ✗ 4

2. ✖ 3

3. ✖ 2

4. ✔ 1

Question Number : 65 Question Id : 26449018035 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Angle between the planes  $x + y + z = 1$  and  $x - y = 2$  is

مستوی کا درمیانی زاویہ  $x - y = 2$  اور  $x + y + z = 1$

Options :

1. ✖ 0

2. ✔  $\frac{\pi}{2}$ 3. ✖  $\frac{\pi}{3}$ 4. ✖  $\frac{\pi}{4}$

Question Number : 66 Question Id : 26449018036 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The equation of the plane passing through the point  $(-2, -2, 2)$  and containing the line joining the points  $(1, 1, 1)$  and  $(1, -1, 2)$  is

نقطہ  $(-2, -2, 2)$  سے گزرنے والی مستوی مساوات اور جس میں نقاط  $(1, 1, 1)$  اور  $(1, -1, 2)$  کو ملانے والی خط یہ ہے۔

Options :

1. ✖  $x + 2y - 3z + 4 = 0$

2. ✖  $3x - 4y + 1 = 0$

3. ✖  $5x + 2y - 3z - 17 = 0$

4. ✔  $x - 3y - 6z + 8 = 0$

Question Number : 67 Question Id : 26449018037 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The equation of the plane through the points  $(1, -2, 4)$  and  $(3, -4, 5)$  and parallel to x axis is

سطحی مساوات جو نقاط  $(1, -2, 4)$  اور  $(3, -4, 5)$  سے گزرتے ہوئے x محور کے متوازی ہوتی ہے۔

Options :

1. ✔  $y + 2z = 6$



2. ✖  $y-2z=6$

3. ✖  $2y+z=6$

4. ✖  $y+2z=6$

Question Number : 68 Question Id : 26449018038 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Two planes represented by  $ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 0$  will be perpendicular if

دو مستوی  $ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 0$  اس طرح ظاہر کیے گئے کہ وہ

ایک دوسرے پر عمودوار ہوتے ہیں، اگر \_\_\_\_\_

Options :

1. ✔  $a+b+c=0$

2. ✖  $abc=0$

3. ✖  $ab+bc+ca=0$

4. ✖  $a+b+c=1$

Question Number : 69 Question Id : 26449018039 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The equation of the plane passing through the intersection of the planes  $x+2y+3z=4$ ,  $2x+y-z+5=0$  and perpendicular to the plane  $6z+5x+3y+8=0$  is

\_\_\_\_\_

سطحی مساوات جو دو مستوع  $x+2y+3z=4$ ,  $2x+y-z+5=0$  کے تقاطع سے گزرتے ہوئے سطح  $6z+5x+3y+8=0$  کے عمودوار ہوں \_\_\_\_\_ ہے۔

Options :

1. ✖  $51x-15y+50z+173=0$

2. ✔  $51x-15y-50z+173=0$

3. ✖  $51x-15y-50z-173=0$

4. ✖ None

Question Number : 70 Question Id : 26449018040 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The angle between the line  $\frac{x+1}{3} = \frac{y-1}{2} = \frac{z-2}{4}$  and the plane  $2x - y - 3z - 4 = 0$  is

سطح  $2x - y - 3z - 4 = 0$  اور خط  $\frac{x+1}{3} = \frac{y-1}{2} = \frac{z-2}{4}$  کے درمیان زاویہ

Options :

1. ✖  $\cos^{-1}\left(\frac{-4}{\sqrt{406}}\right)$

2. ✔  $\sin^{-1}\left(\frac{-4}{\sqrt{406}}\right)$

3. ✖  $30^\circ$

4. ✖  $60^\circ$

Question Number : 71 Question Id : 26449018041 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The distance of the point  $(1, -2, 3)$  from the plane  $x - y + z = 5$  measured parallel to the line where they are proportional to  $2, 3, -6$  is \_\_\_\_\_

نقطہ  $(1, -2, 3)$  اور سطح  $x - y + z = 5$  کا فاصلہ سمتی کو سائن کے تناسب  $(2, 3, -6)$  ہے تب \_\_\_\_\_

Options :

1. ✓ 1

2. ✗ 2

3. ✗  $\sqrt{3}$ 4. ✗  $\sqrt{2}$ 

Question Number : 72 Question Id : 26449018042 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The lines  $\frac{x}{1} = \frac{y}{2} = \frac{z}{3}$  and  $\frac{x-1}{-2} = \frac{y-2}{-4} = \frac{z-3}{-6}$  are

دو خطوط  $\frac{x}{1} = \frac{y}{2} = \frac{z}{3}$  اور  $\frac{x-1}{-2} = \frac{y-2}{-4} = \frac{z-3}{-6}$  آپس میں \_\_\_\_\_ ہیں۔

Options :

1. ✓ parallel  
متوازی

2. ✗ intersecting  
منقطع

skew

عوجی

3. ✖

coincident

منطبق

4. ✖

Question Number : 73 Question Id : 26449018043 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The shortest distance between the line  $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}$  and  $\frac{x-2}{3} = \frac{y-4}{4} = \frac{z-5}{4}$  is

خطوط  $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}$  اور  $\frac{x-2}{3} = \frac{y-4}{4} = \frac{z-5}{4}$  کے درمیان قریبی فاصلہ

Options :

$$\frac{1}{6}$$

1. ✔

$$\frac{1}{\sqrt{6}}$$

2. ✖

$$\frac{1}{\sqrt{3}}$$

3. ✖

$$\frac{1}{3}$$

4. ✖

Question Number : 74 Question Id : 26449018044 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 equation does not represent sphere \_\_\_\_\_

مندرجہ ذیل مساوات یہ کرہ کی نمائندگی نہیں کرتی ہے۔

Options :

$$x^2 + y^2 + z^2 - 6x + 8y - 10z + 1 = 0$$

1. ✖

$$x^2 + y^2 + z^2 + 6x - 4y + 2z + 14 = 0$$

2. ✖

$$x^2 + y^2 + z^2 + 4x - 2y + 8z + 25 = 0$$

3. ✔

$$x^2 + y^2 + z^2 + 2x - 4y - 6z - 2 = 0$$

4. ✖

Question Number : 75 Question Id : 26449018045 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The two spheres  $x^2 + y^2 + z^2 = 25$  and  $x^2 + y^2 + z^2 - 24x - 40y + 225 = 0$  are \_\_\_\_  
 \_\_\_\_\_  $x^2 + y^2 + z^2 = 25$  اور  $x^2 + y^2 + z^2 - 24x - 40y + 225 = 0$  دو کرہ

Options :

Touches internally

1. ✖ داخلي مس کرتے ہیں

Touches externally

2. ✔ خارجی مس کرتے ہیں

Intersection two points

3. ✖ دو نقاط منقطع کرتے ہیں

Do not intersect

4. ✖ آپس میں قطع نہیں کرتے ہیں

Question Number : 76 Question Id : 26449018046 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The plane  $2x - 2y + z + 12 = 0$  touches the sphere  $x^2 + y^2 + z^2 - 2x - 4y + 2z - 3 = 0$  at the point

مستوی  $2x - 2y + z + 12 = 0$  جو کرہ  $x^2 + y^2 + z^2 - 2x - 4y + 2z - 3 = 0$  کو

نقطے پر مس کرتا ہے۔

Options :

1. ✖ (1, -4, -2)

2. ✔ (-1, 4, -2)

3. ✖ (-1, -4, 2)

4. ✖ (1, 4, -2)

Question Number : 77 Question Id : 26449018047 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The point of contact of the spheres  $x^2 + y^2 + z^2 + 2x - 4y - 4z - 7 = 0$ ,

$x^2 + y^2 + z^2 + 2x - 4y - 16z + 65 = 0$  is

$x^2 + y^2 + z^2 + 2x - 4y - 16z + 65 = 0$  ،  $x^2 + y^2 + z^2 + 2x - 4y - 4z - 7 = 0$

کروں کا نقطہ تقاطع

Options :



1. ✖ (1,2,6)

2. ✖ (1,2,-6)

3. ✖ (1,-2,6)

4. ✔ (-1,2,6)

Question Number : 78 Question Id : 26449018048 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The pole of the plane  $x-y+2z-9=0$  with respect to the sphere  $x^2 + y^2 + z^2 - 9 = 0$  is \_\_\_\_\_

کرہ  $x^2 + y^2 + z^2 - 9 = 0$  کے حوالے سے سطح  $x-y+2z-9=0$  کا قطب

Options :

1. ✖ (1,2,3)

2. ✖ (2,3,-1)

3. ✖ (2,1,2)

4. ✔ (1,-1,2)

Question Number : 79 Question Id : 26449018049 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If two spheres of radius  $r_1$  and  $r_2$  cut orthogonally, then the radius of the common circle is

اگر دو کرّوں کے نصف قطر  $r_1$  اور  $r_2$  عموداً قطع کرتے ہیں، تب مشترکہ دائرے کا نصف قطر \_\_\_\_\_

Options :

1. ✖  $r_1 r_2$

2. ✖  $\sqrt{r_1^2 + r_2^2}$

3. ✖  $r_1 r_2 \sqrt{r_1^2 + r_2^2}$

4. ✔  $\frac{r_1 r_2}{\sqrt{r_1^2 + r_2^2}}$

Question Number : 80 Question Id : 26449018050 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The angle of intersection of the spheres  $x^2 + y^2 + z^2 - 2x - 4y - 6z + 10 = 0$  and

$x^2 + y^2 + z^2 - 6x - 2y + 2z + 2 = 0$  is

$$x^2 + y^2 + z^2 - 6x - 2y + 2z + 2 = 0 \text{ اور } x^2 + y^2 + z^2 - 2x - 4y - 6z + 10 = 0$$

کروں کا زاویہ منقطع

Options :

1. ✖  $\frac{\pi}{2}$

2. ✔  $\cos^{-1}\left(\frac{2}{3}\right)$

3. ✖  $\cos^{-1}\left(\frac{1}{3}\right)$

4. ✖  $\frac{\pi}{3}$

Question Number : 81 Question Id : 26449018051 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The vertex of the cone  $x^2 - 2y^2 + 3z^2 - 4xy + 5yz - 6zx + 8x - 19y - 2z - 20 = 0$  is

مخروط  $x^2 - 2y^2 + 3z^2 - 4xy + 5yz - 6zx + 8x - 19y - 2z - 20 = 0$  کا راس

Options :

1. ✓ (1,-2,3)

2. ✗ (1,2,3)

3. ✗ (1,2,-3)

4. ✗ (-1,2,3)

Question Number : 82 Question Id : 26449018052 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The locus of the lines through the vertex of a cone normal to the tangent planes is called

خطوط کالوکس جو مخروط کے راس سے مماسی مستوی پر عموداً گرتا ہے \_\_\_\_\_ کہلاتا ہے۔

Options :

right circular cone

1. ✗ قائم دائری مخروط

enveloping cone

لفافی مخروط

2. ✖

reciprocal cone

مقلوبی مخروط

3. ✔

quadratic cone

دو درجی مخروط

4. ✖

Question Number : 83 Question Id : 26449018053 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Equation to the right circular cone whose vertex is at origin the axis along x-axis and  
semi-vertical angle  $\alpha$  is

قائم دائری مخروطی مساوات جس کا راس مبدا پر ہے۔ x محور پر نیم عمود وارزاویہ  $\alpha$  ہے۔

Options :

$$x^2 + y^2 = z^2 \tan \alpha$$

1. ✖

$$y^2 + z^2 = x^2 \tan^2 \alpha$$

2. ✔

$$y^2 \tan^2 \alpha$$

3. ✖

4. ✖  $x^2 \tan \alpha$

Question Number : 84 Question Id : 26449018054 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f=(13256) (23) (46512)$  is a permutation then the order of  $f$  is

اگر  $f=(13256) (23) (46512)$  ایک مبادلہ ہے، تب  $f$  کا درجہ

Options :

1. ✖ 5

2. ✔ 6

3. ✖ 4

4. ✖ 12

Question Number : 85 Question Id : 26449018055 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f=(2 3 6)$ ,  $g=(1 4 6)$  then  $gf=$

اگر  $f=(2 3 6)$ ،  $g=(1 4 6)$  تب  $gf=$

Options :

1. ✖ (1 4 2 3 6)
2. ✖ (1 4 3 6 2)
3. ✖ (4 1 2 3 6)
4. ✔ (1 4 6 2 3)

Question Number : 86 Question Id : 26449018056 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the group  $\{Z_7 - \{0\}, \odot\}$ , the inverse of the element 5 is

گروپ  $\{Z_7 - \{0\}, \odot\}$  میں عنصر 5 کا معکوس

Options :

1. ✔ 3
2. ✖ 2
3. ✖ 1
4. ✖ 4

Question Number : 87 Question Id : 26449018057 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The order of 3 in  $(\mathbb{Z}, +)$  is

3 کا درجہ  $(\mathbb{Z}, +)$

Options :

1. ✖ 2

2. ✖ 1

3. ✖ 4

Infinite

4. ✔ لامتناہی

Question Number : 88 Question Id : 26449018058 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of automorphism of a cyclic group of order  $n$  is

$n$  ترتیب والے دائری گروپ میں خود مارفت کی تعداد

Options :

1. ✖  $n$

2. ✖  $n^2$



3. ✓  $\varphi(n)$

4. ✗ 1

Question Number : 89 Question Id : 26449018059 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 a Boolean ring?

مندرجہ ذیل میں کون سا بولین رینگ ہے۔

Options :

1. ✗  $(R, +, \cdot)$

2. ✗  $(Z, +, \cdot)$

3. ✗  $(C, +, \cdot)$

4. ✓  $(\rho(s), +, \cdot)$

Question Number : 90 Question Id : 26449018060 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The binary operations in  $N$  are

N میں دو اساسی تعامل یہ ہیں۔

Options :

1. ✖  $-, \div$ 2. ✔  $+, \cdot$ 3. ✖  $+, -$ 4. ✖  $-, \cdot$ 

Question Number : 91 Question Id : 26449018061 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 a semi group?

ذیل میں کون سا نیم گروپ نہیں ہے؟

Options :

1. ✔  $(Q, -)$ 2. ✖  $(N, +)$ 3. ✖  $(R, +)$ 4. ✖  $(Z, +)$

Question Number : 92 Question Id : 26449018062 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Let  $H, K$  be subgroup of a group  $G$ , then

فرض کیجیے کہ گروپ  $G$  کے تحت گروپ  $H, K$  ہیں، تب

Options :

$H \cup K$  is a subgroup of  $G$

$G$  کا تحت گروپ  $H \cup K$  ہے۔

1. ✖

$H \cap K$  is a subgroup of  $G$

$G$  کا تحت گروپ  $H \cap K$  ہے۔

2. ✔

$H \times K$  is a subgroup of  $G$

$G$  کا تحت گروپ  $H \times K$  ہے۔

3. ✖

$HK$  is a subgroup of  $G$

$G$  کا تحت گروپ  $HK$  ہے۔

4. ✖

Question Number : 93 Question Id : 26449018063 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 false \_\_\_\_\_

ذیل کا یہ بیان غلط ہے۔

Options :

Every abelian group is cyclic

1. ✓ ہر ایبیلین گروپ دائری ہوتا ہے

Every sub group of a cyclic group is cyclic

2. ✗ دائری گروپ کا ہر تحت گروپ دائری ہوتا ہے

Every cyclic group is abelian

3. ✗ ہر دائری گروپ ایبیلین گروپ ہوتا ہے

Every group of prime order is cyclic

4. ✗ طاق درجے کا ہر گروپ دائری ہوتا ہے

Question Number : 94 Question Id : 26449018064 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Every group of prime order is

مفرد درجہ کا ہر گروپ \_\_\_\_\_ ہے۔

Options :

1. ✓ Cyclic  
دائری
2. ✗ non-abelian  
غیر ابدیلیائی
3. ✗ subgroup  
تحت گروپ
4. ✗ normal group  
نارمل گروپ

Question Number : 95 Question Id : 26449018065 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The inverse of the permutation  $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 3 & 1 & 2 & 5 & 4 \end{pmatrix}$

مبادلہ  $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 3 & 1 & 2 & 5 & 4 \end{pmatrix}$  کا معکوس

Options :

$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 2 & 3 & 5 & 4 & 1 \end{pmatrix}$$

1. ✗

2. ✓ 
$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 2 & 3 & 1 & 5 & 4 \end{pmatrix}$$

3. ✗ 
$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 4 & 5 & 3 & 1 & 2 \end{pmatrix}$$

4. ✗ 
$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 5 & 4 & 2 & 3 & 1 \end{pmatrix}$$

Question Number : 96 Question Id : 26449018066 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The order of the element 13 in  $U(14)$  is

U(14) میں عنصر 13 کا درجہ

Options :

1. ✗ 5

2. ✗ 10

3. ✗ 1

4. ✓ 2

Question Number : 97 Question Id : 26449018067 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $H$  is a subgroup of  $G$ ,  $m$  is the distinct right cosets of  $H$  in  $G$ ,  $n$  is the number of distinct left cosets of  $H$  in  $G$ , then

اگر  $G$  کا تحت گروپ  $H$  ہے،  $G$  میں  $H$  کے  $m$  مختلف دائیں ہم سیٹس ہیں اور  
 $G$  میں  $H$  کے  $n$  بائیں ہم سیٹس کی تعداد ہے، تب

Options :

1. ✖  $m = 2n$

2. ✖  $n = 2m$

3. ✔  $m = n$

4. ✖  $m = 3n$

Question Number : 98 Question Id : 26449018068 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A homomorphism  $G \rightarrow G'$  is an isomorphism iff the kernel consists of

ہم مارفیت  $G \rightarrow G'$  جو ایک مارفیت ہوگا صرف اگر صرف کرنل میں \_\_\_\_\_ ہوگا۔

Options :

the identity 'e' only

صرف تماثلی 'e'

1. ✖

a normal subgroup of G

G کا عادی تحت گروپ

2. ✔

a factor group of G

G کا جز ضربی گروپ

3. ✖

quotient group of G

G کا مخرو جی گروپ

4. ✖

Question Number : 99 Question Id : 26449018069 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An ideal of  $Z_4$  is

$Z_4$  کا ایدیاں \_\_\_\_\_ ہے۔

Options :

1. ✔ {0,2}

2. ✖ {0,1}



3. ✖ {0,3}

4. ✖ {3}

Question Number : 100 Question Id : 26449018070 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$\phi : Z_{12} \rightarrow Z_{12}$  defined by  $\phi(x) = 3x \forall x \in Z_{12}$  is a homomorphism then  $k(\gamma\phi) =$

$k(\gamma\phi) =$  اس طرح بیان کیا گیا کہ  $\phi(x) = 3x \forall x \in Z_{12}$  ایک ہم مارفیت ہے، تب

Options :

1. ✖ {0,4}

2. ✔ {0,4,8}

3. ✖ {0,2,4}

4. ✖ {0,2,6}

Question Number : 101 Question Id : 26449018071 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n$  is equal to

اس کے مساوی ہے۔  $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n$

Options :

1. ✖ 1

2. ✖  $\infty$

3. ✖ 0

4. ✔  $e$

Question Number : 102 Question Id : 26449018072 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 false \_\_\_\_\_

ذیل کا کون سا بیان غلط ہے۔

Options :

Every group of order 4 is abelian

4 درجہ والا ہر گروپ ایک اہیلین ہے۔

1. ✖

Every group of order 5 is abelian

2. ✖ 5 درجہ والا ہر گروپ ایک ایبلین ہے۔

Every group of order 6 is abelian

3. ✔ 6 درجہ والا ہر گروپ ایک ایبلین ہے۔

Every group of order 11 is abelian

4. ✖ 11 درجہ والا ہر گروپ ایک ایبلین ہے۔

Question Number : 103 Question Id : 26449018073 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Any non-empty subset of real numbers which is bounded below has

حقیقی اعداد کا کوئی بھی غیر خالی تحت سیٹ جو ذیلی محدود ہے وہ \_\_\_\_\_ ہوتا ہے۔

Options :

infimum

1. ✔ کمترین

both infimum and supremum

2. ✖ کمترین اور علویہ دونوں

supremum

علویہ

3. ✖

neither infimum nor supremum

نہ کمترین نہ علویہ

4. ✖

Question Number : 104 Question Id : 26449018074 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of units in the ring  $Z_{14}$  is \_\_\_\_\_

$Z_{14}$  حلقے میں اکائیوں کی تعداد

Options :

4

1. ✖

6

2. ✔

10

3. ✖

12

4. ✖

Question Number : 105 Question Id : 26449018075 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$\sum \left( \frac{1}{n^p} \right)$  is convergent if

$\sum \left( \frac{1}{n^p} \right)$  ایک متقارب ہے، اگر

Options :

1. ✖  $P < 1$

2. ✔  $P > 1$

3. ✖  $P = 1$

4. ✖  $P \leq 1$

Question Number : 106 Question Id : 26449018076 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 Integral Domain

ذیل میں کون سا مکملہ علاقہ ہے

Options :

1. ✖  $\mathbb{Z} \times \mathbb{Z}$

2. ✖  $M_2(\mathbb{Z})$

3. ✔  $\mathbb{Z}_{11}$

4. ✖  $\mathbb{Z}_{12}$

Question Number : 107 Question Id : 26449018077 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f(x) = \begin{cases} x & 0 < x < 1 \\ 3-x & 1 \leq x \leq 2 \end{cases}$  then

تب  $f(x) = \begin{cases} x & 0 < x < 1 \\ 3-x & 1 \leq x \leq 2 \end{cases}$  اگر

Options :

1. ✖  $\lim_{x \rightarrow 1^-} f(x) = 1$

2. ✖  $\lim_{x \rightarrow 1^-} f(x) = 2$

3. ✖  $\lim_{x \rightarrow 1} f(x) = 2$

both (a) & (b)

4. ✓

Question Number : 108 Question Id : 26449018078 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a polynomial ring  $\mathbb{Z}_2[x]$ ,  $(1+x)^3 =$

$= (1+x)^3$  ایک کثیررکنی حلقہ  $\mathbb{Z}_2[x]$  میں

Options :

1. ✗  $x+x^2+x^3$

2. ✗  $1+x^2+x^3$

3. ✗  $1+x+x^3$

4. ✓  $1+x+x^2+x^3$

Question Number : 109 Question Id : 26449018079 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the ring of integers  $(\mathbb{Z}, +, \cdot)$  which of the following is a maximal ideal

صحیح اعداد  $(\mathbb{Z}, +, \cdot)$  کے حلقے میں ذیل کا کون سا عظیمی ایدیاں ہے۔

Options :

1. ✖  $\{0\}$

2. ✖  $12\mathbb{Z}$

3. ✔  $11\mathbb{Z}$

4. ✖  $14\mathbb{Z}$

Question Number : 110 Question Id : 26449018080 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f$  and  $g$  are continuous on  $[a, b]$  and have equal finite derivatives in  $[a, b]$  then  $f-g$  is

اگر  $[a, b]$  پر  $f$  اور  $g$  مسلسل ہیں اور مساوی غیر متناہی مشتق  $[a, b]$  میں ہوں تب  $f - g$  ہوگا۔

Options :

constant

1. ✔ مستقل



$$\frac{f}{g}$$

2. ✖  $f/g$

$$g$$

3. ✖  $g$

$$f$$

4. ✖  $f$

Question Number : 111 Question Id : 26449018081 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of proper ideals of a field  $F$  is \_\_\_\_

ایک میدان  $F$  کے واجب الایدیال کی تعداد

Options :

1. ✖ 2

2. ✔ 0

3. ✖ 4

Infinite  
لا متناہی

4. ✖

Question Number : 112 Question Id : 26449018082 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The function for which Rolle's theorem is true is

وہ تفاعل جو رولس کے مسئلے کے لیے صحیح ہے۔

Options :

$$f(x) = \log x \text{ in the interval } \left[ \frac{1}{2}, 2 \right]$$

$$f(x) = \log x \text{ وقفہ میں } [1/2, 2]$$

1. ✔

$$f(x) = |x+1| \text{ in the interval } [-2, 2]$$

$$f(x) = |x+1| \text{ وقفہ میں } [-2, 2]$$

2. ✖

$$f(x) = |x| \text{ in the interval } [-1, 1]$$

$$f(x) = |x| \text{ وقفہ میں } [-1, 1]$$

3. ✖

$$f(x) = |x-1| \text{ in the interval } [-2, 2]$$

4. ✖  $f(x) = |x-1|$  وقفہ میں  $[-2, 2]$

Question Number : 113 Question Id : 26449018083 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f$  be a bounded function defined on  $[a, b]$  and  $P_1, P_2$  be two partitions of  $[a, b]$  such that

$P_2$  is refinement of  $P_1$  then

$[a, b]$  پر ایک محدود تفاعل  $f$  اس طرح بیان کیا گیا اور  $[a, b]$  کے دو جزو تقسیم  $P_1, P_2$  ہیں۔ جب کہ  $P_1$  کا تنقیس  $P_2$  ہے تب

Options :

$$L(P_2, f) \leq L(P_1, f)$$

1. ✖

$$L(P_2, f) \geq U(P_1, f)$$

2. ✔

$$U(P_2, f) \geq U(P_1, f)$$

3. ✖

$$L(P_2, f) = L(P_1, f)$$

4. ✖

Question Number : 114 Question Id : 26449018084 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f$  is Riemann integrable on  $[a, b]$  then

اگر  $[a, b]$  پر  $f$  ایک ریمن مکمل تقابل ہے تب

Options :

1. ✓  $\left| \int_a^b f(x) dx \right| \leq \int_a^b |f(x)| dx$

2. ✗  $\left| \int_a^b f(x) dx \right| \geq \int_a^b |f(x)| dx$

3. ✗  $\left| \int_a^b f(x) dx \right| = \int_a^b |f(x)| dx$

4. ✗  $\left| \int_a^b f(x) dx \right| > \int_a^b |f(x)| dx$

Question Number : 115 Question Id : 26449018085 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of associates of  $(2-i)$  in the ring of Gaussian integers is

گاسین صحیح اعداد کے رنگ میں  $[2, -i]$  کی متعلقہ تعداد

Options :

1. ✖ 0

2. ✖ 2

3. ✔ 4

4. ✖ 3

Question Number : 116 Question Id : 26449018086 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $\phi(x, y, z) = 3x^2y - y^3z^2$  then  $\text{grad } \phi$  at the point  $(1, -2, -1)$  is

اگر  $\phi(x, y, z) = 3x^2y - y^3z^2$  تب نقطہ  $(1, -2, -1)$  پر  $\text{grad } \phi$  کی قدر

Options :

1. ✔  $(-12, -9, -16)$

2. ✖  $(12, 9, 16)$

3. ✖  $(12, -6, 9)$

4. ✖ (12, 6, -9)

Question Number : 117 Question Id : 26449018087 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $\vec{r} = x\vec{i} + y\vec{j} + z\vec{k}$  then  $\text{div } \vec{r}$  is

اگر  $\vec{r} = x\vec{i} + y\vec{j} + z\vec{k}$  تب  $\text{div } \vec{r}$  \_\_\_\_\_ ہے

Options :

1. ✔ 3

2. ✖ 2

3. ✖ 0

4. ✖ 1

Question Number : 118 Question Id : 26449018088 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The directional derivative of  $f = xy + yz + zx$  in the direction of the vector  $\vec{i} + 2\vec{j} + 2\vec{k}$  at the point (1, 2, 0) is

نقطہ (1, 2, 0) پر سمتیہ  $\vec{i} + 2\vec{j} + 2\vec{k}$  کے رخ میں  $f = xy + yz + zx$  کا سمتی مشتق

Options :

1. ✓  $\frac{10}{3}$

2. ✖  $\frac{11}{3}$

3. ✖ 12

4. ✖ 14

Question Number : 119 Question Id : 26449018089 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $\vec{V} = x^2y\vec{i} - 2zx\vec{j} + 2yz\vec{k}$  then  $\text{curl } \vec{V}$  is

\_\_\_\_\_  $\text{curl } \vec{V}$  جب  $\vec{V} = x^2y\vec{i} - 2zx\vec{j} + 2yz\vec{k}$  اگر

Options :

1. ✖  $(x+z)\vec{i} - (z+x^2)\vec{j}$

2. ✖  $(x+z)\vec{i} + (z+x^2)\vec{j}$

3. ✓  $(2x + 2z)\vec{i} - (2z + x^2)\vec{k}$

4. ✖  $(2x + 2z)\vec{i} + (2z + x^2)\vec{k}$

Question Number : 120 Question Id : 26449018090 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A vector  $\vec{F}$  is called irrotational if

ایک سمتہ غیر گردش کہلائے گا، اگر  $\vec{F}$

Options :

1. ✖  $\text{div } \vec{F} = 0$

2. ✖  $\text{curl } \vec{F} = 1$

3. ✖  $\text{div } \vec{F} = 1$

4. ✓  $\text{curl } \vec{F} = 0$

Question Number : 121 Question Id : 26449018091 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0



If  $F = 3x^2\vec{i} + (2xz - y)\vec{j} + z\vec{k}$  along the straight line 'c' from (0,0,0) to (2,1,3) then

$\int_c F \cdot dr$  is

اگر  $F = 3x^2\vec{i} + (2xz - y)\vec{j} + z\vec{k}$  ہو (0,0,0) تا (2,1,3) تک گزرنے والی خط کے متوازی ہوں تب  $\int_c F \cdot dr$  ہے

Options :

1. ✖ 10

2. ✖ -12

3. ✖ 14

4. ✔ 16

Question Number : 122 Question Id : 26449018092 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If S is the surface of the cylinder  $x^2 + y^2 = 16$  then the unit normal vector to the surface  $\hat{n}$  is

اگر S ایک  $x^2 + y^2 = 16$  استوانے کی سطح ہے۔ تب  $\hat{n}$  سطح کے لیے اکائی عماد سمتیہ کیا ہوگا؟

Options :

1. ✖  $2x\vec{i} - 2y\vec{j}$

2. ✓  $\frac{x}{4}\vec{i} + \frac{y}{4}\vec{j}$

3. ✗  $2x\vec{i} - \vec{j}$

4. ✗  $\frac{2x}{7}\vec{i} + \frac{y}{7}\vec{j}$

Question Number : 123 Question Id : 26449018093 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Gauss divergence theorem connects

گاس متباعد مسئلہ اس کو جوڑتا ہے۔

Options :

Line integral and Surface integral

1. ✗ خطی تکملہ اور سطحی تکملہ

Surface integral and Volume integral

2. ✓ سطحی تکملہ اور حجمی تکملہ

Line integral and Volume integral

3. ✗ خطی تکملہ اور حجمی تکملہ

all the above

تمام

4. ✖

Question Number : 124 Question Id : 26449018094 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If 'C' curve  $x^2 + y^2 = 1$   $z = y^2$  and  $F = yz\bar{i} + zx\bar{j} + xy\bar{k}$  then  $\int_C F \cdot dr$  is

اگر C ایک منحنی  $x^2 + y^2 = 1$ ،  $z = y^2$  اور  $F = yz\bar{i} + zx\bar{j} + xy\bar{k}$  تب  $\int_C F \cdot dr$  \_\_\_\_\_ ہے۔

Options :

1. ✔ 0

2. ✖ 1

3. ✖ -1

4. ✖ 2

Question Number : 125 Question Id : 26449018095 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  $\oint_c y(2xy - 1)dx + x(2xy + 1)dy$  where  $c$  is the circle  $x^2 + y^2 = 1$  is

ہے  $x^2 + y^2 = 1$  ایک دائرہ  $c$  کی قدر کیا ہوگی جہاں  $\oint_c y(2xy - 1)dx + x(2xy + 1)dy$

Options :

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

Question Number : 126 Question Id : 26449018096 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The series  $\sum_{n=1}^{\infty} \frac{1}{n(\log x)} P$  is converges if

سلسلہ  $\sum_{n=1}^{\infty} \frac{1}{n(\log x)} P$  کے لیے  $p$  ہم آہنگ ہوگا، اگر

Options :

1. ✔  $P > 1$
2. ✖  $P < 1$

3. ✖  $P \geq 1$

4. ✖  $P \leq 1$

Question Number : 127 Question Id : 26449018097 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$Z_n$  is an integral domain if and only if  $n$  is

$Z_n$  ایک مکملہ علاقہ ہے اگر صرف اور صرف  $n = \_\_\_\_\_\_$  ہے۔

Options :

1. ✖ cyclic  
دائری

2. ✖ identity  
تمثیلہ

3. ✔ prime  
مفرد

4. ✖ zero divisor  
صفر کا قاسم

Question Number : 128 Question Id : 26449018098 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The series  $\sum_{n=1}^{\infty} (\sqrt{n+1} - \sqrt{n})$  is \_\_\_\_\_

\_\_\_\_\_  $\sum_{n=1}^{\infty} (\sqrt{n+1} - \sqrt{n})$  سلسلہ

Options :

Convergence

1. ✖ تقارب

Divergence

2. ✔ متباد

Conditioned

3. ✖ شرطیہ

Absolute convergence

4. ✖ مطلق تقارب

Question Number : 129 Question Id : 26449018099 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The characteristics of the ring  $(\mathbb{Z}_6, \oplus, \odot)$  is

حلقہ  $(\mathbb{Z}_6, \oplus, \odot)$  کے خصوصیات \_\_\_\_\_ ہیں۔

Options :

1. ✓ 6
2. ✗ 3
3. ✗ 12
4. ✗ 0

Question Number : 130 Question Id : 26449018100 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Principal ideal  $(3)$  is a

اصل ایدیاں  $(3)$  \_\_\_\_\_ ہے۔

Options :

1. ✗ prime ideal of  $\mathbb{Z}$   
Z کا مفرد ایدیاں

maximal ideal of  $Z$

$Z$  کا عظمیٰ ایدیاں

2. ✖

both (a)&(b)

$a$  اور  $b$  دونوں

3. ✔

neither (a) nor (b)

$a$  نہ اور نہ ہی  $b$

4. ✖

Question Number : 131 Question Id : 26449018101 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Any finite cyclic group of order  $n$  is isomorphic to

$n$  درجہ والا کوئی بھی متناہی دائری گروپ ایک ہم مارفیت ہوتا ہے \_\_\_\_\_ کے لیے۔

Options :

1. ✔  $(Z_n, \oplus)$

2. ✖  $(Z_n, \odot)$

3. ✖  $(Z, +)$



4. ✖ (Z, ·)

Question Number : 132 Question Id : 26449018102 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $S_1 = \sqrt{2}$  and  $S_{n+1} = \sqrt{2} S_1 \forall n \in \mathbb{N}$  then the sequence  $\{S_n\}$  convergence to \_\_\_\_\_

اگر  $S_1 = \sqrt{2}$  اور  $S_{n+1} = \sqrt{2} S_1 \forall n \in \mathbb{N}$  تب تواتر  $\{S_n\}$  کا ہم آہنگ ہوتا ہے۔

Options :

1. ✔ 2

2. ✖  $\sqrt{2}$

3. ✖ -2

4. ✖  $\frac{-1}{\sqrt{2}}$

Question Number : 133 Question Id : 26449018103 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 statement is not correct?

ذیل کا یہ بیان غلط ہے۔

Options :

1. ✖ any ideal of  $R$  is a subring of  $R$   
 $R$  کا کسی مثالی حلقہ کا  $R$  ایک تحت حلقہ ہے
2. ✔ a subring of  $R$  is an ideal of  $R$   
 $R$  کا ایک تحت حلقہ  $R$  کا مثالی حلقہ ہے
3. ✖ the union of two subrings of a ring need not be a subring  
 ایک حلقہ کے دو تحت حلقوں کا اجماع، ایک تحت حلقہ ہونا ضروری نہیں
4. ✖ the intersection of two subrings of  $R$  is a subring of  $R$   
 $R$  کے دو تحت حلقوں کا تقاطع،  $R$  کا تحت حلقہ ہوتا ہے

Question Number : 134 Question Id : 26449018104 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

$f$  and  $g$  be real valued functions that are continuous at  $x_0$  in  $R$  then \_\_\_\_\_

\_\_\_\_\_  $R$  میں  $x_0$  پر  $f$  اور  $g$  حقیقی قدری تفاعل ہیں تب

Options :

1. ✖  $f+g$  is continuous at  $x_0$   
 $f+g$  مسلسل ہے

fg is continuous at  $x_0$

fg پر  $x_0$  مسلسل ہے

2. ✖

$\frac{f}{g}$  continuous  $x_0$

f/g پر  $x_0$  مسلسل ہے

3. ✖

All the above

تمام

4. ✔

Question Number : 135 Question Id : 26449018105 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $\{0\}$  is a zero subspace of inner product space  $V$  then  $\{0\}^\perp$  is equal to

اگر  $\{0\}$  ایک داخلی حاصل ضرب فضا  $V$  کا صفر تحت فضا  $\{0\}^\perp$  ہے، جو \_\_\_\_\_ کے مساوی ہے۔

Options :

1. ✖  $\{0\}$

2. ✔  $\{V\}$

3. ✖  $\phi$

4. ✖  $W$

Question Number : 136 Question Id : 26449018106 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $f(x) = |x| + |x-1| + |x-2|$  then which of the following is true \_\_\_\_\_

اگر  $f(x) = |x| + |x-1| + |x-2|$  تب ذیل کا یہ بیان صحیح ہے۔

Options :

1. ✔  $f$  is continuous at  $x=1,2,3$   
مسلل ہے  $f$  پر  $x=1,2,3$

2. ✖  $f$  is continuous and derivable at  $x=1,2,3$   
مسلل اور مشتق ہے  $f$  پر  $x=1,2,3$

3. ✖  $f$  is continuous at  $x=1,2$  and derivable at  $1,2,3$   
مسلل ہے  $f$  پر  $x=1,2$  اور مشتق ہے  $f$  پر  $x=1,2,3$

4. ✖ All the above  
تمام صحیح ہیں

Question Number : 137 Question Id : 26449018107 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Let  $T : V \rightarrow W$  be a linear transformation. Then  $T$  is a non-singular if

فرض کرو کہ  $T : V \rightarrow W$  ایک خطی استحاله ہے، تب  $T$  غیر اکائی ہوگا، اگر

Options :

1. ✓  $T$  is 1-1

2. ✗  $T$  is onto

3. ✗  $T$  is 1-1 & onto

4. ✗  $\text{Ker } T \neq \{0\}$

Question Number : 138 Question Id : 26449018108 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  $C$  in Cauchy's Mean value theorem for  $f(x) = e^x$ ,  $g(x) = e^{-x}$  in  $[a, b]$  is \_\_\_\_\_

$[a, b]$  میں  $f(x)=e^x$ ,  $g(x)=e^{-x}$  کے لیے کاچیس کے وسطی قدر مسئلہ میں  $C$  کی قدر کیا ہوگی؟

Options :

1. ✗  $\frac{a}{2}$

2. ✖  $\frac{b}{2}$

3. ✔  $\frac{a+b}{2}$

4. ✖  $\sqrt{ab}$

Question Number : 139 Question Id : 26449018109 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The sum of the eigen values of the matrix  $\begin{bmatrix} 3 & -4 & 4 \\ 1 & -2 & 4 \\ 1 & -1 & 3 \end{bmatrix}$  is

دی گئی ماتریس  $\begin{bmatrix} 3 & -4 & 4 \\ 1 & -2 & 4 \\ 1 & -1 & 3 \end{bmatrix}$  کا این قیمتوں کا مجموعہ \_\_\_\_\_ ہے۔

Options :

1. ✔ 4

2. ✖ 3

3. ✖ 8

2

4. ✖

Question Number : 140 Question Id : 26449018110 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If A is a square matrix then  $A - A^T$  is

اگر A ایک مربع ماتریس ہے تب  $A - A^T$  — ہے۔

Options :

Symmetric matrix

متشاکل ماتریس

1. ✖

Skew Symmetric matrix

عوجی متشاکل ماتریس

2. ✔

Hermitian matrix

ہرمیشن ماتریس

3. ✖

Skew Hermitian matrix

عوجی ہرمیشن ماتریس

4. ✖

Question Number : 141 Question Id : 26449018111 Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The inverse of the matrix  $A = \begin{pmatrix} 1 & 2 \\ 3 & 1 \end{pmatrix}$  is

ماترس  $A = \begin{pmatrix} 1 & 2 \\ 3 & 1 \end{pmatrix}$  کا معکوس ماترس یہ ہے۔

Options :

1. ✓  $\frac{1}{5} \begin{pmatrix} -1 & 2 \\ 3 & -1 \end{pmatrix}$

2. ✗  $\frac{1}{5} \begin{pmatrix} -1 & 2 \\ -3 & 1 \end{pmatrix}$

3. ✗  $\frac{1}{5} \begin{pmatrix} 1 & -2 \\ 3 & -1 \end{pmatrix}$

4. ✗  $\frac{1}{5} \begin{pmatrix} -1 & -2 \\ 3 & 1 \end{pmatrix}$

Question Number : 142 Question Id : 26449018112 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0



Rank of the matrix  $\begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{bmatrix}$  is

ماتریس  $\begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{bmatrix}$  کا درجہ

Options :

1. ✓ 2

2. ✖ 3

3. ✖ 1

4. ✖ 0

Question Number : 143 Question Id : 26449018113 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The nullity of the linear transformation  $T: V \rightarrow V$  defined by  $T(v) = v$  for all  $v \in V$  is

$T: V \rightarrow V$  خطی استحالہ کی معدومیت اس طرح بیان کی گئی  $T(v) = v$  تمام  $v \in V$  کے لیے قدر کیا ہوگی؟

Options :

1. ✖ 1

2. ✖ 2

3. ✔ 0

4. ✖ 3

Question Number : 144 Question Id : 26449018114 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A linear transformation  $T: V \rightarrow F$  is called a

ایک خطی استحالہ  $T: V \rightarrow F$  کہلاتا ہے۔

Options :

trivial linear transformation

1. ✖ ادنیٰ خطی استحالہ

identity linear transformation

2. ✖ تماثلی خطی استحالہ

natural linear transformation

3. ✖ طبعی خطی استحالہ

linear functional

خطی تعامل

4. ✓

Question Number : 145 Question Id : 26449018115 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $U = \{(1,2,1), (0,1,2)\}$ ,  $W = \{(1,0,0), (0,1,0)\}$  then  $\dim(U+W) =$   
 $= \dim(U+W)$  اگر  $U = \{(1,2,1), (0,1,2)\}$ ,  $W = \{(1,0,0), (0,1,0)\}$  تب

Options :

1. ✖ 0

2. ✖ 1

3. ✓ 3

4. ✖ 4

Question Number : 146 Question Id : 26449018116 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In  $V_3(R)$ ,  $A = \{(a, b, 0)/a, b \in R\}$  and  $B = \{(0, 0, c)/c \in R\}$  are subspace of  $V$  then  $A \cap B =$   
 $A \cap B =$   $V_3(R)$  میں  $A = \{(a, b, 0)/a, b \in R\}$  اور  $B = \{(0, 0, c)/c \in R\}$  کے تحت فضا ہیں، تب

Options :

1. ✖  $\{(a, b, c)/a, b, c \in R\}$

2. ✔  $\{0\}$

3. ✖  $\{(a, 0, c)/a, c \in R\}$

4. ✖  $\{(a, b, 0)/a, b \in R\}$

Question Number : 147 Question Id : 26449018117 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If a  $3 \times 8$  matrix  $A$  has rank 3 then  $\dim \text{Nul } A =$  \_\_\_\_\_

اگر 3 درجہ والا ماتریس  $A$  3x8 ہے تب  $\dim \text{Nul } A$

Options :

1. ✖ 4

2. ✖ 3

3. ✔ 5

8

4. ✖

Question Number : 148 Question Id : 26449018118 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $S = \{(1,0,0)(2,0,0)(3,0,0)\}$  then  $L(S)$  in  $V_3(R)$  is

$= L(S)$  في  $V_3(R)$  تب  $S = \{(1,0,0)(2,0,0)(3,0,0)\}$  اگر

Options :

$$\{(0, x, 0)/x \in R\}$$

1. ✖

$$\{(x, 0, 0)/x \in R\}$$

2. ✔

$$\{(x, y, 0)/x, y \in R\}$$

3. ✖

$$\{(x, y, z)/x, y, z \in R\}$$

4. ✖

Question Number : 149 Question Id : 26449018119 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The only vector orthogonal to every vector in  $V$  is

$V$  میں ہر ایک سمتیہ کے لیے واحد عمودی سمتیہ \_\_\_\_\_ ہے۔

Options :

1. ✖ 1

2. ✖ (1, 1)

3. ✖ (0, 0)

4. ✔ 0

Question Number : 150 Question Id : 26449018120 Display Question Number : Yes Is Question Mandatory : No Calculator : None  
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If  $W$  is a subspace of  $\mathbb{R}^4$  given by  $W = \{(a, b, c, d) / b - 2c + d = 0\}$ , then  $\dim W =$

اگر  $\mathbb{R}^4$  کا تحت فضا  $W$  ہے جو  $W = \{(a, b, c, d) / b - 2c + d = 0\}$  سے ظاہر کیا گیا تب  $\dim W =$

Options :

1. ✖ 2

2. ✔ 3

3. ✖ 4

4. ✖ 1