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# 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 05th June 2025 Shift 2 |
| <b>Subject Name :</b>                          | MATHEMATICS URDU                        |
| <b>Creation Date :</b>                         | 2025-06-06 11:18:56                     |
| <b>Duration :</b>                              | 120                                     |
| <b>Total Marks :</b>                           | 150                                     |
| <b>Display Marks:</b>                          | No                                      |
| <b>Share Answer Key With Delivery Engine :</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                                      |

## MATHEMATICS URDU

|                                 |          |
|---------------------------------|----------|
| <b>Group Number :</b>           | 1        |
| <b>Group Id :</b>               | 23366776 |
| <b>Group Maximum Duration :</b> | 0        |
| <b>Group Minimum Duration :</b> | 120      |
| <b>Show Attended Group? :</b>   | No       |
| <b>Edit Attended Group? :</b>   | No       |
| <b>Break time :</b>             | 0        |
| <b>Group Marks :</b>            | 150      |

## General English

|                         |           |
|-------------------------|-----------|
| <b>Section Id :</b>     | 233667377 |
| <b>Section Number :</b> | 1         |
| <b>Section type :</b>   | Online    |

|                                              |           |
|----------------------------------------------|-----------|
| <b>Mandatory or Optional :</b>               | Mandatory |
| <b>Number of Questions :</b>                 | 21        |
| <b>Number of Questions to be attempted :</b> | 21        |
| <b>Section Marks :</b>                       | 25        |
| <b>Maximum Instruction Time :</b>            | 0         |
| <b>Sub-Section Number :</b>                  | 1         |
| <b>Sub-Section Id :</b>                      | 233667452 |
| <b>Question Shuffling Allowed :</b>          | No        |

**Question Id : 23366711326 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (1 to 5)**

Question Label : Comprehension

**Read the passage and answer questions based on the passage:**

Moral education centres upon this conception of the school as a mode of social life, that the best and the deepest moral training is precisely that which one gets through having to enter into proper relations with others in a unity of work and thought. The present educational systems, so far as they destroy or neglect this unity, render it difficult or impossible to get any genuine, regular moral training.

Sub questions

**Question Number : 1 Question Id : 23366711327 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 1 Wrong Marks : 0**

According to the writer, the school is a form of \_\_\_\_\_

Options :

1. ✖ individual existence
2. ✖ religious life
3. ✖ spiritual life

#### 4. ✓ social life

Question Number : 2 Question Id : 23366711328 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Moral training, according to the passage, effects \_\_\_\_\_

Options :

1. ✓ a unity of work and thought
2. ✗ entering into proper relations with oneself
3. ✗ the skills of work
4. ✗ the skills of thought

Question Number : 3 Question Id : 23366711329 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The writer's attitude to the present education system can be described as \_\_\_\_\_

Options :

1. ✓ Critical
2. ✗ adulatory
3. ✗ defensive
4. ✗ indifferent

Question Number : 4 Question Id : 23366711330 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The central concern of the passage is \_\_\_\_\_

Options :

1. ✘ spiritual education / spiritual training
2. ✘ work education / work training
3. ✔ moral education / moral training
4. ✘ thought education / thought training

Question Number : 5 Question Id : 23366711331 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the word from the passage that is a synonym of accurate

Options :

1. ✘ Conception
2. ✘ Neglect
3. ✔ Precise
4. ✘ Genuine

Sub-Section Number :

2

Sub-Section Id :

233667453

Question Shuffling Allowed :

Yes

Question Number : 6 Question Id : 23366711332 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Correct the underline word in the sentence below, by substituting with the correct word

I pray for god to give me strength

Options :

1. ✘ regarding

2. ✓ to

3. ✗ of

4. ✗ with

Question Number : 7 Question Id : 23366711333 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

I think he is \_\_\_\_\_ honest man

Options :

1. ✗ the

2. ✓ an

3. ✗ a

4. ✗ no article

Question Number : 8 Question Id : 23366711334 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

This is \_\_\_\_\_ car my friend bought last week

Options :

1. ✓ the

2. ✗ an

3. ✗ a

4. ✗ no article

Question Number : 9 Question Id : 23366711335 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Indeed, I am not sure \_\_\_\_\_ his success

Options :

1. ✓ of
2. ✗ regarding
3. ✗ about
4. ✗ off

Question Number : 10 Question Id : 23366711336 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

They saw him fell \_\_\_\_\_ his horse

Options :

1. ✗ after
2. ✗ against
3. ✗ of
4. ✓ off

Question Number : 11 Question Id : 23366711337 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The \_\_\_\_\_ will meet again, to discuss the matter

Options :

1. ✗ Comittee
2. ✗ Commitee

3. ✓ Committee

4. ✗ Comitee

Question Number : 12 Question Id : 23366711338 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The Cricket team are in a \_\_\_\_\_ mood

Options :

1. ✓ buoyant

2. ✗ buoyent

3. ✗ boyant

4. ✗ buyant

Question Number : 13 Question Id : 23366711339 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Had he studied hard, he \_\_\_\_\_ passed

Options :

1. ✗ has

2. ✗ had been

3. ✓ would have

4. ✗ have been

Question Number : 14 Question Id : 23366711340 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

I wish I \_\_\_\_\_ her address

Options :

1. ✘ know
2. ✘ have known
3. ✘ may know
4. ✔ knew

Question Number : 15 Question Id : 23366711341 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Incredulous means \_\_\_\_\_

Options :

1. ✘ obliterate
2. ✔ skeptical
3. ✘ practical
4. ✘ insane

Question Number : 16 Question Id : 23366711342 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Precipitous means \_\_\_\_\_

Options :

1. ✔ very steep
2. ✘ very deep

3. ✖ presumption

4. ✖ nascent

Question Number : 17 Question Id : 23366711343 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

\_\_\_\_\_ is a synonym for ingenuous

Options :

1. ✖ Clever

2. ✖ ingenious

3. ✔ honest

4. ✖ Indecent

Question Number : 18 Question Id : 23366711344 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Keenness is a synonym for \_\_\_\_\_

Options :

1. ✖ abjure

2. ✖ enigma

3. ✖ skip

4. ✔ acumen

Question Number : 19 Question Id : 23366711345 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Invincible is an antonym for \_\_\_\_\_

Options :

1. ✓ conquerable
2. ✗ transparent
3. ✗ fiasco
4. ✗ instil

Question Number : 20 Question Id : 23366711346 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Change the following into a simple sentence

He wanted to play with his friends and so he finished his home work quickly

Options :

1. ✗ As he wanted to play with his friends, he finished his homework quickly
2. ✗ So as to play with his friends, he finished his home work quickly
3. ✗ He wants to play with his friends and they he finished his home work quickly
4. ✓ In order to play with his friends, he finished his home work quickly

Question Number : 21 Question Id : 23366711347 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Change the following sentence into a complex sentence

“Despite several obstacles, she succeeded finally”

Options :

1. ✘ In spite of several obstacles, she succeeded finally
2. ✘ Notwithstanding several obstacles, she succeeded finally
3. ✔ Though there were several obstacles, she succeeded finally
4. ✘ There were several obstacles and still she succeeded finally

Question Number : 22 Question Id : 23366711348 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Change the following sentence into passive voice  
“I saw him opening the door”

Options :

1. ✘ I saw the door and he was opening it
2. ✘ Opening the door, he was seen by me
3. ✔ I saw the door being opened by him
4. ✘ He was seen by me while opening the door

Question Number : 23 Question Id : 23366711349 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Change the following into active voice  
“I was kept waiting for two hours by him”

Options :

1. ✘ I waited for two hours because of him

2. ✓ He kept me waiting for two hours
3. ✗ He is waiting for me for two hours
4. ✗ I was waiting for two hours for him

Question Number : 24 Question Id : 23366711350 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Change the following into indirect speech

“I will bring my laptop tomorrow”, she said

Options :

1. ✗ She said she would bring my laptop the next day
2. ✓ She said that she would bring her laptop the next day
3. ✗ She said she will bring her laptop the next day
4. ✗ She said she would bring her laptop tomorrow

Question Number : 25 Question Id : 23366711351 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Change the following into direct speech:

“She said that she loved pizza so much”

Options :

1. ✓ She said, “I love pizza so much”
2. ✗ She says, “I love pizza so much”

3. ✖ She said, "I loved pizza so much"

4. ✖ She says, "I loved pizza so much"

### General Knowledge

|                                       |           |
|---------------------------------------|-----------|
| Section Id :                          | 233667378 |
| Section Number :                      | 2         |
| Section type :                        | Online    |
| Mandatory or Optional :               | Mandatory |
| Number of Questions :                 | 15        |
| Number of Questions to be attempted : | 15        |
| Section Marks :                       | 15        |
| Maximum Instruction Time :            | 0         |
| Sub-Section Number :                  | 1         |
| Sub-Section Id :                      | 233667454 |
| Question Shuffling Allowed :          | Yes       |

Question Number : 26 Question Id : 23366711352 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The primary function of the Election Commission of India is to:

الیکشن کمیشن آف انڈیا کا بنیادی کام یہ ہے :

Options :

Formation of laws

قوانین کی تشکیل

1. ✖

Conducting elections

انتخابات کا انعقاد

2. ✓

Pass budgets

بجٹ کی منظوری

3. ✗

Managing Parliament sessions

پارلیمنٹ کے اجلاس کا انتظام

4. ✗

Question Number : 27 Question Id : 23366711353 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The largest freshwater lake in India is:

ہندوستان میں میٹھے پانی کی سب سے بڑی جھیل کون سی ہے ؟

Options :

Vembanad Lake

ویمبناڈ جھیل

1. ✗

Dal Lake

دال جھیل

2. ✗

Wular Lake

3. ✓ وولر جھیل

Chilika Lake

4. ✗ چیلکا جھیل

Question Number : 28 Question Id : 23366711354 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The term "carbon footprint" refers to:

"کاربن فٹ پرنٹ" سے کیا مراد ہے؟

Options :

Growth of forests

1. ✗ جنگلات کی ترقی

Water pollution levels

2. ✗ پانی کی آلودگی کی سطح

Total greenhouse gas emissions

3. ✓ گرین ہاؤس گیسوں کا کل اخراج

## Fuel efficiency of vehicles

4. ✖ گاڑیوں کی ایندھن کی کارکردگی

Question Number : 29 Question Id : 23366711355 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

India's first mission to study the Sun is:

سورج کا مطالعہ کرنے والی پہلی مہم کون سی ہے؟

Options :

Aditya-L1

1. ✔ آدیتیا - L1

Chandrayaan

2. ✖ چندریان

Surya-N1

3. ✖ سورج - N1

Vikram Lander

وکریم لینڈر

4. ✖

Question Number : 30 Question Id : 23366711356 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The 'Green Revolution' in India was mainly associated with:

ہندوستان میں "سبز انقلاب" بنیادی طور پر اس سے رابطہ تھا

Options :

Irrigation reforms

1. ✖

آب پاشی اصلاحات

Industrial development

2. ✖

صنعتی ترقی

Agricultural productivity

3. ✔

زرعی پیداوار

## Environmental protection

ماحولیاتی تحفظ

4. ✖

Question Number : 31 Question Id : 23366711357 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a fundamental right in the Indian Constitution?

مندرجہ ذیل میں سے کون سا ہندوستانی آئین میں بنیادی حق نہیں ہے

Options :

Right to Equality

برابری کا حق

1. ✖

Right to Property

جا ئیداد کا حق

2. ✔

Right to Education

تعلیم کا حق

3. ✖

## Right to Freedom

آزادی کا حق

4. ✖

Question Number : 32 Question Id : 23366711358 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

UNESCO stands for:

یونیسکو کا مطلب یہ ہے ؟

Options :

United Nations Educational, Scientific and Cultural Organization

اقوام متحدہ کی تعلیمی، سائنسی اور ثقافتی تنظیم

1. ✔

Universal Science and Culture Organization

یونیورسل سائنس اینڈ کلچر آرگنائزیشن

2. ✖

United Nations Environmental, Scientific and Cultural Organization

اقوام متحدہ کی ماحولیاتی ، سائنسی اور ثقافتی تنظیم

3. ✖

Union of National Education, Science and Culture Organisation

قومی تعلیم ، سائنس اور ثقافتی تنظیم کی یونین

4. ✖

Question Number : 33 Question Id : 23366711359 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Indian Parliament consists of:

ہندوستانی پارلیمنٹ پر یہ مشتمل ہے

Options :

Lok Sabha and President

لوک سبھا اور صدر

1. ✖

Lok Sabha and Rajya Sabha

2. ✖ لوک سبھا اور راجیہ سبھا

Lok Sabha, Rajya Sabha and President

3. ✔ لوک سبھا، راجیہ سبھا اور صدر

Rajya Sabha and Supreme Court

4. ✖ راجیہ سبھا اور سپریم کورٹ

Question Number : 34 Question Id : 23366711360 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The capital of Uttarakhand is:

اتراکھنڈ کا دارالحکومت کون سا ہے ؟

Options :

Mussoorie

1. ✖ موسوری

Nainital

نائنٹیل

2. ✖

Dehradun

دہرا ڈون

3. ✔

Haridwar

ہریدوار

4. ✖

Question Number : 35 Question Id : 23366711361 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which Indian River is known as 'Dakshina Ganga'?

ہندوستان کا کون سا دریا " دکشہ گنگا " کے نام سے جانا جاتا ہے

Options :

Krishna

کرسنا

1. ✖

Godavari

گوداوری

2. ✔

Kaveri

3. ✖ کا ویری

Mahanadi

4. ✖ میا ندی

Question Number : 36 Question Id : 23366711362 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

'One Earth, One Family, One Future' was the theme of which recent international summit held in India?

"ایک زمین، ایک خاندان، ایک مستقبل" حال ہی میں ہندوستان میں اقوام متحدہ کی کس کانفرنس کا موضوع تھا؟

Options :

G7 Summit

1. ✖ جی-7 سربراہی اجلاس

SCO Summit

2. ✖ سی او سربراہی اجلاس

G20 Summit

3. ✓ 20-25 ستمبر 2023ء

BRICS Summit

4. ✗ برکس سمٹ

Question Number : 37 Question Id : 23366711363 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The primary role of NITI Aayog is to:

: "نیتی ایوگ" کا بنیادی کردار یہ ہے :

Options :

Conduct elections

1. ✗ انتخابات کا انعقاد

Formulation of policies and strategies

2. ✓ پالیسیوں اور حکمت عملی کی تشکیل

Collecting taxes

3. ✖

ٹیکس جمع کرنا

Enforcement of laws

4. ✖

قوانین کا نفاذ

Question Number : 38 Question Id : 23366711364 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The first Indian woman to go into space was:

خلا میں جانے والی ہندوستان کی پہلی خاتون کون تھیں؟

Options :

Sunita Williams

1. ✖

سُنیتا ولیمز

Kalpana Chawla

2. ✔

کَلپنا چاولہ

Ritu Karidhal

ریتو کریدھال

3. ✖

Tessy Thomas

ٹیسے تھامس

4. ✖

Question Number : 39 Question Id : 23366711365 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which country recently exited the European Union (Brexit)?

کون سا ملک حال ہی میں یورپین یونین سے نکل گیا؟

Options :

Germany

جرمنی

1. ✖

France

فرانس

2. ✖

Italy

اطالی

3. ✖

United Kingdom

برطانیہ

4. ✔

Question Number : 40 Question Id : 23366711366 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

‘Mission Shakti’ was related to:

‘میشن شکتی’ کس سے متعلق ہے ؟

Options :

Women's empowerment

خواتین کو با اختیار بنانا

1. ✖

Anti-satellite missile test

اینٹی سیٹلائٹ میزائل کا تجربہ

2. ✔

## Cybersecurity program

سیٹبر سیکورٹی پروگرام

3. ✖

## Skill development for youth

نوجوانوں کے لیے مہارت کی ترقی

4. ✖

### Teaching Aptitude

|                                       |           |
|---------------------------------------|-----------|
| Section Id :                          | 233667379 |
| Section Number :                      | 3         |
| Section type :                        | Online    |
| Mandatory or Optional :               | Mandatory |
| Number of Questions :                 | 10        |
| Number of Questions to be attempted : | 10        |
| Section Marks :                       | 10        |
| Maximum Instruction Time :            | 0         |
| Sub-Section Number :                  | 1         |
| Sub-Section Id :                      | 233667455 |
| Question Shuffling Allowed :          | Yes       |

Question Number : 41 Question Id : 23366711367 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The purpose of formative assessment is:

تشکلاتی تشخیص کا مطلب یہ ہے :

Options :

To assign final grades

حتمی درجات تفویض کرنے کے لیے

1. ✖

To evaluate teaching staff

تدریسی عملے کا جائزہ لینا

2. ✖

To improve learning while it is happening

سیکھنے کو بہتر بنانے کے لیے جیسے جیسے یہ  
ترقی کرتا ہے۔

3. ✔

To promote students

طلباء کی حوصلہ افزائی کے لیے

4. ✖

Question Number : 42 Question Id : 23366711368 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which learning theory is associated with operant conditioning?

کون سا سیکھنے کا نظریہ " آپریٹ کنڈیشننگ " سے وابستہ ہے

Options :

Piaget's theory

1. ✖ پیاگتس کی تھیوری

Skinner's theory

2. ✔ سکنر کی تھیوری

Maslow's theory

3. ✖ ماسلو کی تھیوری

Gardner's theory

4. ✖ گارڈنر کی تھیوری

Question Number : 43 Question Id : 23366711369 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

A democratic classroom environment encourages:

ایک جمہوری کمرہ جماعت کا ماحول کس طرح حوصلہ افزائی کرتا ہے

Options :

Authoritarian discipline

آمرانہ نظم و ضبط

1. ✖

Passive learners

غیر فعال سیکھنے والے

2. ✖

Student participation and dialogue

3. ✔ طلباء کی شرکت اور مکالمہ

Teacher-centred teaching

اساتذہ پر مبنی تعلیم

4. ✖

Question Number : 44 Question Id : 23366711370 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which one is an example of intrinsic motivation?

اندرونی قابلیتوں کی حوصلہ افزائی کی مثال یہ ہے۔

Options :

Prize for winning

جیتنے پر انعام

1. ✖

Fear of punishment

سزا کا خوف

2. ✖

Desire to learn

سیکھنے کی خواہش

3. ✔

Parental pressure

والدین کا دباؤ

4. ✖

Question Number : 45 Question Id : 23366711371 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A teacher using Bloom's Taxonomy should aim at which higher-order skill?

بلوم کی درجہ بندی کا استعمال کرنے والے استاد کا مقصد یہ ہے

Options :

Remembering facts

حقائق کا یاد کرنا

1. ✖

Applying definitions

تعریفیں لاکر کرنا

2. ✖

Creating new knowledge

نیا علم پیدا کرنا

3. ✔

Understanding rules

قوانین کو سمجھانا

4. ✖

Question Number : 46 Question Id : 23366711372 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In pedagogy, 'feedback' helps:

تدریسی " فیڈ بیک " کس طرح مدد کرتا ہے ؟

Options :

Punish students

1. ✖ طلباء کو سزا دینے کے لیے

Modify teaching strategies

2. ✔ تدریسی حکمت عملیوں میں ترمیم کرنے کے لیے

Give homework

3. ✖ ہوم ورک دینا

Mark attendance

4. ✖ حاضری کو نشان زد کرنا

Question Number : 47 Question Id : 23366711373 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which among these promotes inclusive education?

ان میں سے کون سی جامع تعلیم و فروغ دیتا ہے؟

Options :

Segregated classrooms

انگ انگ کمرہ جماعتیں

1. ✖

Fixed curriculum

مقررہ نصاب

2. ✖

Adaptive teaching methods

قابل اختیار تدریسی طریقہ

3. ✔

Competitive grouping

مسابقتی گروہ بندی

4. ✖

Question Number : 48 Question Id : 23366711374 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which is a barrier to effective classroom communication?

کمتر جماعت میں موثر مواصلات میں کیا رکاوٹ ہے؟

Options :

Use of visual aids

بصری آلات کا استعمال

1. ✖

Clear articulation

واضح بیان

2. ✖

Language mismatch

زبان میں مماثلت نہیں

3. ✔

Active listening

فعال سننا

4. ✖

Question Number : 49 Question Id : 23366711375 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A good teacher evaluates students by:

ایک اچھا استاد طالب علموں کی جانچ اس طرح کرتا ہے :

Options :

Comparing them with others

دوسروں کے ساتھ ان کا موازنہ کرنا

1. ✖

Judging their behaviour

ان کے رویے کا اندازہ لگانا

2. ✖

Identifying strengths and weaknesses

طاقتوں اور کمزوریوں کی نشاندہی کرنا

3. ✔

Ignoring slow learners

سست سیکھنے والوں کو نظر انداز کرنا

4. ✖

Question Number : 50 Question Id : 23366711376 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Effective teaching is primarily about:

موثر تعلیم ، بنیادی طور پر اس کے بارے میں ہے

Options :

Completing the syllabus

نصاب کو مکمل کرنا

1. ✖

Giving maximum homework

زیادہ سے زیادہ ہوم ورک دینا

2. ✖

Enhancing understanding and engagement

افہام و تفہیم اور مشغولیت کو بڑھانا

3. ✔

Following textbooks strictly

نصابی کتب کی سختی سے پیروی کرنا

4. ✖

**Mathematics Urdu**

233667380

Section Id :

|                                       |           |
|---------------------------------------|-----------|
| Section Number :                      | 4         |
| Section type :                        | Online    |
| Mandatory or Optional :               | Mandatory |
| Number of Questions :                 | 100       |
| Number of Questions to be attempted : | 100       |
| Section Marks :                       | 100       |
| Maximum Instruction Time :            | 0         |
| Sub-Section Number :                  | 1         |
| Sub-Section Id :                      | 233667456 |
| Question Shuffling Allowed :          | Yes       |

Question Number : 51 Question Id : 23366711377 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following differential equations is not first-order and first-degree

مندرجہ ذیل تفرقی مساوات میں کونسا اولیٰ درجہ اور  
ترتیب میں نہیں ہے

Options :

1. ✖  $\frac{dy}{dx} = x + y$

2. ✔  $(\frac{dy}{dx})^2 + y = 0$

3. ✖  $\frac{dy}{dx} = x^2 + y^2$

4. ✖  $\frac{dy}{dx} = 3x + 2$

Question Number : 52 Question Id : 23366711378 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The orthogonal trajectories of  $y = ax^2, y = ax^n$ 

$y = ax^2$  ،  $y = ax^n$  کی متبادی خط حرکت

Options :

1. ✖  $x^2 + 2y^2 = c^2$

2. ✖  $y^2 - x^2 = c^2$

3. ✔  $x^2 + ny^2 = c$

4. ✖  $x^2 - ny^2 = c$

Question Number : 53 Question Id : 23366711379 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the integrating factor for the differential equation  $\frac{dy}{dx} + \left(\frac{2}{x}\right)y = x^2$ 

$\frac{dy}{dx} + \left(\frac{2}{x}\right)y = x^2$  تفرقی مساوات کا تکمیل شدہ جز فری

Options :

1. ✔  $x^2$

2. ✖  $\frac{1}{x^2}$

3. ✖  $x$ 4. ✖  $\frac{1}{x}$ 

Question Number : 54 Question Id : 23366711380 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Solution of non-exact differential equation  $(1 + xy)ydx + (1 - xy)dy = 0$  with  
integral factor  $\frac{1}{x^2y^2}$  is

تیسرے قسطی نفی صورت  
جکا تکمیل شدہ جزوی  
 $\int \frac{1}{x^2y^2} [(1+xy)ydx + (1-xy)dy] = 0$

Options :

1. ✖  $\frac{1}{xy} - \log\left(\frac{x}{y}\right) = c$ 2. ✖  $-\frac{1}{xy} - \log\left(\frac{y}{x}\right) = c$ 3. ✔  $-\frac{1}{xy} + \log\left(\frac{x}{y}\right) = c$ 4. ✖  $\frac{1}{xy} + \log\left(\frac{y}{x}\right) = c$

Question Number : 55 Question Id : 23366711381 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the general solution of the differential equation  $\frac{dy}{dx} = 5x^2 + 2$ .

تفریق ماہریت کا جواب  $\frac{dy}{dx} = 5x^2 + 2$

Options :

1. ✓  $5x^3 + 6x - 3y + 3C = 0$
2. ✗  $12x - 3y^2 + C = 0$
3. ✗  $10x^3 + 12x - y^2 + C = 0$
4. ✗  $10x^2 - 3y^2 + C = 0$

Question Number : 56 Question Id : 23366711382 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Solve  $p^2 - 7p + 12 = 0$  for p

حل کر  $p^2 - 7p + 12 = 0$

Options :

1. ✓  $(y - 3x - c)(y - 4x - c) = 0$
2. ✗  $(y - 4x - c)(y - 2x - c) = 0$

3. ✖  $(y + 3x - c)(y - 4x - c) = 0$

4. ✖  $(y - 3x - c)(y + 4x - c) = 0$

Question Number : 57 Question Id : 23366711383 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation  $y = px + \sqrt{4 + p^2}$  is

فَرَقِ مساوات کا حل  $y = px + \sqrt{4 + p^2}$

Options :

1. ✖  $(y - cx)^2 + c^2 = 0$

2. ✖  $(y - cx)^2 + 4c^2 = 0$

3. ✔  $(y - cx)^2 - c^2 = 4$

4. ✖  $(y - cx)^2 - 4c^2 = 0$

Question Number : 58 Question Id : 23366711384 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Which of the following equations is solvable for y

مندرجہ ذیل میں سے کون سا مساوات کوئی ہے

Options :

1. ✖  $x^2 + y^2 = 1$

2. ✖  $x + y^2 = 1$

3. ✔  $3x + 2y = 8$

4. ✖  $x + y = 1$  and  $x - y = 1$

Question Number : 59 Question Id : 23366711385 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

What is the general solution of the Clairaut's equation  $y = px + p^3$

$y = px + p^3$  کلاریٹ مساوات کا عمومی حل یہ ہے

Options :

1. ✔  $y = Cx + C^3$

2. ✖  $y = Cx + C^2$

3. ✖  $y = Cx + 3C^2$

4. ✖  $y = Cx + C^4$

Question Number : 60 Question Id : 23366711386 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

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

$$(D^2 + D + 1)y = \sin x \text{ کا خصوصی تہ } \sin x$$

Options :

1. ✖  $\sin x$
2. ✖  $-\sin x$
3. ✖  $\cos x$
4. ✔  $-\cos x$

Question Number : 61 Question Id : 23366711387 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The general solution of  $(D - 2)(D + 1)^2 = 0$ .

$$(D - 2)(D + 1)^2 = 0 \text{ کا عمومی حل}$$

Options :

1. ✖  $c_1 e^{2x} + c_2 e^x + c_3 e^{-x}$
2. ✔  $c_1 e^{2x} + (c_2 + c_3 x) e^{-x}$
3. ✖  $(c_1 \cos x + c_2 \sin x) + c_3 e^{2x}$
4. ✖  $c_1 e^{2x} + (c_2 + c_3 x) e^x$

Question Number : 62 Question Id : 23366711388 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $m = -2, m = -3$  are root of the auxiliary equation of a second order homogeneous differential equation, then the differential equation is

اگر  $m = -2$  ،  $m = -3$  حوّلوں کے دو درجی متجانسی ترقی مساوات کے جزو ترقی ہیں تب ترقی مساوات

Options :

1. ✓  $(D^2 + 5D + 6)y = 0$

2. ✗  $(D^2 + 4)y = 0$

3. ✗  $(D^2 - 5D + 6)y = 0$

4. ✗  $(D^2 - 3D + 1)y = 0$

Question Number : 63 Question Id : 23366711389 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The particular integral of  $f(D)y = e^{ax}$  if  $f(a) \neq 0$ .

اگر  $f(D)y = e^{ax}$  ہو تو خصوصی کلمہ  $f(a) \neq 0$

Options :

1. ✗  $\frac{1}{f(a)} e^{-ax}$

2. ✖  $\frac{e^{ax}}{\phi(a)} \frac{x^m}{m!}$

3. ✔  $\frac{1}{f(a)} e^{ax}$

4. ✖  $\frac{e^{-ax}}{\phi(a)} \frac{x^m}{m!}$

Question Number : 64 Question Id : 23366711390 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

If Q is a function of x, then the value of  $\frac{1}{D-\alpha} Q$  is

اگر  $x$  پر  $Q$  متناسق ہے تب  $\frac{1}{D-\alpha} Q$  کی قدر

Options :

1. ✖  $e^{-\alpha x} \int e^{\alpha x} Q dx$

2. ✔  $e^{\alpha x} \int e^{-\alpha x} Q dx$

3. ✖  $e^{-\alpha x} \int e^{-\alpha x} Q dx$

4. ✖  $e^{\alpha x} \int e^{\alpha x} Q dx$

Question Number : 65 Question Id : 23366711391 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the value  $\frac{1}{D^2} e^{4x} =$

$$\hat{\text{قیمت}} \text{ ————— } = \frac{1}{D^2} e^{4x}$$

Options :

1. ✖  $\frac{1}{4} e^{4x}$

2. ✔  $\frac{1}{16} e^{4x}$

3. ✖  $\frac{1}{12} e^{4x}$

4. ✖  $\frac{1}{8} e^{4x}$

Question Number : 66 Question Id : 23366711392 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The Wronskian of the differential equation  $\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = \frac{e^x}{1+e^x}$  is

$$\text{تفریق مساوات کا دائرہ} \quad \frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = \frac{e^x}{1+e^x}$$

Options :

1. ✖  $e^x$

2. ✓  $e^{3x}$

3. ✗  $e^{2x}$

4. ✗  $e^{5x}$

Question Number : 67 Question Id : 23366711393 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation is  $\frac{dy}{dx} = \sin(x + y) + \cos(x + y)$

فريقنا  $\int \frac{dy}{dx} = \sin(x+y) + \cos(x+y)$

Options :

1. ✓  $x = \ln\left(1 + \tan\frac{1}{2}(x + y)\right) + c$

2. ✗  $x = \ln(\tan(x + y)) + c$

3. ✗  $x = \ln(x + y + c)$

4. ✗  $x = \tan(x + y + 1) + c$

Question Number : 68 Question Id : 23366711394 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Solve  $(x^2D^2 - 4xD + 6)y = x^2$  where  $D = \frac{d}{dx}$

سوال:  $(x^2D^2 - 4xD + 6)y = x^2$  جہاں  $D = \frac{d}{dx}$

Options :

1. ✖  $y = c_1x^2 + c_2x^2 - x^2\log x^2$

2. ✖  $y = c_1x^2 + c_2x^3 - x\log x^2$

3. ✔  $y = c_1x^2 + c_2x^3 - x^2\log x$

4. ✖  $y = c_1x^2 + c_2x^2 - x\log x$

Question Number : 69 Question Id : 23366711395 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The polynomial  $2x^2 - 4x + 3$  in terms of Legendre's polynomial is .....

پالیномیال  $2x^2 - 4x + 3$  کے لگنڈریس پالیномیال میں

Options :

1. ✖  $\frac{1}{3}(4P_2 - 4P_1 + 11P_0)$

2. ✖  $\frac{1}{3}(4P_2 + 12P_1 + 11P_0)$

3. ✖  $\frac{1}{3}(P_2 - 12P_1 + 11P_0)$

4. ✔  $\frac{1}{3}(4P_2 - 12P_1 + 11P_0)$

Question Number : 70 Question Id : 23366711396 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The linear differential equation  $(x^n D^n + a_1 x^{n-1} D^{n-1} + a_2 x^{n-2} D^{n-2} \dots + a_n) = X$  represents

خطی تفرقی معادلات  
 $x = (x^n D^n + a_1 x^{n-1} D^{n-1} + a_2 x^{n-2} D^{n-2} + \dots + a_n)$   
 و ا طبع رتو

Options :

Cauchy Differential equation

1. ✔ کوشی تفرقی معادلات

Legendre Differential equation

2. ✖ لمینڈری تفرقی معادلات

Gauss Differential equation

غوث نرقي مساوات

3. ✖

Albert Differential equation

البرٹ نرقي مساوات

4. ✖

Question Number : 71 Question Id : 23366711397 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find the Cartesian equation of the plane passing through the point (3,2,-3) and the normal to the plane is  $4i-2j+5k$ ?

مستوی جو نقطہ (3, 2, -3) سے گزرتا ہے اور مستوی  
 $4i - 2j + 5k$  کے نارمل ہے اس مستوی کے مساوات کیا ہیں۔

Options :

1. ✓  $4x-2y+5z+7=0$

2. ✖  $3x-2y-3z+1=0$

3. ✖  $4x-y+5z+7=0$

4. ✖  $4x-2y-z+7=0$

Question Number : 72 Question Id : 23366711398 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

There is a rectangular garden of 220 metres  $\times$  70 metres. A path of width 4 metres is built around the garden. What is the area of the path

220  $\times$  70 میٹر البار درمے مستطیل باغ کے اطراف 4 میٹر چوڑا راستہ بنھا یا گیا جس کا رقبہ

Options :

1. ✖  $2472m^2$

2. ✖  $2162m^2$

3. ✖  $1836m^2$

4. ✔  $2384m^2$

Question Number : 73 Question Id : 23366711399 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the correct formula for representing a plane

مندرجہ ذیل میں صوبہ کو نما شے کی رائے دہی ماہور ت کوئی ایس ہے

Options :

1. ✖  $\vec{r} \cdot \hat{n} = d$

2. ✖  $ax + by + cz = d$

3. ✖  $lx + my + nz = d$

4. ✔  $al + bm + cn = d^2$

Question Number : 74 Question Id : 23366711400 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the plane passes through three collinear points  $(x_1, y_1, z_1), (x_2, y_2, z_2), (x_3, y_3, z_3)$  then which of the following is true

ہم خطی  $(x_1, y_1, z_1), (x_2, y_2, z_2), (x_3, y_3, z_3)$  نقاط سے گزرنے والی کوئی  
صورت کے مساوات صحیح ہے

Options :

1. ✖  $x_1y_1z_1 + x_2y_2z_2 + x_3y_3z_3 = 0$

2. ✔  $\begin{vmatrix} x_1 & y_1 & z_1 \\ x_2 & y_2 & z_2 \\ x_3 & y_3 & z_3 \end{vmatrix} = 0$

3. ✖  $\begin{vmatrix} x_1 \\ y_2 \\ z_3 \end{vmatrix} = 0$

4. ✖  $x_1x_2x_3 + y_1y_2y_3 + z_1z_2z_3 = 0$

Question Number : 75 Question Id : 23366711401 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the equation of the plane passing through the three points

(2,2,0), (1,2,1), and (-1,2,-2)

یہ تین نقطہ (2,2,0), (1,2,1), (-1,2,-2) سے گزرنے والے  
مستوی کے مساوات کو ملنا ہے

Options :

1. ✔  $(\vec{r} - (2i + 2j) \cdot [(-i + k) \times (-3i - 2k)] = 0$

2. ✖  $(\vec{r} - (3i - 2j) \cdot [(-i + k) \times (2i - 2k)] = 0$

3. ✖  $(\vec{r} + (2i + 2j) \cdot [(-i - k) \times (-3i - 2k)] = 0$

4. ✖  $(\vec{r} - (2i + 2j) \cdot [(-i - k) \times (3i + 2k)] = 0$

Question Number : 76 Question Id : 23366711402 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Two lines are said to be perpendicular if the product of their slope is equal to

دو خطوط آپس میں عمودوار کہلاتے ہیں جبکہ ان کا دُکھال  
کا حاصل مجموعہ صفر ہے ۔

Options :

1. ✓ -1
2. ✗ 0
3. ✗ 1
4. ✗  $\frac{1}{2}$

Question Number : 77 Question Id : 23366711403 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the distance of (5, 12) from the origin?

مبدأ سے (5, 12) کا فاصلہ کیا ہے ۔

Options :

1. ✗ 5 units
2. ✗ 8 units
3. ✗ 12 units
4. ✓ 13 units

Question Number : 78 Question Id : 23366711404 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Two lines are said to be parallel if the difference of their slope is

→ دو خطوط متوازی کہلائی گئی ہیں جبکہ ان کا فرق  
— ہو گا

Options :

1. ✖ -1

2. ✔ 0

3. ✖ 1

4. ✖ 2

Question Number : 79 Question Id : 23366711405 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of a straight line that passes through the point (3, 4) and is perpendicular to the line  $3x+2y+5=0$  is

خط مستقیم جو (3,4) نقطہ سے گزرتی ہے اور  $3x+2y+5=0$  کے ساتھ  
عامدوار ہے اس کے مساوی

Options :

1. ✓  $2x-3y+6=0$

2. ✗  $2x+3y+6=0$

3. ✗  $2x-3y-6=0$

4. ✗  $2x+3y-6=0$

Question Number : 80 Question Id : 23366711406 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The angle between the line  $\frac{x+1}{2} = \frac{y}{3} = \frac{z-3}{6}$  and the plane  $10x+2y-11z=3$

Handwritten solution:  $10x+2y-11z=3$  is given.  $\therefore \frac{x+1}{2} = \frac{y}{3} = \frac{z-3}{6}$  is the line. The angle between the line and the plane is asked.

Options :

1. ✗  $\cos^{-1}\left(\frac{1}{8}\right)$

2. ✗  $\cos^{-1}\left(\frac{8}{21}\right)$

3. ✓  $\sin^{-1}\left(\frac{8}{21}\right)$

4. ✗  $\sin^{-1}\left(\frac{1}{8}\right)$

Question Number : 81 Question Id : 23366711407 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The center- radius form of a sphere is

مرکز کُرّہ دور سطح کُرّہ تک نصف قطر کی شکل

Options :

1. ✖  $x^2 + y^2 + z^2 = r^2$

2. ✔  $(x - a)^2 + (y - b)^2 + (z - c)^2 = r^2$

3. ✖  $x^2 + y^2 = r^2$

4. ✖  $(x - a)^2 + (y - b)^2 = r^2$

Question Number : 82 Question Id : 23366711408 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Two spheres are said to be in touch externally if (where d=distance between their centres)

دو کُرّہ آپس میں بیرونی مس کر رہے ہیں جبکہ d ان کے مرکزوں کے درمیان فاصلہ ہے

Options :

1. ✔  $d = r_1 + r_2$

2. ✖  $d = r_1 - r_2$

3. ✖  $r_1 = r_2$

4. ✖  $d = r_1 \cdot r_2$

Question Number : 83 Question Id : 23366711409 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The centre and radius of the circle of  $x^2 + y^2 + z^2 + 2x - 2y - 4z - 19 = 0$  is

مرکز اور دائرے  $x^2 + y^2 + z^2 + 2x - 2y - 4z - 19 = 0$  کے  
تھیف قطر اس طرح ہیں

Options :

1. ✔  $(-1, 1, 2), 5$

2. ✖  $(1, -1, 2), 4$

3. ✖  $(-1, 1, 2), -4$

4. ✖  $(1, -1, 2), -4$

Question Number : 84 Question Id : 23366711410 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general form of the sphere is

کُرّہ کی عمومی مساواتی شکل

Options :

1. ✖  $x^2 + y^2 + z^2 + ux + vy + wz - d = 0$
2. ✖  $x^2 + y^2 + z^2 + 2ux + 2vy + 2wz - d = 0$
3. ✖  $x^2 + y^2 + z^2 + ux + vy + wz + d = 0$
4. ✔  $x^2 + y^2 + z^2 + 2ux + 2vy + 2wz + d = 0$

Question Number : 85 Question Id : 23366711411 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find the value of  $\alpha$  where the angle between the plane  $2x - 3y + 6z - 11 = 0$  and the x-axis is  $\sin^{-1}(\alpha)$

x محور اور مستوی  $2x - 3y + 6z - 11 = 0$  کے درمیان زاویہ  
 $\sin^{-1}(\alpha)$  ہے جب  $\alpha$  کی قیمت

Options :

1. ✖  $\frac{\sqrt{2}}{3}$
2. ✔  $\frac{2}{7}$

3. ✖  $\frac{\sqrt{3}}{2}$

4. ✖  $\frac{3}{7}$

Question Number : 86 Question Id : 23366711412 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The total surface area of a cone with a base radius of “r” and a slanted height of “l” is equal to

مخروط کا مکمل سطحی رقبہ جس کا نصف قطر r اور ڈھلان l ہے

Options :

1. ✖  $\pi r l + 2\pi r^2$

2. ✖  $2\pi r l + 2\pi r^2$

3. ✔  $\pi r l + \pi r^2$

4. ✖  $2\pi r^2$

Question Number : 87 Question Id : 23366711413 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the total surface area of a cone with a radius of 7cm and a height of 24cm

مکمل مخروط کا سطحی رقبہ جس کا نصف قطر 7 سم اور بلندی 24 سم ہے۔

Options :

1. ✖  $710\text{cm}^2$
2. ✔  $704\text{cm}^2$
3. ✖  $700\text{cm}^2$
4. ✖  $725\text{cm}^2$

Question Number : 88 Question Id : 23366711414 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The curved surface area of a cone is  $1980\text{ cm}^2$ , and its radius is 21cm; what is the slanted height of a cone

مخروط کا مثنیٰ سطحی رقبہ 1980 مربع سم ہے اور اس کا نصف قطر 21 سم ہے۔ اس کا مثنیٰ رقبہ کیا ہے؟

Options :

1. ✖ 25cm

2. ✖ 38cm

3. ✖ 35cm

4. ✔ 30cm

Question Number : 89 Question Id : 23366711415 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

9. Find the equation of the tangent plane to the sphere  $x^2 + y^2 + z^2 - 4x + 2y - 6z + 5 = 0$  which is parallel to the plane  $3x + 2y - 2z = 0$

سطح متوازی کے مساویات جو کرے  $x^2 + y^2 + z^2 - 4x + 2y - 6z + 5 = 0$   
اور متوازی کے  $3x + 2y - 2z = 0$  متوازی ہوں

Options :

1. ✖  $3x + 2y - 2z + 3 + 2\sqrt{17} = 0$ 2. ✖  $3x + 2y - 2z + 3 - 2\sqrt{17} = 0$ 3. ✔  $3x + 2y - 2z + 2 + 3\sqrt{17} = 0$ 4. ✖  $3x - 2y - 2z - 3 - 3\sqrt{17} = 0$ 

Question Number : 90 Question Id : 23366711416 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A right circular cone height 15cm and base radius 15cm is curved out of a wooden sphere of radius 15cm volume of the remaining wood (in %) is

عالم دائری مخروط جسکی بلندی ۱۵ سمر دور داسی نصف قطر  
۱۵ سمر ہے اور ۱۵ سمر نصف قطر دے کر کمرے کو بناد کر رہی تب  
بچت کڑی کی مقدار کی میسر

Options :

1. ✖ 25

2. ✖ 37.5

3. ✖ 50

4. ✔ 75

Question Number : 91 Question Id : 23366711417 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $Z_n = \{0, 1, 2, \dots, n-1\}$  fails to be a group under multiplication modulate

because

$Z_n = \{0, 1, 2, \dots, n-1\}$  ہر ۳ میٹاسی کے تحت کا ڈب بیوگا جبکہ

Options :

جبکہ ہڈی خاصیت کا کام نہیں

1. ✖ Closure property fails

Closure property holds but not associate  
ہڈی خاصیت صادق مگر ہم شریک نہیں

2. ✖

There is no identity

شناختی قانون وضع نہیں

3. ✖

There is no inverse for an element '0' of the set

مکوس عنصر، '0' کے لئے وضع نہیں

4. ✔

Question Number : 92 Question Id : 23366711418 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If 'a' is non-identity self-inverse element then  $O(a)$  must be

اگر 'a' غیر شناختی ہی مکوس عنصر ہے تب  
 $O(a) = \text{—}$  ہوگا

Options :

1. ✖ 5

2. ✖ 4

3. ✓ 2

4. ✗ 1

Question Number : 93 Question Id : 23366711419 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The number of generators of a cyclic group of order 60 is

حوری گروپ جہاں 60 کے مولدوں کی تعداد

Options :

1. ✗ 32

2. ✓ 16

3. ✗ 8

4. ✗ 30

Question Number : 94 Question Id : 23366711420 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the order of the non-abelian group

غیر ابدی گروپ کا رتبہ کیا ہے

Options :

1. ✗ 4

2. ✓ 36

3. ✖ 25

4. ✖ 49

Question Number : 95 Question Id : 23366711421 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Let  $G = \{1, -1, i, -i\}$  is multiplication group then  $G = \{1, -1, i, -i\}$  ایک ضربی گروپ ہے یہ

Options :

G is cyclic and 'i' is the only generator

1. ✖

G حوری اور i واحد مولد ہوگا

G is must cyclic

2. ✖

G مخصوصی حوری ہوگا

G is cyclic with two generators 'i' and '-i'

3. ✔

G کے دو مولد i اور -i ہوں گے

G is cyclic '1' is the only generator

4. ✖

G حوری ہے اور 1 واحد مولد ہوگا

Question Number : 96 Question Id : 23366711422 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Let  $(G, +)$  be a group. A nonempty subset  $H$  of  $G$  is a subgroup of  $G$  if and only if

اگر  $(G, +)$  ایک گروپ ہے،  $H$  غیر خالی تحت سب سے ہے  
 $G$  کا، صرف اور صرف  $a, b \in H$  جب

Options :

1. ✖  $ab^{-1} \in H$
2. ✖  $ab \in H$
3. ✔  $a + (-b) \in H$
4. ✖  $a + b^{-1} \in H$

Question Number : 97 Question Id : 23366711423 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $O(G)=12$  and the index of a subgroup of  $H$  of  $G$  is 3. then order of  $H$  is

اگر  $O(G)=12$  اور  $H$  کا انڈیکس 3 ہے تو  $H$  کا مرتبہ —

Options :

1. ✖ 2
2. ✔ 4
3. ✖ 6

4. ✖ 12

Question Number : 98 Question Id : 23366711424 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Every finite group  $G$  of composite order possesses

ہر متناہی گروپ  $G$  کا مرکب درجہ کا حصول

Options :

. improper sub group

1. ✖ غیر واجب تحت گروپ

proper subgroup

2. ✓ واجب تحت گروپ

no subgroup

3. ✖ غیر تحت گروپ

abelian group

4. ✖ ابیلی تحت گروپ

Question Number : 99 Question Id : 23366711425 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A permutation of the form  $\begin{pmatrix} a_1 & a_2 & \dots & a_k \\ a_2 & a_3 & \dots & a_1 \end{pmatrix}$  is called a ----- of length k.

طول k دے مبادلہ  $\begin{pmatrix} a_1 & a_2 & \dots & a_k \\ a_2 & a_3 & \dots & a_1 \end{pmatrix}$  کہلاتا ہے

Options :

permutation

مبادلہ

1. ✖

cycle

حوری

2. ✔

transposition

عیور

3. ✖

matrix

ماتریس

4. ✖

Question Number : 100 Question Id : 23366711426 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $N$  and  $M$  are normal subgroups of  $G$  and  $M \cap N = \{e\}$  for  $n \in N, m \in M$  then

$M \cap N = \{e\}$  اور  $G$  کے دو معمولی تحت گروپ ہیں  $N$  اور  $M$   
 $m \in M$  اور  $n \in N$  جب

Options :

1. ✓  $nm = mn$
2. ✗  $nm \neq mn$
3. ✗  $nm = 1$
4. ✗  $n = m$

Question Number : 101 Question Id : 23366711427 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $G$  is abelian of  $N$  is normal subgroup of  $G$  then  $G/N$  is

اگر  $G$  ایبلی گروپ ہے تب  $N$  معمولی تحت گروپ ہے  $G$  کا  
 تب  $G/N$  —

Options :

1. ✗ non-abelian غیر ایبلی
2. ✓ abelian ایبلی

3. ✖ cyclic حوری

4. ✖ non-cyclic غیر حوری

Question Number : 102 Question Id : 23366711428 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The order of the symmetric group  $S_n$  on in symbols is

$S_n$  متماثل گروپ کا مرتبہ کی ما سنجی ہے

Options :

1. ✖ n

2. ✖  $2^n$

3. ✔  $n!$

4. ✖  $(n-1)!$

Question Number : 103 Question Id : 23366711429 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

If  $N$  is a normal subgroup of a group  $G$  and  $a, b \in G$  then

اگر  $N$  عموماً تحت گروپ ہے گروپ  $G$  کا تب  $a, b \in G$  تو

Options :

1. ✖  $NaNb = Nb$

2. ✓  $aNbN = abN$

3. ✗  $NaNb = aN$

4. ✗  $NaNb = Na$

Question Number : 104 Question Id : 23366711430 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A homomorphism  $\phi: G \rightarrow \bar{G}$  is an isomorphism if.

ہم مارمیت  $\phi: G \rightarrow \bar{G}$  ایک مارمیت ہے، جبکہ

Options :

$\phi$  is one to one

1. ✗  $\phi$  ایک تا ایک متفاعل ہے۔

$\phi$  is one to one & onto

2. ✓  $\phi$  ایک تا ایک دور ہر متفاعل

$\phi$  is onto

3. ✗  $\phi$  ایک ہر متفاعل

$\emptyset$  is neither one to one

$\emptyset$  یک تا ایک تفاعل نہیں ہے

4. ✖

Question Number : 105 Question Id : 23366711431 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following set is not a ring

صورتہ ذیل میں کونسا سٹ حلقہ نہیں ہے

Options :

1. ✖ set of real numbers

حقیقی اعداد کا سٹ

set of rational numbers

2. ✖

ناعلق اعداد کا سٹ

set of natural numbers

3. ✔

طبیعی اعداد کا سٹ

set of integers

4. ✖

صحیح اعداد کا سٹ

Question Number : 106 Question Id : 23366711432 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $R$  is a Boolean ring then

اگر  $R$  ایک بولیون حلقہ ہے تب

Options :

1. ✖  $a + a = a, \forall a \in R$
2. ✖  $a + a = 1, \forall a \in R$
3. ✔  $a + a = 0, \forall a \in R$
4. ✖  $a + a = -a, \forall a \in R$

Question Number : 107 Question Id : 23366711433 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following is correct

مندرجہ ذیل میں کونسا صادق ہے

Options :

every integral domain is a field

ہر صحیح علاقہ میدان ہے

1. ✖

An infinite integral domain is field

ہر لامتناہی صحیح علاقہ ایک میدان ہے

2. ✖

A finite integral domain is a field

یہ متناہی صحیح علاقہ ایک میدان ہے

3. ✓

integral domain is a field

صحیح علاقہ ایک میدان ہے

4. ✗

Question Number : 108 Question Id : 23366711434 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Number of ideals a field has

مثالی تعداد وڈل میدان

Options :

1. ✗ 3

2. ✗ 1

3. ✗ 0

4. ✓ 2

Question Number : 109 Question Id : 23366711435 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $R$  is a non-zero ring so that  $a^2 = a, \forall a \in R$  then the characteristics of  $R$  is

$\forall a \in R, a^2 = a$  ایک غیر صفر حلقہ ہے تب  
تو خصوصیات  $R$  — ہیں

Options :

1. ✓ 2

2. ✗ 3

3. ✗ 4

4. ✗ 6

Question Number : 110 Question Id : 23366711436 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $(G, 0)$  is a group of order 24 then  $G$  can have a subgroup order

اگر گروپ  $G$  کا مرتبہ 24 ہے تب  $G$  کتنا گروپ کا  
مرتبہ ہو گا۔

Options :

1. ✗ 5

2. ✗ 7

3. ✓ 8

4. ✖ 9

Question Number : 111 Question Id : 23366711437 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A set  $A$  is said to be countable if there exist a function  $f: A \rightarrow \mathbb{N}$  such thatاگر  $f: A \rightarrow \mathbb{N}$  متفاعل ہے تب سٹ  $A$  کو قابل شمار کیا جائے گا

Options :

1.  $f$  ایک دو قسمی متفاعل1. ✓  $f$  is bijective2.  $f$  سر جکٹو2. ✖  $f$  is surjective3.  $f$  یکساں تنقیدی3. ✖  $f$  is identity map $f$  is additive identity4.  $f$  یکساں جمعیت

4. ✖

Question Number : 112 Question Id : 23366711438 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following are true about Dirichlet function

مندرجہ ذیل میں کون سا ڈیرکلیٹ فنکشن کے تحت صادق ہے

Options :

Dirichlet function is continuous everywhere on  $\mathbb{R}$ .

ڈیرکلیٹ فنکشن ہر جگہ  $\mathbb{R}$  پر مسلسل ہے۔

1. ✖

Dirichlet function is discontinuous everywhere on  $\mathbb{R}$ .

ڈیرکلیٹ فنکشن ہر جگہ  $\mathbb{R}$  پر غیر مسلسل ہے۔

2. ✔

Dirichlet function is continuous only at rationals.

ڈیرکلیٹ فنکشن صرف ریشنل علاقوں پر

3. ✖

Dirichlet function is discontinuous only at irrationals.

ڈیرکلیٹ فنکشن غیر ریشنل علاقوں پر

4. ✖

Question Number : 113 Question Id : 23366711439 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Choose the correct option

صادق کا حوالہ کرو

Options :

Let  $a, b \in \mathbb{R}$  and  $f: (a, b] \rightarrow \mathbb{R}$  continuous on  $(a, b]$  then  $f$  is bounded on  $(a, b]$ .

1.  $\times$   $\mu$   $(a, b]$   $\Leftarrow$  مسلسل  $f: (a, b] \rightarrow \mathbb{R}$  اور  $a, b \in \mathbb{R}$

تَب  $f$  بيوختی ہے  $\mu$   $(a, b]$

1.  $\times$

Let  $a, b \in \mathbb{R}$  and  $f: [a, b) \rightarrow \mathbb{R}$  continuous on  $[a, b)$  then  $f$  is bounded on  $[a, b)$ .

2.  $\times$   $\mu$   $[a, b)$   $\Leftarrow$  مسلسل  $f: [a, b) \rightarrow \mathbb{R}$  اور  $a, b \in \mathbb{R}$

تَب  $f$  بيوختی ہے  $\mu$   $[a, b)$

2.  $\times$

Let  $a, b \in \mathbb{R}$  and  $f: (a, b) \rightarrow \mathbb{R}$  continuous on  $(a, b)$  then  $f$  is bounded on  $(a, b)$ .

3.  $\times$   $\mu$   $(a, b)$   $\Leftarrow$  مسلسل  $f: (a, b) \rightarrow \mathbb{R}$  اور  $a, b \in \mathbb{R}$

3.  $\times$

Let  $a, b \in \mathbb{R}$  and  $f: [a, b] \rightarrow \mathbb{R}$  continuous on  $[a, b]$  then  $f$  is bounded on  $[a, b]$ .

4.  $\checkmark$   $\mu$   $[a, b]$   $\Leftarrow$  مسلسل  $f: [a, b] \rightarrow \mathbb{R}$  اور  $a, b \in \mathbb{R}$

4.  $\checkmark$

Let  $a, b, c, d \in \mathbb{R}$ . Choose the true statement.

فرض کرد  $a, b, c, d \in \mathbb{R}$  تب صادق عبارت

Options :

There exists a continuous onto function  $f: [a, b] \rightarrow [c, d]$ .

1. ✓  $f: [a, b] \rightarrow [c, d]$  مسلسل متعامل پر بر متعامل موجود ہوگا

There exists a continuous onto function  $f: [a, b] \rightarrow (a, b)$ .

2. ✗  $f: [a, b] \rightarrow (a, b)$  مسلسل متعامل پر بر متعامل موجود ہوگا

There exists a continuous onto function  $f: [a, b] \rightarrow [a, b)$ .

3. ✗  $f: [a, b] \rightarrow [a, b)$  مسلسل متعامل پر بر متعامل موجود ہوگا

There exists a continuous onto function  $f: [a, b] \rightarrow (a, b)$ .

4. ✗  $f: [a, b] \rightarrow (a, b)$  مسلسل متعامل پر بر متعامل موجود ہوگا

Question Number : 115 Question Id : 23366711441 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Choose the true statement.

صادقاً عبارتوں میں سے

Options :

Continuous real valued functions are Lipschitz.

مستمر حقیقی قدری تقاضی لپشٹز ہے

1. ✖

Lipschitz real valued functions are Continuous.

لپشٹز حقیقی قدری تقاضی مستمر ہیں

2. ✔

Uniformly continuous real valued functions are Lipschitz.

یکساں مستمر حقیقی قدری تقاضی لپشٹز ہیں

3. ✖

Continuous real valued functions are uniformly continuous.

مستمر حقیقی قدری تقاضی ہمیشہ یکساں مستمر ہیں

4. ✖

Question Number : 116 Question Id : 23366711442 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of  $\lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x$

$$\lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x$$

Options :

1. ✖  $\ln 2$

2. ✖ 1

3. ✔ e

4. ✖  $\infty$

Question Number : 117 Question Id : 23366711443 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of  $\lim_{x \rightarrow \infty} (\tan x \log x)$

$$\lim_{x \rightarrow \infty} (\tan x \log x)$$

Options :

1. ✖ 2

2. ✖ 1

3. ✖ 3

4. ✓ 0

Question Number : 118 Question Id : 23366711444 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $f'(x) = \frac{1}{2-x^2}$  Then what would be the sum of the lower and upper bound of  $f(1)$ , if $f(0) = 1$  and  $f(x)$  is defined for  $[0, 1]$ 

دگر  $f'(x) = \frac{1}{2-x^2}$  میں بالائی اور نشیبی حد  $f(1)$  کیا ہوگا  
 جبکہ  $f(0) = 1$  اور  $f(x)$  کو تعریف  $[0, 1]$  ہے

Options :

1. ✗ 0.5

2. ✗ 1.5

3. ✗ 2.5

4. ✓ 3.5

Question Number : 119 Question Id : 23366711445 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $f$  and  $g$  belong to  $R[a, b]$ , then choose the false statement.

اگر  $f, g$  دونوں  $R[a, b]$  سے متعلق ہیں تب  
 کا وہ بیان کوٹا ہے

Options :

the sum  $f + g$  belongs to  $R[a, b]$ .

1. ✖  $f + g$  کا مجموعہ  $R[a, b]$  سے متعلق ہے

the difference  $f - g$  belongs to  $R[a, b]$ .

2. ✖  $f - g$  کا حاصل  $R[a, b]$  سے متعلق ہے

the product  $f.g$  belongs to  $R[a, b]$ .

3. ✖  $f.g$  کا حاصل ضرب  $R[a, b]$  سے متعلق ہے

the quotient  $f/g$  belongs to  $R[a, b]$ .

4. ✔  $f/g$  کا حاصل  $R[a, b]$  سے متعلق ہے

Question Number : 120 Question Id : 23366711446 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

For  $x \in R$ ,  $\lim_{n \rightarrow \infty} \left( \left( \frac{1}{n} \right) \sin(nx + n) \right) =$

Since  $\lim_{n \rightarrow \infty} \left( \left( \frac{1}{n} \right) \sin(nx + n) \right) =$

Options :

1. ✖ -1

2. ✔ 0

3. ✖ 1

4. ✖ 2

Question Number : 121 Question Id : 23366711447 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find  $\sum_{n=1}^{\infty} \frac{1}{n(n+1)(n+2)} =$

Since  $\sum_{n=1}^{\infty} \frac{1}{n(n+1)(n+2)} =$

Options :

1. ✖  $-\frac{1}{2}$

2. ✖ 0

3. ✖  $\frac{1}{2}$

4. ✔  $\frac{1}{4}$

Question Number : 122 Question Id : 23366711448 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Function  $f$  should be \_\_\_\_\_ on  $[a, b]$  according to Rolle's theorem.

روں کے تحت متبادل  $f$  —————  $[a, b]$  پر دے

Options :

continuous

1. ✔

مستمر

non-continuous

2. ✖

غیر مستمر

integral

3. ✖

تکامل

non-existent

مکسر موجود

4. ✖

Question Number : 123 Question Id : 23366711449 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What are/is the conditions to satisfy Lagrange's mean value theorem?

اگر ایسے درمیان دو نکتے ہوں جن کے درمیان میں لائی گئی ہو

Options :

$f$  is continuous on  $(a, b)$

$f$  مسلسل ہے  $(a, b)$  پر

1. ✖

$f$  is differentiable on  $(a, b)$

$f$  تفوقاً یوئیر ہے  $(a, b)$  پر

2. ✖

$f$  is differentiable and continuous on  $(a, b)$

$f$  مسلسل اور تفوقاً یوئیر ہے  $(a, b)$  پر

3. ✔

$f$  is differentiable and non-continuous on  $(a, b)$

$f$  تفرق پذیر اور غیر مسلسل ہے  $(a, b)$  پر

4. ✖

Question Number : 124 Question Id : 23366711450 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Check about the continuity of function given by  $f(x) = \sqrt{x}$  in interval  $[0, 2]$

تعملاً  $f(x) = \sqrt{x}$  کا وقفہ  $[0, 2]$  سے وضع ہے اس کا جائزہ کر

Options :

Discontinuity everywhere

ہر جگہ غیر مسلسل ہے

1. ✖

can't say about continuity of  $f$

غیر طے شدہ ہے  $f$  کے لیے

2. ✖

it is not uniformly continuous

$f$  یکساں مسلسل نہیں ہے

3. ✖

it is uniformly continuous

ف یساں مسلسل ہے

4. ✓

Question Number : 125 Question Id : 23366711451 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The value of 'x' for which the function  $f(x) = \frac{x^2-3x-4}{x^2+3x-4}$  is not continuous are

x کی کی قیمت پر  $f(x) = \frac{x^2-3x-4}{x^2+3x-4}$  غیر مسلسل ہے

Options :

1. ✗ 4 and -1
2. ✗ 4 and 1
3. ✓ -4 and 1
4. ✗ -4 and -1

Question Number : 126 Question Id : 23366711452 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Find  $\|P\|$  for the partition  $P = \{1,4,5,8,13\}$

$P = \{1, 4, 5, 8, 13\}$  کا جز تقسیم  $\|P\|$  معلوم کرو

Options :

1. ✖ 1

2. ✖ 3

3. ✔ 5

4. ✖ 7

Question Number : 127 Question Id : 23366711453 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $f: [a, b] \rightarrow \mathbb{R}$  is integrable on  $[a, b]$ . then---- where  $M$  and  $m$  are supremum and infimum of  $f$  on  $[a, b]$ .

اگر  $f: [a, b] \rightarrow \mathbb{R}$   $[a, b]$  پر تعریف شدہ یکپارچہ پذیر تابع ہو تو  $M$  اور  $m$   $[a, b]$  پر  $f$  کی بیش و کم قیمتوں کے درمیان میں ہوں گے۔

Options :

1. ✖  $m(b - a) > \int_a^b f(x) dx > M(b - a)$

2. ✖  $m(b - a) \geq \int_a^b f(x) dx \geq M(b - a)$

3. ✔  $m(b - a) \leq \int_a^b f(x) dx \leq M(b - a)$

4. ✖  $m(b - a) < \int_a^b f(x) dx < M(b - a)$

Question Number : 128 Question Id : 23366711454 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the value of the given,  $\lim_{x \rightarrow 0} \left( \frac{2}{x} \right)$

دے دیے گئے ہیں کہ  $\lim_{x \rightarrow 0} \frac{2}{x}$

Options :

1. ✓  $\infty$

2. ✗ 0

3. ✗  $\frac{1}{2}$

4. ✗  $\frac{3}{2}$

Question Number : 129 Question Id : 23366711455 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find  $\int_0^8 x \, dx =$

دے دیے گئے ہیں کہ  $\int_0^8 x \, dx =$

Options :

1. ✗ 34

2. ✓ 32

3. ✖ 21

4. ✖ 24

Question Number : 130 Question Id : 23366711456 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What will be nature of the  $f(x) = 10 - 9x + 6x^2 - x^3$  for  $x < 1$ 

اے کے لیے فکٹریٹ کیا ہوگی  $f(x) = 10 - 9x + 6x^2 - x^3$

Options :

Decreases

تکثری

1. ✔

Increases

اضافی

2. ✖

Cannot be determined for  $x < 1$ 

اے کے لیے ہند کر سکتے

3. ✖

A constant function

مستقل تعامل

4. ✖

Question Number : 131 Question Id : 23366711457 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Let  $V$  be a vector space over field  $F$  then which of the following is incorrect

میدان  $F$  پر  $V$  سمتیہ فضا ہے جس میں مکتوبہ ذیل میں  
کا ضرب بیان کوٹا ہے

Options :

$V$  is an abelian group under addition

$V$  دیلی گروپ ہے عمل جمع کے تحت

1. ✖

There must be two binary operations in  $V$

$V$  میں دو دکنی عمل کاروں ہوں

2. ✔

$V$  is closed w.r.t scalar multiplication

$V$  بندشی ہے عددیہ ضرب پر

3. ✖

$V$  is an abelian group under multiplication

$V$  دیلی گروپ ہے عمل ضرب کے تحت

4. ✖

Question Number : 132 Question Id : 23366711458 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If a vector  $u = (1, -2, k)$  in  $R^3$  be a linear combination of vector  $v = (3, 0, -2)$  and  $w = (2, -1, -5)$  then

اگر  $u = (1, -2, k)$  سمتیہ  $R^3$  میں، جو سمتیہ  $v = (3, 0, -2)$  اور  $w = (2, -1, -5)$  کا خطی اجتماع ہے تب

Options :

1. ✓  $k = -8$

2. ✗  $k$  can be any real number

3. ✗  $k = 8$

4. ✗  $k = -3$

$k$  کوئی بھی حقیقی عدد نہ ہو

Question Number : 133 Question Id : 23366711459 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If vector  $(x_1, x_2, x_3, x_4), (y_1, y_2, y_3, y_4), (z_1, z_2, z_3, z_4), (w_1, w_2, w_3, w_4)$  are linearly independent in  $R^4$  if  $\alpha, \beta, \gamma, \delta$  are scalars then  $\alpha(x_1, x_2, x_3, x_4) + \beta(y_1, y_2, y_3, y_4) + \gamma(z_1, z_2, z_3, z_4) + \delta(w_1, w_2, w_3, w_4) = 0$  then the value of  $\alpha + \beta + \gamma + \delta$  is

اگر سہ  $(x_1, x_2, x_3, x_4), (y_1, y_2, y_3, y_4), (z_1, z_2, z_3, z_4), (w_1, w_2, w_3, w_4)$  خطی خود مختار  $R^4$  میں ہیں اگر  $\alpha, \beta, \gamma, \delta$  عددی ہیں تب  $\alpha(x_1, x_2, x_3, x_4) + \beta(y_1, y_2, y_3, y_4) + \gamma(z_1, z_2, z_3, z_4) + \delta(w_1, w_2, w_3, w_4) = 0$  تو قیمت  $\alpha + \beta + \gamma + \delta =$

Options :

1. ✗ 4
2. ✓ 0
3. ✗ -4
4. ✗ 2

Question Number : 134 Question Id : 23366711460 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Let  $S = \{(-3, 5, 2), (0, 2, -2), (8, -1, \frac{1}{2}), (-4, 1, 0)\}$  be a subset of a vector space  $R^3$  then

فرض کرو  $S = \{(-3, 5, 2), (0, 2, -2), (8, -1, \frac{1}{2}), (-4, 1, 0)\}$  مت مست  $R^3$  پر مت

Options :

S is linearly independent since it has finite vectors

1. ✖  $S$  خطی خود مختار ہے جبکہ یہ متناہی مت مست ہے

S is linearly independent since it has more than three vectors

2. ✖  $S$  خطی خود مختار ہے جبکہ یہ تین سے زائد مت مست رکھتا ہے

S is linearly dependent since it has finite vectors

3. ✖  $S$  خطی تابع جبکہ یہ متناہی مت مست رکھتا ہے

S is linearly dependent since it has more than three vectors

4. ✔  $S$  خطی تابع ہے جبکہ یہ 3 سے زائد مت مست رکھتا ہے

Question Number : 135 Question Id : 23366711461 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following sets of vectors in  $R^3$  are linearly independent

مندرجہ ذیل سیٹ کے سٹ  $R^3$  خطی خود تابع ہے .

Options :

1. ✖  $\{(0,0,1), (0,1,0), (0,1,1)\}$

2. ✔  $\{(0,1,0), (1,0,1), (1,1,0)\}$

3. ✖  $\{(1,0,0), (0,1,0), (0,0,0)\}$

4. ✖  $\{(1,0,0), (0,1,0), (1,1,0)\}$

Question Number : 136 Question Id : 23366711462 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a linear transformation

مندرجہ ذیل میں کون سا خطی (ستعالہ نہیں ہے)

Options :

$T: V_3(R) \rightarrow V_3(R)$  is defined by  $T(x, y, z) = (2x - 3y, 7y + 2z)$

1. ✖  $T(x, y, z) = (2x - 3y, 7y + 2z)$  ہے اور ضلع کیا گیا ہے  $T: V_3(R) \rightarrow V_3(R)$

$T: V_3(R) \rightarrow V_2(R)$  is defined by  $T(x, y, z) = (z, 2x + y)$

2. ✖

$$T(x, y, z) = (z, 2x + y)$$

دے دیا گیا ہے  $T: V_3(R) \rightarrow V_2(R)$

$T: V_3(R) \rightarrow V_2(R)$  is defined by  $T(x, y, z) = (x^2, y)$

3. ✔

$$T(x, y, z) = (x^2, y)$$

دے دیا گیا ہے  $T: V_3(R) \rightarrow V_2(R)$

$T: V_3(R) \rightarrow V_3(R)$  is defined by  $T(x, y, z) = (y, -z, -x)$

4. ✖

$$T(x, y, z) = (y, -z, -x)$$

دے دیا گیا ہے  $T: V_3(R) \rightarrow V_3(R)$

Question Number : 137 Question Id : 23366711463 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $W$  be a subset of an  $n$ -dimensional vector space  $V$ , then which one of the following is not possible

فرض کرو کہ  $W$  تحت سٹ ہے  $n$  البعدیت و دے سبب متضاد ہے کہ  
تہ مندرجہ ذیل میں کوئی نا قابل ہستی ہے

Options :

1. ✖  $\dim W = \dim V$

2. ✔  $\dim W > \dim V$

3. ✖  $\dim W < \dim V$

4. ✖  $\dim W = 0$

Question Number : 138 Question Id : 23366711464 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $U$  and  $V$  be two vector spaces over the same field  $R$ . if  $T: U \rightarrow V$  be a linear map the which one of the following is incorrect

میدان  $R$  پر  $U$  اور  $V$  دو سمتیہ فضا ہیں اور  $T: U \rightarrow V$  خطی نقیشتی ہے جسے مندرجہ ذیل میں گامذب کیا ہے

Options :

1. ✖  $T(u_1 - u_2) = T(u_1) - T(u_2), u_1, u_2 \in U$

2. ✖  $T(u_1 + u_2) = T(u_1) + T(u_2), u_1, u_2 \in U$

3. ✔  $T(u_1 \cdot u_2) = T(u_1) \cdot T(u_2)$

4. ✖  $T(3u_1 + 2u_2) = 3T(u_1) + 2T(u_2)$

Question Number : 139 Question Id : 23366711465 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $T: \mathbb{R}^2 \rightarrow \mathbb{R}^2$  such that  $T(1,2)=(2,3)$  and  $T(0,1)=(1,4)$  then

دیکھو  $T: \mathbb{R}^2 \rightarrow \mathbb{R}^2$  جسکے  $T(1,2)=(2,3)$  اور  $T(0,1)=(1,4)$  ہیں

Options :

T is not linear

1. ✖  $T$  خطی نہیں ہے

T is linear but not unique

2. ✖  $T$  خطی مگر منفرد نہیں

T is linear and unique

3. ✔  $T$  خطی اور منفرد ہے

T may or may not be linear

4. ✖  $T$  خطی ہو یا نہ ہو

Question Number : 140 Question Id : 23366711466 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $T: \mathbb{R}^2 \rightarrow \mathbb{R}^2$  such that  $T(1,1)=(2,0)$  and  $T(0,1)=(1,-1)$  then

اگر  $T: \mathbb{R}^2 \rightarrow \mathbb{R}^2$  جیسے  $T(1,1)=(2,0)$  اور  $T(0,1)=(1,-1)$  ہے

Options :

1. ✖  $T(5,4)=(5,4)$
2. ✖  $T(5,4)=(1,0)$
3. ✖  $T(5,4)=(10,8)$
4. ✔  $T(5,4)=(9,1)$

Question Number : 141 Question Id : 23366711467 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

Let  $T: U \rightarrow V$  be a linear map the

فکرو  $T: U \rightarrow V$  خطی تبدیلی ہے

Options :

$R(T)$  is a subspace of  $U$  and  $N(T)$  is a subspace of  $V$

$R(T)$  رشتہ فضا  $U$  کا اور  $N(T)$  نکتہ فضا  $V$  کا

1. ✖

$N(T)$  is a subspace of  $U$  but  $R(T)$  is not a subspace of  $V$

$N(T)$  تحت فضا ہے  $U$  کا مگر  $R(T)$  تحت فضا ہے  $V$  کا نہیں ہے۔

2. ✖

$R(T)$  is a subspace of  $V$  and  $N(T)$  is a subspace of  $U$

$R(T)$  تحت فضا ہے  $V$  کا اور  $N(T)$  تحت فضا ہے  $U$

3. ✔

$R(T)$  is a subspace of  $V$  but  $N(T)$  is not a subspace of  $U$

$R(T)$  تحت فضا ہے  $V$  کا مگر  $N(T)$  تحت فضا ہے  $U$  کا نہیں ہے۔

4. ✖

Question Number : 142 Question Id : 23366711468 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $T: R^3 \rightarrow R^3$  be a linear map defined by  $T(x_1, x_2, x_3) = (x_1, x_2, 0)$  then rank of  $T$  is

اگر  $T: R^3 \rightarrow R^3$  ایک خطی تبدیلی ہے  $T(x_1, x_2, x_3) = (x_1, x_2, 0)$  سے  
و رصع  $T$  کی رتبہ

Options :

1. ✖ 0

2. ✖ 1

3. ✓ 2

4. ✗ 3

Question Number : 143 Question Id : 23366711469 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $T: U \rightarrow V$  be a linear map are  $U$  is finite finite-dimensional vector space then which one of the following is correct

اگر  $T: U \rightarrow V$  ایک خطی تبدیلی ہے  $U$  متناہی البعدی  
سہ طے پایہ ہے تب صدق مذكورہ ذیل میں

Options :

1. ✗  $\dim R(T) + \dim V = \dim U$

2. ✗  $\dim R(T) + \dim N(T) = \dim V$

3. ✗  $\dim R(T) + \dim U = \dim N(T)$

4. ✓  $\dim R(T) + \dim N(T) = \dim U$

Question Number : 144 Question Id : 23366711470 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The minimum and maximum eigenvalues of the matrix  $\begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$  are -2 and 6, respectively. What is the other eigenvalue

اقل ترین اور عظم ترین ایگن قدریں مائٹری  $\begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$  -2 اور 6 ہیں جب کہ دوسرے ایگن قدریں

Options :

1. ✖ 5
2. ✔ 3
3. ✖ 1
4. ✖ -1

Question Number : 145 Question Id : 23366711471 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

The characteristic equation of matrix  $A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}$  is

ماتریس  $A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}$  کا مشخصی مساوات

Options :

1. ✖  $\lambda^3 + 6\lambda^2 + 9\lambda + 4 = 0$
2. ✖  $\lambda^3 - 6\lambda^2 - 9\lambda + 4 = 0$
3. ✔  $\lambda^3 - 6\lambda^2 + 9\lambda - 4 = 0$
4. ✖  $\lambda^3 - 6\lambda^2 + 12\lambda - 4 = 0$

Question Number : 146 Question Id : 23366711472 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Correct Marks : 1 Wrong Marks : 0

In an inner product space  $V(F)$  for  $a \in F$ ,  $\alpha, \beta, \gamma \in V$ ,  $(\alpha, a\beta + a\gamma)$

$\rightarrow$  خطی حاصل ضرب فضا  $V(F) =$   $(\alpha, a\beta + a\gamma)$  ،  $\alpha \in V$  ،  $\beta, \gamma \in V$  ،  $a \in F$

Options :

1. ✖  $a(\alpha, \beta) + a(\alpha, \gamma)$

2. ✖  $\bar{a}(\beta, \alpha) + \bar{a}(\gamma, \alpha)$

3. ✔  $\bar{a}(\alpha, \beta) + \bar{a}(\alpha, \gamma)$

4. ✖  $\bar{a}(\overline{\alpha, \beta}) + \bar{a}(\overline{\alpha, \gamma})$

Question Number : 147 Question Id : 23366711473 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $\alpha, \beta$  are orthogonal unit vectors, then  $\|\alpha - \beta\| =$

اگر  $\alpha, \beta$  متعامد یونٹ ویکٹرز ہیں تو  $\|\alpha - \beta\| =$

Options :

1. ✖ 0

2. ✖ 1

3. ✔  $\sqrt{2}$

4. ✖ 2

Question Number : 148 Question Id : 23366711474 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If  $\alpha = (-1, 0, 1), \beta = (2, 0, -2)$  then  $\|\alpha + \beta\| =$

اگر  $\alpha = (-1, 0, 1)$  اور  $\beta = (2, 0, -2)$  تو  $\|\alpha + \beta\| =$

Options :

1. ✖ 0
2. ✖ 1
3. ✖ 2
4. ✔  $\sqrt{2}$

Question Number : 149 Question Id : 23366711475 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The vector of unit length orthogonal to  $\alpha = (2, -1, 6)$  in  $V_3(R)$  w.r.to standard inner product is

ایکائی طول والا سیکٹر  $\alpha = (2, -1, 6)$  کے عمودوار  $V_3(R)$  میں  
بشورے معیاری دیکروں حاصل ضرب

Options :

1. ✔  $\left(\frac{2}{3}, -\frac{2}{3}, -\frac{1}{3}\right)$
2. ✖  $(2, -2, -1)$
3. ✖  $(1, 1, 1)$
4. ✖  $(0, 0, 0)$

Question Number : 150 Question Id : 23366711476 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let  $W$  be a subspace of a finite-dimensional vector space  $V(F)$  then  $\dim(V/W) =$

متناهی ابعادى سمتہ قفا  $V(F)$  کا  $W$  قفا ہے  
 جب  $\dim \frac{V}{W} =$

Options :

1. ✗  $\dim W - \dim V$
2. ✓  $\dim V - \dim W$
3. ✗  $\dim V + \dim W$
4. ✗ 0