CAREERS360
PREPARATION Series

AP EDCET 2024

Mathematics

Question Paper & Answer Key - Urdu

Andhra Pradesh State Council of Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

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

Question Paper Name :	MATHEMATICS URDU 8th June 2024 Shift 1
Subject Name :	MATHEMATICS URDU
Creation Date :	2024-06-13 10:31:22
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MATHEMATICS URDU

Group Number :	1
Group Id :	87326532
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	150

General English

Section Id :	873265155
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	25
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	873265186

Question Shuffling Allowed : No

Question Id : 8732654682 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (1 to 5)

Question Label : Comprehension

1-5 Questions : Read the following passage and answer the questions that follow :

Our present idea about the motion of bodies dates back to Galileo and Newton. Before that people believed in Aristotle, who said that the natural state of a body was to be at rest and that it moved only if driven by a force or impulse. It followed that a heavy body should fall faster than a lighter one, because it would have a greater pull towards the earth.

The Aristotelian tradition also held that one could work out all the laws that govern the universe by pure thought; it was not necessary to check by observation. So no one until Galileo bothered to see whether bodies of different weight did in fact fall at different speeds. It is said that Galileo demonstrated that Aristotle's belief was false by dropping weights from the leaning tower of Pisa. The story is almost certainly untrue, but Galileo did do something equivalent: he rolled balls of different weights down a smooth slope. The situation is similar to that of heavy bodies falling vertically, but it is easier to observe because the speeds are smaller. Galileo's measurements indicated that each body increased its speed at the same rate, no matter what its weight. For example, if you let go off a ball on a slope that drops by one meter for every ten meters you go along, the ball will be travelling down the slope at a speed of about one meter per second after one second, two meters per second after two seconds, and so on, however heavy the ball. Of course a lead weight would fall faster than a feather, but that is only because a feather is slowed down by air resistance. If one drops two bodies that don't have much air resistance, such as two different lead weights, they fall at the same rate.

Sub questions

Question Number : 1 Question Id : 8732654683 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Our preset idea of motion dates back to_____?

Options :

1. ✖ Aristotle

2. ✖ Plato

3. ✖ Copernicus

4. ✔ Galileo

Question Number : 2 Question Id : 8732654684 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

According to the Aristotelian tradition the laws of the universe can be understood by _____?

Options :

1. ✖ Logic

2. ✔ Thought

3. ✖ Faith

4. ✖ Observation

Question Number : 3 Question Id : 8732654685 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which of the following falls down faster?

Options :

1. ✖ Feather

2. ✖ Ball

3. ✖ Nothing

4. ✔ Lead

Question Number : 4 Question Id : 8732654686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find the word in the passage which means 'opposition'?

Options :

1. ✖ Logic

2. ✖ Thought

3. ✖ Faith

4. ✔ Resistance

Question Number : 5 Question Id : 8732654687 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Find the antonym for 'equivalent' in the passage

Options :

1. ✖ Identical

2. ✖ Similar

3. ✔ Different

4. ✖ Opposite

Sub-Section Number : 2
Sub-Section Id : 873265187
Question Shuffling Allowed : Yes

Question Number : 6 Question Id : 8732654688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The match _____by the time we reached the stadium.

Options :

1. ✔ had started

2. ✖ was starting

3. ✖ would have started

4. ✖ started

Question Number : 7 Question Id : 8732654689 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

My mobile phone is stolen (Choose the correct Active Voice)

Options :

1. ✖ Some steals my mobile phone.

2. ✔ Someone has stolen my mobile phone

A thief has stolen my mobile phone

3. ✖

My mobile phone is stolen by someone.

4. ✖

Question Number : 8 Question Id : 8732654690 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

I said to my friend "Stop smoking" (Choose the correct Indirect Speech)

Options :

I ordered my friend that he should stop smoking

1. ✖

I advised my friend to stop smoking

2. ✔

I told my friend that smoking is injurious to health

3. ✖

I requested my friend not to smoke

4. ✖

Question Number : 9 Question Id : 8732654691 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

She was ignorant. She admitted it. (Combine these two sentences into one Simple Sentence)

Options :

She was ignorant but he admitted it

1. ✖

Being ignorant, she admitted it

2. ✖

3. ✖ Despite her ignorance, she admitted it

4. ✔ She admitted her ignorance

Question Number : 10 Question Id : 8732654692 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Find the correct sentence among the following :

Options :

1. ✖ One of the boys are making lot of noise in the class.

2. ✖ Furnitures are properly arranged in the hall.

3. ✔ He is too weak to walk

4. ✖ I could not be able to get through the examination inspite of my hard work.

Question Number : 11 Question Id : 8732654693 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Choose the appropriate preposition:

She has got lovely gold bangles____ her arm

Options :

1. ✖ in

2. ✖ by

3. ✔ on

4. ✖ at

Question Number : 12 Question Id : 8732654694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Identify the tense in the following sentence:

How long have you been reading that book?

Options :

1. ✖ Past simple

2. ✖ Present continuous

3. ✖ Past continuous

4. ✔ Present perfect continuous

Question Number : 13 Question Id : 8732654695 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Choose the correct spelling:

Options :

1. ✔ Playwright

2. ✖ Playright

Playwrite

3. ✖

Playerite

4. ✖

Question Number : 14 Question Id : 8732654696 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Transform the following Simple sentence into a Compound sentence :

Being a vegetarian, she doesn't eat meat.

Options :

She is vegetarian; she does not eat meat

1. ✔

She, a vegetarian do not eat meat.

2. ✖

She is a vegetarian, so she does not eat meat.

3. ✖

She is vegetarian….not eat meat.

4. ✖

Question Number : 15 Question Id : 8732654697 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Turn into direct speech :

Ramya told me that she wants to go to Canada next year.

Options :

Ramya said, "I want to go to Canada next year".

1. ✔

2. ✖ Ramya says, “I want to go to Canada next year”.

3. ✖ Ramya said, she wishes “to go to Canada next year”.

4. ✖ Ramya says, “I wanted to go to Canada next year”.

Question Number : 16 Question Id : 8732654698 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What is the synonym for the word ‘Synonym’?

Options :

1. ✖ Supremacist

2. ✖ Opposite

3. ✔ Similar

4. ✖ Infinitude

Question Number : 17 Question Id : 8732654699 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Turn into reported speech :

I am going away for a few days.

Options :

1. ✖ She says she is going away for a few days

2. ✖ She said she is going away for a few days

3. ✔ She said that she was going away for a few days

4. ✖ She said that she is going away for a few days

Question Number : 18 Question Id : 8732654700 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Choose the correct sentence.

Options :

1. ✖ Her hairs were grown

2. ✔ Her hair is grown

3. ✖ Her hair are grown

4. ✖ Her hairs are grown

Question Number : 19 Question Id : 8732654701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

He tried to kill the snake, _____ it went into the anthill.

Options :

1. ✖ instead

2. ✖ for

3. ✖ still

4. ✔ however

Question Number : 20 Question Id : 8732654702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

He crossed _____ Indian ocean twice.

Options :

1. ✔ the

2. ✖ a

3. ✖ an

4. ✖ zero article

Question Number : 21 Question Id : 8732654703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which among the following is the correct sentence?

Options :

1. ✖ Ranadhir is going to arrive tomorrow

2. ✖ Ranadhir will have arrive tomorrow

3. ✔ Ranadhir will arrive tomorrow

Ranadhir will be arrive tomorrow

4. ✖

Question Number : 22 Question Id : 8732654704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Identify the correct sentence.

Options :

The porter insisted helping us with baggages.

1. ✖

The porter insisted to help us with our baggage.

2. ✖

The porter insisted to carry a baggage.

3. ✖

The porter insisted on helping us with our baggage.

4. ✔

Question Number : 23 Question Id : 8732654705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In which sentence is the Article “an” used correctly.

Options :

He earns an about thousand rupees a month.

1. ✖

Shakespeare is an renowned dramatist .

2. ✖

I had never visited an hospital before.

3. ✖

He has been here about an hour.

4. ✔

Question Number : 24 Question Id : 8732654706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Identify the sentence in active voice.

Options :

1. ✖ A kite is being made by the boy.

2. ✖ She was admired very much by him.

3. ✖ English is spoken (by people) in many countries.

4. ✔ Somebody set the huts on fire.

Question Number : 25 Question Id : 8732654707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

One word Substitutes.

A thing occurring again and again for a long time _____.

Options :

1. ✖ anachronism

2. ✖ expatriate

3. ✔ chronic

4. ✖ coincident

General Knowledge

Section Id : 873265156

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 :	873265188
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 8732654708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In May 2024, who was appointed as the President of GST Appellate Tribunal?

مئی 2024 میں جی-ایس-ٹی - اپیلیٹ ٹریبونل کا صدر کے حیثیت سے کون تقرر ہوئے -

Options :

Justice (Retd) K.G.Bala Krishnan

جسٹیس (ریٹائرڈ) کے - جی - بالا کرشنن

1. ✖

Justice Surya kant

جسٹیس سریا کانت

2. ✖

Justice (Retd) Sanjaya Kumar Misra

جسٹیس (ریٹائرڈ) سنجیا کمار مسرا

3. ✔

Justice A.S.Bopanna

جسٹس - اے-ایس- بوپنا

4. ✖

Question Number : 27 Question Id : 8732654709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The scientists discovered the deepest "Taam Ja" blue hole near which country

'TAAM JA' سائنسدانوں نے کس ملک کے قریب سب سے گہرا بلو ہول دریافت کیا؟

Options :

Mexico

میکسیکو

1. ✔

Brazil

برازیل

2. ✖

Peru

پیرو

3. ✖

Chile

چلی

4. ✖

Question Number : 28 Question Id : 8732654710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which Delhi Sultan was known as "Prince of Moneyers"?

"Prince of Moneyers" کس دہلی کے سلطان کو کہا جاتا ہے؟

Options :

Alauddin Khalji

علاؤالدین خلجی

1. ✖

Firoz shah Tughluq

فیروز شاہ تغلق

2. ✖

Balban

بلبن

3. ✖

Muhammad bin Tugluq

محمد بن تغلق

4. ✔

Question Number : 29 Question Id : 8732654711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Gandhiji withdrew the non-cooperation movement because of

کس وجہ سے گاندھی جی نے عدم تعاون کی تحریک واپس لے لی؟

Options :

Chauri-Chaura incident

چوری-چورا واقعہ

1. ✔

Jallianwala Bagh massacre

جلیان والا باغ کا قتل عام

2. ✖

Gandhi-Irwin Pact

گاندھی-ارون معاہدہ

3. ✖

Poona Pact

پونا معاہدہ

4. ✖

Question Number : 30 Question Id : 8732654712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which of the following was not the work of Rabindranath Tagore?

مندرجہ ذیل میں کون سی تصنیف رابندر ناتھ ٹیگور کی نہیں ؟

Options :

Gitanjali

گیتانجلی

1. ✖

Anandmath

آنند مٹھ

2. ✔

Ghare-Baire

گھرے - باہیرے

3. ✖

Gora

گورا

4. ✖

Question Number : 31 Question Id : 8732654713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Rukmini Devi Arundale was famous dancer in

رکمنی دیوی اروندلے کس رقص کی مشہور رقاصہ تھی ؟

Options :

Kuchipudi

کچی پوڈی

1. ✖

Kathakali

کتھاکلی

2. ✖

Kathak

کتھک

3. ✖

Bharatanatyam

بھرتناٹیم

4. ✔

Question Number : 32 Question Id : 8732654714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following was the highest water fall in India?

مندرجہ ذیل میں ہندوستان میں سب سے اونچا آبشار ہے۔

Options :

Athirampally water falls

اتھیرام پلی آبشار

1. ✖

Kunchikal water falls

کنچکل آبشار

2. ✔

Hebbe water falls

ہیبے آبشار

3. ✖

Jog water falls

جوگ آبشار

4. ✖

Question Number : 33 Question Id : 8732654715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Seismology is the study of

اس کا مطالعہ ہے "seismology"

Options :

Volcanoes

آتش فشاں

1. ✖

Cyclones

طوفان

2. ✖

Earthquakes

زلزلے

3. ✔

Tsunamis

سونامی

4. ✖

Question Number : 34 Question Id : 8732654716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Who was the first Chairperson and Managing Director (CMD) of Bharatiya Mahila Bank?

بھارتیہ مہیلا بینک کے پہلے چیئرپرسن اور مینیجنگ ڈائریکٹر (CMD) کون تھے؟

Options :

Usha Ananthasubramanian

اوشا اننتھا سبرامنین

1. ✔

S.M.Swathi

ایس۔ایم سواتی

2. ✖

Leena Nair

لینا نائیر

3. ✖

Roshini Nadar

روشنی نادار

4. ✖

Question Number : 35 Question Id : 8732654717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Narasimhan Committee-II was appointed to recommend reforms on

کن اصلاحات کے لیے نرسمہن کمیٹی - II کا تقرر کیا گیا؟

Options :

Insurance sector

انشورنس شعبہ

1. ✖

Poverty

غربت

2. ✖

GST

جی - ایس - ٹی

3. ✖

Banking sector

بینکنگ کا شعبہ

4. ✔

Question Number : 36 Question Id : 8732654718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Part III of the constitution of India deals with

ہندوستان کے آئین کا حصہ III اس سے متعلق ہے

Options :

The Union and its Territory

یونین اور اس کا زمینی خطہ

1. ✖

Citizenship

شہریت

2. ✖

Directive Principles of State Policy

ریاستی پالیسی کے ہدایتی اصول

3. ✖

Fundamental Rights

بنیادی حقوق

4. ✔

Question Number : 37 Question Id : 8732654719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Who was the first Chief Election Commissioner of India?

ہندوستان پہلے چیف الیکشن کمیشنر کون تھے؟

Options :

S.P. Sen Varma

ایس - پی - سین ورما

1. ✖

Sukumar Sen

سکومار سین

2. ✔

Kalyan Sundaram

کلیان سندرم

3. ✖

T. Swaminathan

ٹی - سوامی ناتھن

4. ✖

Question Number : 38 Question Id : 8732654720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the theme of International Earth Day 2024?

- کا موضوع کیا ہے "International Earth Day - 2024"

Options :

Invest in our planet

ہمارے سیارے میں سرمایہ کاری

1. ✖

Restore our earth

ہماری زمین کی بحالی

2. ✖

Planet vs plastics

سیارہ بہ مقابلہ پلاسٹک

3. ✔

Protect our Species

ہماری نسلوں کا تحفظ

4. ✖

Question Number : 39 Question Id : 8732654721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Jim Corbett National Park was mainly the reserve of

— اس لیے یہ 'Jim Corbett National Park'

Options :

Tigers

شیر

1. ✔

Lions

شیر ببر

2. ✖

Rhinoceros

گینڈے

3. ✖

Crocodiles

مگرمچھ

4. ✖

Question Number : 40 Question Id : 8732654722 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the name of the document maintained by IUCN about the rare and endangered species of plants and animals?

پودوں اور جانوروں کی نایاب اور خطرے سے دوچار انواع کے بارے میں IUCN کے ذریعہ انتظام دستاویز کا کیا نام ہے؟

Options :

Green List

گرین لسٹ

1. ✖

Red List

ریڈ لسٹ

2. ✔

Black List

بلاک لسٹ

3. ✖

Yellow list

یلو لسٹ

4. ✖

Teaching Aptitude

Section Id :	873265157
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 :	873265189
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 8732654723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The role of a facilitator in classroom is_____.

کمرہ جماعت میں سہولت کار کا کیا کردار ہے؟

Options :

To dictate information to students

طلباء کو معلومات فراہم کرنا

1. ✖

To guide and support student learning

طالب علم کی اکتساب میں رہنمائی اور مدد کرنا

2. ✔

To administer tests

امتحانات کو انعقاد کرنا

3. ✖

To discipline students

طلبا میں نظم و ضبط قائم رکھنا

4. ✖

Question Number : 42 Question Id : 8732654724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Primarily the development of child is depend on _____.

بچہ کی نشوونما بنیادی طور پر ـــــ پر منحصر ہے۔

Options :

Parents

والدین

1. ✖

Society

سماج

2. ✖

School climate

اسکول کا ماحول

3. ✖

Environment

ماحولیات

4. ✔

Question Number : 43 Question Id : 8732654725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The position of the teacher is teaching learning process.

تدریسی اکتسابی عمل میں استاد کا مقام کیا ہے؟

Options :

a leader

رہنما

1. ✔

a dictator

آمر

2. ✖

a member

ایک رکن

3. ✖

a director

ایک ڈائریکٹر

4. ✖

Question Number : 44 Question Id : 8732654726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Effective teaching is a function of

موثر تدریسی ایڈ کام ہے، جو ــــ

Options :

Teachers satisfaction

استاد کا اطمینان

1. ✖

Teacher's honesty and commitment

استاد کی ایمانداری اور عزم

2. ✖

Teacher's making students learn and understand

طلباء کو سیکھنے اور سمجھنے میں مدد کرنا

3. ✔

Teachers liking for professional excellence.

اساتذہ کی پیشہ ورانہ قابلیت کے لیے پسندیدگی

4. ✖

Question Number : 45 Question Id : 8732654727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What does the term "learning style" refer to?

لفظ "Learning Style" سے کیا مراد ہے؟

Options :

The speed at which students learn

طلباء کی سیکھنے کی رفتار

1. ✖

The preferred way a student learns best

طلباء کا مفضل طریقہ جس سے وہ بہترین طریقے سے سیکھتے ہیں۔

2. ✔

The number of subjects a student can learn

مضامین کی تعداد جو طالب علم سیکھ سکتا ہے

3. ✖

The location where learning takes place.

وہ جگہ جہاں سیکھنے کا عمل ہوتا ہے۔

4. ✖

Question Number : 46 Question Id : 8732654728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What does "cognitive development" focus on in the context of education.

تعلیم کے تناظر میں "وقوفی نشوونما" کس پر مرکوز ہے؟

Options :

Physical growth of students

طلباء کی جسمانی نشوونما

1. ✖

Emotional intelligence

جذباتی ذہانت

2. ✖

Mental processes and skills like problem solving and critical thinking.

ذہنی عمل اور مہارتیں جیسے مسئلہ حل کرنا اور تنقیدی سوچ

3. ✔

Social interaction among students.

طلباء کے درمیان سماجی باہمی تعامل

4. ✖

Question Number : 47 Question Id : 8732654729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Interaction inside the classroom should generate

کمرہ جماعت میں کس طرح باہمی تعامل پیدا کرسکتے ہیں؟

Options :

Argument

بحث

1. ✖

Information

معلومات

2. ✖

Ideas

خیالات

3. ✔

Controversy

تنازعہ

4. ✖

Question Number : 48 Question Id : 8732654730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following statement is correct.

مندرجہ ذیل میں یہ بیان درست ہے۔

Options :

Syllabus is annexure to the curriculum

مضامین تعلیمی نصاب سے منسلک ہے

1. ✖

Curriculum is the same in all educational institutions.

تمام تعلیمی اداروں میں یکساں نصاب ہے

2. ✖

curriculum include both formal and informal education.

تعلیمی نصاب میں رسمی اور غیر رسمی تعلیم شامل ہیں

3. ✔

Curriculum does not include method of education.

تعلیمی طریقہ میں نصاب کو شامل نہیں کیا گیا

4. ✖

Question Number : 49 Question Id : 8732654731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which is the least important factor in teaching

تدریس میں سب سے کم اہمیت والا عامل یہ ہے ــــ

Options :

Punishing the students

طلباء کو سزا دینا

1. ✔

Maintaining discipline in the class

کمرہ جماعت میں نظم و ضبط برقرار رکھنا

2. ✖

Lecturering in impressive way

متاثر انداز میں تدریس

3. ✖

Drawing sketches and diagrams on the black board.

تختہ سیاہ پر تصویریں اور نقشے کھینچنا

4. ✖

Question Number : 50 Question Id : 8732654732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The ability to learn by an individual is

ایک فرد کی سیکھنے کی صلاحیت سے مراد

Options :

1. ✖ Acquired by the individual
خود سے حاصل کرنا

2. ✖ Developed by the teacher
استاد کے ذریعے تیار کردہ

3. ✖ Absorbed from environment
ماحول سے جذب کرنا

4. ✔ Occurred from within
اندرونی طور پر واقع ہونا

Mathematics

Section Id :	873265158
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 :	873265190
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 8732654733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the general solution of $\frac{dy}{dx} = \frac{1}{x\,secy+7}$ is $x = f(y) + C(secy + tany)$, then $e^{f(y)} =$ _____

$\frac{dy}{dx} = \frac{1}{x\sec y+7}$ کا عمومی حل $x = f(y) + C(\sec y + \tan y)$ ہے تو $e^{f(y)} =$ _____

Options :

1. ✗ $(1 + \sin y)\, e^{(\sec y+\tan y)}$

2. ✗ $(1 + \sin y)^{(\sec y-\tan y)}$

3. ✓ $(1 + \sin y)^{7(\sec y+\tan y)}$

4. ✗ $(1 + \sin y)\, e^{7(\sec y+\tan y)}$

Question Number : 52 Question Id : 8732654734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$$\frac{dy}{dx} = \frac{y}{x - \sqrt{xy}}$$

Options :

1. ✗ Linear equation in x

x میں خطی مساوات

2. ✗ Linear equation in y

y میں خطی مساوات

Bernoulli's equation in y

y میں برنالی کی مساوات

3. ✖

Bernoulli's equation in x

x میں برنالی کی مساوات

4. ✔

Question Number : 53 Question Id : 8732654735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the equation $\frac{dy}{dx} = \frac{(e^x - tany\ secx\ tanx)}{f(x)sec^2y}$ is an exact equation, then a possible function for $f(x)$ is

اگر مساوات $\frac{dy}{dx} = \frac{e^x - tany\ secx\ tanx}{f(x)sec^2y}$ ایک قطعی مساوات ہے تب قابلِ حل تفاعل $f(x)$ ہے۔

Options :

1. ✔ $Secx$

2. ✖ $tanx$

3. ✖ $Sinx$

4. ✖ $Cosx$

Question Number : 54 Question Id : 8732654736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

An integrating factor of $y\,dx - x\,dy + (y^2 + y^2x^2)dx + y^2 \sin y\,dy = 0$ is

$ydx - xdy + (y^2 + y^2x^2)dx + y^2 \sin y\,dy = 0$ کا تکمیل شدہ جزِ ضربی ہے۔

Options :

1. ✔ $\frac{1}{y^2}$

2. ✖ $\frac{1}{1+x^2}$

3. ✖ $\frac{1}{x^2y}$

4. ✖ $\frac{1}{x^2}$

Question Number : 55 Question Id : 8732654737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The solution of the equation $(2x\ \cos y + 3x^2y)\,dx + (x^3 - x^2\ \sin y - y)\,dy = 0$ passing through the point $(0,2)$ is

$(0,2)$ نقطہ سے گزرتی ہے۔ $(2x\cos y + 3x^2y)dx + (x^3 - x^2\sin y - y)dy = 0$ کا حل ایسا مساوات

Options :

1. ✖ $x\ \cos y + x^2y - y = -2$

2. ✖ $x^3 \cos y + xy - \frac{y}{2} = -1$

3. ✖ $x\cos y+x^2y-y^2=-4$

4. ✔ $x^2\cos y+x^3y-\frac{y^2}{2}=-2$

Question Number : 56 Question Id : 8732654738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The solution of $p^2+4p-5=0$, where $p=\frac{dy}{dx}$ is_____

$p=\frac{dy}{dx}$ ہے جہاں $p^2+4p-5=0$ کا حل

Options :

1. ✔ $(5x+y-c)\,(y-x-c)=0$

2. ✖ $(2x+y-c)\,(y+x-c)=0$

3. ✖ $(4x+y-c)\,(2y-x-c)=0$

4. ✖ $(3x+y-c)\,(y-2x-c)=0$

Question Number : 57 Question Id : 8732654739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The solution of $x^2(y-px)=y\,p^2;\quad p=\frac{dy}{dx}$ is

_____ کا حل $x^2(y-px)=yp^2,\ p=\frac{dy}{dx}$

Options :

1. ✔ $y^2=cx^2+c^2$

2. ✖ $y = cx$

3. ✖ $y = cx^2 + \sqrt{x}$

4. ✖ $y = c\sqrt{x} + c^2$

Question Number : 58 Question Id : 8732654740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Orthogonal trajectories of the family of straight lines $y = mx$ is a family of

خط مستقیم خطوط $y=mx$ کے کنبہ کا متعامدی خطِ حرکات کا کنبہ ہے۔

Options :

1. ✖ Parabolas

مکافی

2. ✔ Circles

دائرہ

3. ✖ Straight lines

مستقیم خطوط

4. ✖ Hyperbolas

زائدی کنبہ

Question Number : 59 Question Id : 8732654741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The orthogonal trajectories of the family of concentric circles with center at (a, b) is

ہم مرکز دائروں کے کنبہ کے تعمودی خطِ حرکت مرکزہ (a,b) مرکزہ ہیں ہے۔

Options :

Set of all parabolas having axes as coordinate axes.

تمام مکافی سٹ کا محور جن کے محتصات محور ہیں

1. ✖

Set of all concurrent straight lines through (a, b)

تمام متزاکز خطوط کا سیٹ جو (a,b) نقطہ سے گذرتا ہے۔

2. ✔

Set of all concentric ellipses with center at (a, b)

تمام ہم مرکز بیضوی جنکا مرکز (a,b) ہے

3. ✖

Set of all concentric circles with center at (0,0) and passing through (a, b)

تمام ہم مرکز دائروں کا سٹ جنکا مرکزہ $(0,0)$ ہے اور نقطہ (a,b) سے گذرتے ہیں

4. ✖

Question Number : 60 Question Id : 8732654742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general solution of $(D^3+4D)y=\sin 2x$ is

$(D^3+4D)y=\sin 2x$ کا عمومی حل

Options :

1. ✖ $y = C_1 + C_2 \cos 2x + C_3 \sin 2x - x \cos x$

2. ✖ $y = C_1 + C_2 \cos 2x + C_3 \sin 2x - x^2 \cos x$

3. ✔ $y = C_1 + C_2 \cos 2x + C_3 \sin 2x - \frac{x}{8} \sin 2x$

4. ✖ $y = C_1 + C_2 \cos 2x + C_3 \sin 2x - x \sin 2x$

Question Number : 61 Question Id : 8732654743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general solution of $\left(1 - \frac{1}{p}\right)\left(\frac{y}{p} - x\right) = 1$, where $p = \frac{dy}{dx}$ is

کا عمومی حل $\left(1 - \frac{1}{p}\right)\left(\frac{y}{p} - x\right) = 1$

جہاں $p = \frac{dy}{dx}$ ہے۔

Options :

1. ✖ $y = x + cx^2$

2. ✔ $y = cx + \frac{c^2}{c-1}$

3. ✖ $y = cx + \frac{c-1}{c}$

4. ✖ $y = cy + y^2$

Question Number : 62 Question Id : 8732654744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general solution of $(D^2-4D+4)y=x^3$

— کا عمومی حل $(D^2-4D+4)y=x^3$

Options :

1. ✔ $y=(c_1+c_2x)\,e^{2x}+\frac{x^3}{4}+\frac{3x^2}{4}+\frac{9x}{8}+\frac{3}{4}$

2. ✖ $y=(c_1+c_2x)\,e^{2x}+\frac{x^2}{4}+\frac{9x}{8}+\frac{1}{4}$

3. ✖ $y=(c_1+c_2x)\,e^{2x}+\frac{x^2}{38}+\frac{9x}{8}-\frac{3}{4}$

4. ✖ $y=(c_1+c_2x)\,e^{2x}+\frac{x^3}{6}+\frac{x^2}{4}+\frac{x}{8}+\frac{3}{4}$

Question Number : 63 Question Id : 8732654745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The complementary function of a linear non-homogeneous n^{th} order differential equation with constant coefficients is

n درجہ کے تفریقی تفاعل کے مستقل ضریب جو خطی غیر متجانس تکمیلی تفاعل سے بنتے ہیں —

Options :

1. ✖ A linear combination of any $(n-1)$ solutions of its homogeneous equation.

متجانس مساوات کے $(n-1)$ حل خطی اجتماع کے ساتھ ہیں۔

A linear combination of any n functions involving $\sin x$, $\cos x$, e^x, $\log x$

خطی اجتماع n تفاعل کے ساتھ جن میں $\sin x, \cos x, e^x, \log x$ شامل ہیں۔

2. ✖

A linear combination of any $\frac{n}{2}$ solutions of its homogeneous equation.

خطی اجتماع کوئی $\frac{n}{2}$ حل کیلئے جو ہم متجانس مساوات ہیں۔

3. ✖

A linear combination of n linearly independent solutions of its homogeneous equation.

خطی اجتماع جن کے n خود مختیار حل موجود متجانس مساوات میں ہیں۔

4. ✔

Question Number : 64 Question Id : 8732654746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If e^{ax} and $x\,e^{ax}$ $(a \neq 0)$ are two linearly independent solutions of a second order linear differential equation $f(D)y = 0$, then the particular integral of $f(D)y = e^{ax}$ is

دو درجی خطی تفرقی مساوات $f(D)y=0$ کے دو خود مختار حل e^{ax} اور xe^{ax} موجود ہوں تب جبکہ $a \neq 0$ ہے۔ $f(D)y = e^{ax}$ کا مخصوص تکمیلہ

Options :

1. ✖ $x^2 e^{ax}$

2. ✖ xe^{ax}

3. ✔ $\frac{x^2}{2}e^{ax}$

4. ✖ $\frac{x}{2}e^{ax}$

Question Number : 65 Question Id : 8732654747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$\frac{1}{D-a}f(x)=$, $(D=\frac{d}{dx})$

$(\because D=\frac{d}{dx})$ لہذا $\frac{1}{D-a}f(x)=$ —

Options :

1. ✖ $e^{-ax}\int e^{ax}f(x)dx$

2. ✖ $e^{ax}\int f(x)dx$

3. ✔ $e^{ax}\int f(x)e^{-ax}dx$

4. ✖ $e^{ax}\int f(x)e^{ax}dx$

Question Number : 66 Question Id : 8732654748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $y=ax^2+bx+c$ is particular integral of $\frac{d^2y}{dx^2}-5\frac{dy}{dx}+6y=x^2$, then $a+b+6c$ =

اگر $y=ax^2+bx+c$ ایک خصوصی تکمل ہے $\frac{d^2y}{dx^2}-5\frac{dy}{dx}+6y=x^2$ کا تو $a+b+6c$ = ____

Options :

1. ✖ $\frac{1}{6}$

2. ✖ $\frac{19}{108}$

3. ✔ $\frac{3}{2}$

4. ✖ $\frac{7}{108}$

Question Number : 67 Question Id : 8732654749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general solution of $(D^2+9)y=\cos^3 x$ is

$(D^2+9)y=\cos^3 x$ کا عمومی حل ____

Options :

1. ✖ $y=c_1\cos 3x+c_2\sin 3x+\frac{x}{24}\sin x+\frac{3}{32}\cos x$

2. ✔ $y=c_1\cos 3x+c_2\sin 3x+\frac{x}{24}\sin 3x+\frac{3}{32}\cos x$

3. ✖ $y = c_1 \cos 3x + c_2 \sin 3x + \frac{x}{24}\sin 3x + \frac{3}{32}\cos 3x$

4. ✖ $y = c_1 \cos 3x + c_2 \sin 3x + \frac{x}{24}\sin x + \frac{3}{32}\cos 3x$

Question Number : 68 Question Id : 8732654750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Orthogonal trajectories of the family of curves $r = a\theta$, where a is a parameter, is

Options :

1. ✖ $r^2 = c\, e^{\theta^2}$

2. ✖ $r^2 = \frac{c}{2}\, e^{-\theta}$

3. ✔ $\frac{r}{c} = \exp\left(-\frac{\theta^2}{2}\right)$

4. ✖ $\frac{r}{c} = \exp\left(\frac{\theta^2}{2}\right)$

Question Number : 69 Question Id : 8732654751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $y = c_1e^{ax} + c_2e^{-ax} + c_3 \sin ax$ is the general solution of $(D^2 - a^2)y = \sin ax$ (a is a positive integer); $y(0) = 0$ and $y(\pi) = 0$, then $c_1 + c_2 + c_3 =$

اگر $y = c_1e^{ax} + c_2e^{-ax} + c_3 \sin ax$ ایک عمومی حل ہے
جہاں a ایک مثبت صحیح عدد ہے $(D^2 - a^2)y = \sin ax$ کا
اور $y(0) = 0$ اور $y(\pi) = 0$ ہے تو ——— $= c_1 + c_2 + c_3$

Options :

1. $\frac{-1}{2a^2}$ ✔

2. $\frac{1}{2a^2}$ ✖

3. $2a$ ✖

4. $-2a$ ✖

Question Number : 70 Question Id : 8732654752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the curve satisfying the differential equation $(1+x^2)\frac{dy}{dx} + 2xy - 4x^2 = 0$ and passing through the origin is

منحنی مساوات جو مساوات $(1+x^2)\frac{dy}{dx} + 2xy - 4x^2 = 0$ کو مطمئن
بخشتی ہیں اور مبداء سے گزرتے ہیں۔ اس کی
مساوات کیا ہے ——

Options :

1. $3y\,(1+x^2)=\,4x^3$

2. $3y\,(1+x^3)=\,2x$

3. $2y\,(1+x^2)=\,3x^2$

4. $2y\,(x+x^2)=\,3x^3$

Question Number : 71 Question Id : 8732654753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the plane which cuts equal intercepts of unit length on the coordinate exes is

سطحی مساوات جو اکائی لمبائی کے مساوی طور پر محدد محوروں سے قطع کرتی ہے۔ جبکہ مخصوص محور سے گذرتے ہیں۔

Options :

1. $x+y+z=3$

2. $x+y+z=0$

3. $x+y+z=1$

4. $2x-y-z=1$

Question Number : 72 Question Id : 8732654754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the plane passing through the point (1,2,3) and parallel to the plane $2x + 3y + 6z = 9$ is

سطح معلوم کیا جو نقطہ (1,2,3) سے گذرتی ہے
اور سطح $2x+3y+6z=9$ کے متوازی بھی ہے۔

Options :

1. $2x + 3y + 6z + 26 = 0$ ✗

2. $2x + 3y + 6z - 26 = 0$ ✓

3. $2x - 3y - 6z = 9$ ✗

4. $2x + 3y - 6z = 26$ ✗

Question Number : 73 Question Id : 8732654755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The perpendicular distance from the origin to the plane $x+2y-2z+9=0$ is

سطح $x+2y-2z+9=0$ سے عمودی دوری کا فاصلہ
مبداء سے ہے۔

Options :

1. 2 ✗

2. 3 ✓

3. 4 ✗

4. ✖ 5

Question Number : 74 Question Id : 8732654756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The angle between the two planes $x - y + z = 6$ and $2x + y - z = 9$ is

$x-y+z=6$ اور $2x+y-z=9$ کے درمیانی زاویہ ___ ہے

Options :

1. ✖ $\frac{\pi}{3}$

2. ✖ $\frac{\pi}{4}$

3. ✔ $\frac{\pi}{2}$

4. ✖ π

Question Number : 75 Question Id : 8732654757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the plane through the line of intersection of the planes $x + 3y + 4z - 7 = 0$, $x + y + z - 1 = 0$ and perpendicular to the plane $x - 3y + 5z - 1 = 0$ is

خطی مساوات جو مستوی $x+3y+4z-7=0$ اور $x+y+z-1=0$ کے تقاطع کے خط سے گذرتے ہوئے مستوی $x-3y+5z-1=0$ کے عمود ہو ___ ہیں

Options :

1. $2x + 3y + z - 4 = 0$ ✖

2. $3x + y + 3 = 0$ ✔

3. $5x + y + 7 = 0$ ✖

4. $4x + 2y + 5z - 7 = 0$ ✖

Question Number : 76 Question Id : 8732654758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The length of the perpendicular from the point (7, 14, 5) to the plane $2x + 4y - 6 = 0$ is

$2x+4y-6=0$ کے عمودوار دوری مستوی کے (7, 14, 5) نقطہ کیلئے ہے۔

Options :

1. $\frac{70}{\sqrt{21}}$ ✖

2. $\frac{11}{\sqrt{21}}$ ✖

3. $\frac{59}{\sqrt{21}}$ ✔

4. $3\sqrt{21}$ ✖

Question Number : 77 Question Id : 8732654759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The projection of the line joining the points $A = (2,3,-1), B = (1,2,3)$ on the line having the direction ratios as $(2,3,-6)$ is

خطِ مستقیم جو نقطہ $A=(2,3,-1)$ کو نقطہ $B=(1,2,3)$ سے ملاتے ہوئے۔
جن کے سمتیہ نسبت ہے $(2,3,-6)$ جسکا سمتیہ ہے

Options :

1. ✖ $\frac{-2}{7}$

2. ✖ $\frac{-3}{4}$

3. ✔ $\frac{29}{7}$

4. ✖ $\frac{19}{7}$

Question Number : 78 Question Id : 8732654760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the line passing through the point $(2,1,4)$ and parallel to the line $x - y - 2z = 5, 3x + y + z = 6$ is

خط کے مساوات جو نقطہ $(2,1,4)$ سے گذرتے ہوئے خطوط
$3x+y+z=6$ اور $x-y-2z=5$ کے متوازی ہیں۔

Options :

1. ✖ $\frac{x-2}{-1}=\frac{y-1}{7}=\frac{z-4}{4}$

2. ✔ $\frac{x-1}{1}=\frac{y-8}{-7}=\frac{z}{4}$

3. ✖ $\frac{x-2}{1}=\frac{y-1}{7}=\frac{z-4}{-4}$

4. ✖ $\frac{x-1}{-1}=\frac{y-2}{-7}=\frac{z-4}{4}$

Question Number : 79 Question Id : 8732654761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The equation of the line passing through the points (1,2,1) and (1,4,3) is

نقاط (1,2,1) اور (1,4,3) سے گزرنے والے خط کی مساوات ہے

Options :

1. ✔ $x=1, \quad y-z=1$

2. ✖ $x=1, \quad \frac{y-2}{3}=\frac{z-1}{2}$

3. ✖ $\frac{x-1}{1}=\frac{y-4}{2}=\frac{z-3}{2}$

4. ✖ $\frac{x-1}{1}=\frac{y-2}{2}=\frac{z-3}{2}$

Question Number : 80 Question Id : 8732654762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If the two lines $\frac{x-1}{-3}=\frac{y-2}{2k}=\frac{z-3}{2}$ and $\frac{x-1}{3k}=\frac{y-5}{1}=\frac{z-6}{-5}$ are mutually perpendicular then the value of k is

اگر دو خطوط $\frac{x-1}{-3}=\frac{y-2}{2k}=\frac{z-3}{2}$ اور $\frac{x-1}{3k}=\frac{y-5}{1}=\frac{z-6}{-5}$ آپس میں عمود ہیں تب k = ____

Options :

1. ✖ 0

2. ✖ $\frac{10}{7}$

3. ✔ $\frac{-10}{7}$

4. ✖ $\frac{3}{7}$

Question Number : 81 Question Id : 8732654763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The equation of the plane containing the line $\frac{x-1}{2}=\frac{y+1}{-1}=\frac{z-3}{4}$ and perpendicular to the plane $x+2y+z=12$ is

خط $\frac{x-1}{2}=\frac{y+1}{-1}=\frac{z-3}{4}$ کے ساتھ متوازی اور خط $x+2y+z=12$ کے عمود مساوات ____ ہیں۔

Options :

1. ✔ $9x-2y-5z+4=0$

2. $-9x+2y-5z-4=0$

3. $9x-2y+5z+4=0$

4. $9x+5y-2z-4=0$

Question Number : 82 Question Id : 8732654764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the plane bisecting the acute angle between the planes $3x-4y+12z=26$ and $x+2y-2z=9$, is

دو مستوی کے $x+2y-2z=9$ اور $3x-4y+12z=26$ درمیان واقع حادہ زاویہ کو مساوی تقسیم کرنے والے مستوی کے مساوات ۔

Options :

1. $4x+38y-62z-39=0$

2. $22x+14y+10z-195=0$

3. $4x+19y-z-41=0$

4. $10x+13y+10z-47=0$

Question Number : 83 Question Id : 8732654765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

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

$\frac{x-2}{3}=\frac{y-3}{4}=\frac{z+4}{5}$ اور $\frac{x-1}{2}=\frac{y-2}{3}=\frac{z-3}{4}$ دو خطوط کے درمیان اقل ترین دوری ہے ——

Options :

1. ✖ 0

2. ✖ $\frac{12}{\sqrt{6}}$

3. ✖ $\frac{10}{\sqrt{6}}$

4. ✔ $\frac{8}{\sqrt{6}}$

Question Number : 84 Question Id : 8732654766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The radius of the circle $x^2+y^2+z^2-2x+4y-6z-2=0,\ z=0$ is (in proper units).

$z=0$, $x^2+y^2+z^2-2x+4y-6z-2=0$ دائرے کا نصف قطر (واجبی اکائیوں میں) ——

Options :

1. ✖ $\sqrt{3}$

2. ✖ $\sqrt{5}$

3. ✔ $\sqrt{7}$

4. ✖ $\sqrt{11}$

Question Number : 85 Question Id : 8732654767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the sphere centred at (2,1,3) and radius 6 units is

کرہ کا مرکزہ (2,1,3) اور نصف قطر 6 یونٹ ہے۔
تو اس کی مساوات ـــــ ہے۔

Options :

1. ✖ $x^2+y^2+z^2-4x+2y-6z+11=0$

2. ✔ $x^2+y^2+z^2-4x-2y-6z=22$

3. ✖ $x^2+y^2+z^2+4x-2y+6z=22$

4. ✖ $x^2+y^2+z^2-4x-2y-6z-11=0$

Question Number : 86 Question Id : 8732654768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the sphere which touches the plane $3x+2y-z+2=0$ at the point (1,-2,1) and passes through the origin is

اس کرہ کی مساوات کیا ہو گی جو مستوی $3x+2y-z+2=0$ کو نقطہ $(1,-2,1)$ پر مس کرتے ہیں۔ اور مبداء سے گذرتے ہیں۔

Options :

$x^2+y^2+z^2-11x-2y+z=0$

1. ✔

$x^2+y^2+z^2+11x+2y-z=0$

2. ✖

$x^2+y^2+z^2-11x-2y-z=0$

3. ✖

$x^2+y^2+z^2+11x+2y+2z=0$

4. ✖

Question Number : 87 Question Id : 8732654769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the cone which passes through the three coordinate axes and the lines $\frac{x}{1}=\frac{y}{-2}=\frac{z}{3}$ and $\frac{x}{2}=\frac{y}{1}=\frac{z}{1}$ is

مخروطی مساوات جو تین محتصاتی محور اور خطوط $\frac{x}{1}=\frac{y}{-2}=\frac{z}{3}$ اور $\frac{x}{2}=\frac{y}{1}=\frac{z}{1}$ سے گذرتے ہیں۔

Options :

$2yz+2zx+3xy=0$

1. ✖

$2xy+2yz+3zx=0$

2. ✖

$2yz+2zx-3xy=0$

3. ✔

$2yz-2zx+3xy=0$

4. ✖

Question Number : 88 Question Id : 8732654770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The enveloping cone of the sphere $x^2+y^2+z^2+2x-2y=2$ with its vertex $(1,1,1)$ is

. $x^2+y^2+z^2+2x-2y=2$ کرہ جو کہ ہے — لفافی مخروط
کا راس $(1,1,1)$ ہے

Options :

$3x^2+y^2+2zx+10x+2y+4z-6=0$

1. ✖

$x^2+y^2+2zx+5x+3y+4z-5=0$

2. ✖

$x^2+y^2-2zx+5x-3y+6z-10=0$

3. ✖

$3x^2-y^2+4zx-10x+2y-4z+6=0$

4. ✔

Question Number : 89 Question Id : 8732654771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

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

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

Options :

1. ✖ (1,2,3)

2. ✔ (1,-2,3)

3. ✖ (-1,-2,3)

4. ✖ (-1,-2,-3)

Question Number : 90 Question Id : 8732654772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If the plane $2x-y+cz=0$ cuts the cone $yz+zx+xy=0$ in perpendicular lines, then the value of c is

$yz+zx+xy=0$ مخروط $2x-y+z=0$ اگر مستوی
کو عمودا قطع کرتے ہیں تب c کی قدر ——

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 3

4. ✖ 4

Question Number : 91 Question Id : 8732654773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

In group $G=\left(\{\bar{0},\bar{1},\bar{2},.....,\bar{10}\}, \quad +_{10}\right)$, the order of $\bar{8}$ is

گروپ میں $\left(\{\bar{0},\bar{1},\bar{2},\ldots\bar{10}\},+_{10}\right)=G$

$\bar{8}$ کا درجہ ___ ہے۔

Options :

1. ✖ 10

2. ✖ 8

3. ✖ 7

4. ✔ 5

Question Number : 92 Question Id : 8732654774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $n(A) = 4$, then the number of commutative binary operations that can be defined on A is

اگر $n(A)=4$ تب دو اساسی تقلیبی عمل جہاں A ___ ہوگا

Options :

4^{16}

1. ✖

4^{10}

2. ✔

4^{6}

3. ✖

4^{4}

4. ✖

Question Number : 93 Question Id : 8732654775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If a group G has 100 elements, then the number of subgroups of G having 8 elements is

اگر گروپ G میں 100 عناصر ہیں تو 8 عناصر والے تحت گروپ کی تعداد ـــــ ہے۔

Options :

1. 8 ✖

2. 4 ✖

3. 2 ✖

4. 0 ✔

Question Number : 94 Question Id : 8732654776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $G=\{1,-1, i, -i\}$ is a group under multiplication, then the number of subgroups of G is

$G = \{1, -1, i, -i\}$ کا ایک گروپ ہے ضرب کے تحت اور اس میں تحت گروپ کی تعداد G = ـــــ

Options :

1. 1 ✖

2

2. ✖

3

3. ✔

4

4. ✖

Question Number : 95 Question Id : 8732654777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $\phi : Z_{12} \to Z_{12}$ is a homomorphism defined on the group $(\mathbb{Z}_{12}, +_{12})$ given by $\phi(x) = 3x$, then ker ϕ is

جو ہے $\phi : Z_{12} \to Z_{12}$ اگر ہم عارفی گروپ
$\phi(x)=3x$ جہاں - ہے $(Z_{12}, +_{12})$ سے واضح کی گئی
اور $\ker \phi =$ ——— ہو گا

Options :

$\{\bar{0}, \bar{2}, \bar{4}\}$

1. ✖

$\{\bar{0}, \bar{4}, \bar{8}\}$

2. ✔

$\{\bar{0}, \bar{4}, \bar{6}\}$

3. ✖

$\{\bar{0}, \bar{8}\}$

4. ✖

Question Number : 96 Question Id : 8732654778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $O(G) = 12$ and H is a sub group of G such that $O(H) = 4$, then the number of right cosets of H in G is

اگر $O(G)=12$ اور G کا ذیلی گروپ H ہے جس کا $O(H)=4$ ہے تو G کے ہم سیٹ H کی تعداد ___ ہے۔

Options :

8

1. ✖

5

2. ✖

3

3. ✔

6

4. ✖

Question Number : 97 Question Id : 8732654779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The order of i in the multiplicative group $\{1, -1, i, -i\}$ is

ضربی گروپ $\{1, -1, i, -i\}$ میں i کا درجہ ___

Options :

3

1. ✖

4

2. ✔

0

3. ✖

1

4. ✖

Question Number : 98 Question Id : 8732654780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Number of subgroups of the group $(\mathbb{Z}_{48}, +_{48})$ is

گروپ $(Z_{48}, +_{48})$ کے تحت گروپ کی تعداد ــــ

Options :

7

1. ✖

8

2. ✖

9

3. ✖

10

4. ✔

Question Number : 99 Question Id : 8732654781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The generators of the cyclic group $G = \left(\{\bar{0}, \bar{1}, \bar{2}, \bar{3}, \bar{4}, \bar{5},\}, \quad +_6\right)$ are

دوری گروپ G کے مولد $(\{\bar{0}, \bar{1}, \bar{2}, \bar{3}, \bar{4}, \bar{5}\}, +_6)$ ــــ ہیں۔

Options :

1. ✖ $\bar{0},\bar{5}$

2. ✔ $\bar{1},\bar{5}$

3. ✖ $\bar{2},\bar{4}$

4. ✖ $\bar{1},\bar{3}$

Question Number : 100 Question Id : 8732654782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The number of generators of an infinite cyclic group is

لامتناہی دوری گروپ کے مولدوں کی تعداد ——

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 2

4. ✖ Infinite
لامتناہی

Question Number : 101 Question Id : 8732654783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Order of the permutation (5 6 7 8 9)o(7 9 6 8 5) in the group (S_9, o)

(S_9, o) جو کہ (5 6 7 8 9) o (7 9 6 8 5) مبادلہ تر تیب
گروپ سے — ہے۔

Options :

1. ✖ 2

2. ✖ 3

3. ✖ 4

4. ✔ 5

Question Number : 102 Question Id : 8732654784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $a = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 4 & 5 & 6 & 1 & 9 & 8 & 7 & 2 \end{pmatrix}$ is a permutation in the group (S_9, o), then $O(a^2)$ is

اگر $a = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 4 & 5 & 6 & 1 & 9 & 8 & 7 & 2 \end{pmatrix}$ ایک مبادلہ گروپ
(S_9, o) میں $O(a^2)$ ہے۔

Options :

1. ✖ 12

2. ✖ 8

3. ✔ 6

4. ✖ 4

Question Number : 103 Question Id : 8732654785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The order of the cycle (1 4 5 7) in the permutation group (S_7, o) is

مبادلہ گروپ (S_7, o) میں دوری چکر (1 4 5 7) کی ترتیب ——— ہے۔

Options :

1. ✖ 3

2. ✔ 4

3. ✖ 5

4. ✖ 6

Question Number : 104 Question Id : 8732654786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The number of invertible elements in the ring of integers is

صحیح اعداد کے حلقے میں غیر منعکس عناصر کی تعداد ———

Options :

0

1. ✖

1

2. ✖

2

3. ✔

3

4. ✖

Question Number : 105 Question Id : 8732654787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The product of (4 5) (1 2 3) (3 2 1) (5 4) (2 6) (1 4) in the group S_6 expressed as the product of disjoint cycles is

S_6 گروپ میں

$(4,5)(1,2,3)(3,2,1)(5,4)(2,6)(1,4)$

کا حاصل ضرب ہی حاصل کو غیر مشترکہ دوریت کا حاصل ضرب ——

Options :

(1 6) (2 4)

1. ✖

(1 2) (4 6)

2. ✖

(1 4) (2 6)

3. ✔

(1 4 2 6)

4. ✖

Question Number : 106 Question Id : 8732654788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The number of non-zero zero-divisors in the ring $(Z_{12}, +_{12}, X_{12})$ is

جملے میں $(Z_{12}, +_{12}, X_{12})$ حلقے میں غیر صفر، صفر مقسوم علیہ کی تعداد ہے۔

Options :

1. ✗ 4

2. ✗ 5

3. ✗ 6

4. ✓ 7

Question Number : 107 Question Id : 8732654789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The units of the ring $(Z_6, +_6, X_6)$ are

جملے میں $(Z_6, +_6, X_6)$ اکائیوں کی تعداد

Options :

1. ✗ 2, 3

2. ✗ 2, 4

3. ✔ 1, 5

4. ✖ 4, 3

Question Number : 108 Question Id : 8732654790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The set of generators of the cyclic group $(Z_8, +_8)$, where $\mathbb{Z}_8 = \{0,1,2,3,4,5,6,7\}$ and $+_8$ is the addition modulo 8, is

دوری گروپ $(Z_8, +8)$ میں مولد کا سیٹ
اور $Z_8 = \{0,1,2,3,4,5,6,7\}$ اور $+8$ ایک جمعی عملیاتی ہے۔
تب مولد کی مقدار —

Options :

1. ✖ $\{1,2,3,4\}$

2. ✖ $\{1,3,6,7\}$

3. ✖ $\{2,4,5,6\}$

4. ✔ $\{1,3,5,7\}$

Question Number : 109 Question Id : 8732654791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If a cyclic group G is generated by an element α of order 15, then which one of the following statements is true?

اگر دوری گروپ G، عنصر α جسکا ترتیب 15 ہے.
وجود پایا گیا۔ تب دیل کا بیان کونسا صادق ہے۔

Options :

α^2 is a generator of G

α^2 کا G مولد ہے.

1. ✔

α^3 is a generator of G

α^3 کا G مولد ہے

2. ✖

α^5 is a generator of G

α^5 کا G مولد ہے

3. ✖

α^{15} is a generator of G

α^{15} کا G مولد ہے

4. ✖

Question Number : 110 Question Id : 8732654792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The number of ideals in the field F is

میدان F میں ایڈیلوں کی تعداد ہے

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 2

4. ✖ 3

Question Number : 111 Question Id : 8732654793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The limit of the sequence $\{s_n\}$ as $n \to \infty$ where $s_n = \sqrt{n^2+n} - n$, is

تواتر $\{Sn\}$ جبکہ $n \to \infty$ ہے۔ اسکی منتہا ___ ہے۔
جہاں $S_n = \sqrt{n^2+n-n}$ ہے۔

Options :

1. ✖ 0

2. ✖ 1

3. ✖ 2

4. ✔ $\frac{1}{2}$

Question Number : 112 Question Id : 8732654794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Cauchy's sequence among the following sequences, is

ذیل میں کونسا جیس کے توالی کی مثال ہے لکھیے ۔

Options :

1. $\left\{1+\frac{1}{2}+\frac{1}{3}+.....+\frac{1}{n}\right\}$ ✖

2. $\left\{1+\frac{1}{2!}+\frac{1}{3!}+.....+\frac{1}{n!}\right\}$ ✔

3. $\{n\}$ ✖

4. $\left\{n+\frac{1}{n}\right\}$ ✖

Question Number : 113 Question Id : 8732654795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following statements is not true in $\mathbb{R}$?

$\mathbb{R}$ میں ذیل کا کونسا بیان صحیح نہیں ہے :-

Options :

1. Bounded sequences are convergent ✔

محدود توالی تقارب ہیں ۔

Increasing sequences bounded above are convergent

بڑھتے ہوئے توالی محدود اور تقاربی ہیں۔

2. ✖

Decreasing sequences bounded below are convergent

گھٹتے ہوئے توالی محدود اور تقاربی ہے۔

3. ✖

Convergent sequences are bounded

تقاربی توالی محدود ہیں۔

4. ✖

Question Number : 114 Question Id : 8732654796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $s_n = \sum_{k=1}^{n} \frac{1}{k}$, then the sequence $\{s_n\}$ is

اگر $s_n = \sum_{k=1}^{n} 1/k$ تب توالی $\{s_n\}$ ہے۔

Options :

Convergent

تقاربی

1. ✖

Bounded

محدود

2. ✖

Increasing

بڑھتا ہے

3. ✔

Decreasing

گھٹتا ہے

4. ✖

Question Number : 115 Question Id : 8732654797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $t_n=(-1)^n+1$ for all $n\geq 1$, then

اگر $t_n=(-1)^n+1$ تمام $n\geq 1$ کے لیے ہے تب

Options :

$\lim_{n\to\infty} t_n$ exists

$\lim_{n\to\infty} t_n$ موجود ہے

1. ✖

$\limsup t_n=2$ and $\liminf t_n=0$

$\liminf t_n=0$ اور $\limsup t_n=2$

2. ✔

$\limsup t_n=2$ and $\liminf t_n=-1$

$\liminf t_n=-1$ اور $\limsup t_n=2$

3. ✖

$\limsup t_n$ and $\liminf t_n$ do not exist

4. ✖ $\limsup t_n$ اور $\liminf t_n$ موجود ہیں

Question Number : 116 Question Id : 8732654798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

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

یہ $\sum_{n=1}^{\infty} \frac{(-1)^n}{n}$ سلسلہ

Options :

1. ✖ Convergent to zero

صفر تک تقاربی ہے

2. ✖ Divergent

متباعد ہے

3. ✖ Absolutely convergent

مطلق تقاربی ہے

4. ✔ Convergent but not absolutely

تقاربی لیکن مطلق نہیں

Question Number : 117 Question Id : 8732654799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $f:\mathbb{R}\to\mathbb{R}$ is defined by $f(x)=|x|$ for all $x\in\mathbb{R}$, then

اگر $f:\mathbb{R}\to\mathbb{R}$ اسطرح بیان کیا گیا کہ $f(x)=|x|$ تمام $x\in\mathbb{R}$ کیلئے۔ تب

Options :

f is continuous on $\mathbb{R}$

f پر $\mathbb{R}$ مسلسل

1. ✔

f is not continuous at '0'

صفر پر f غیر مسلسل

2. ✖

f is continuous at '0' only

صرف 0 پر f مسلسل ہے

3. ✖

f is not continuous at any x in $\mathbb{R}$

$\mathbb{R}$ میں کہیں بھی x پر f غیر مسلسل

4. ✖

Question Number : 118 Question Id : 8732654800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$\lim_{n\to\infty} n^{\frac{1}{n}} =$

$\lim_{n\to\infty} n^{1/n}$ = ____ ثابتا ا

Options :

1. ✖ 0

2. ✖ ∞

3. ✔ 1

4. ✖ does not exist

موجود نہیں ہے

Question Number : 119 Question Id : 8732654801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The function f defined by $f(x) = x$, if $x \in \mathbb{R} - \mathbb{Q}$,
$= 1 - x$, if $x \in \mathbb{Q}$ is continuous

$f(x) = x$, $x \in R-Q$ اگر
$= 1-x$, $x \in Q$ اگر

تفاعل f "ا سطرح بیان کیا گیا۔

Options :

1. ✖ at $x = 1$ only

صرف $x=1$ پر

at $x = \frac{1}{2}$ only

صرف پر $x = \frac{1}{2}$

2. ✔

at all rational numbers x

تمام ناطق اعداد x پر

3. ✖

$\mathbb{R} - \{0, 1\}$

$R - \{0, 1\}$

4. ✖

Question Number : 120 Question Id : 8732654802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $f(x) = [x]$ for $x \in [0,10]$, then f is

اگر $f(x)=[x]$ تمام $x \in [0,10]$ کے لیے f ہے —

Options :

Continuous on $[0, 10]$

$[0, 10]$ پر مسلسل

1. ✖

Differentiable on $[0, 10]$

$[0, 10]$ پر تفرقی

2. ✖

Integrable on $[0,10]$

$[0,10]$ پر تکمیلہ

3. ✔

Strictly increasing on $[0,10]$

$[0,10]$ پر اضافی شرطیہ

4. ✖

Question Number : 121 Question Id : 8732654803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If f is continuous on $[0,1]$ and differentiable on $(0,1)$ and $|f(x)-f(y)| \le (x-y)^2$ for all x, y in $[0,1]$, then

اگر f، $[0,1]$ پر مسلسل ہے اور $(0,1)$ پر تفرقی

اور $[0,1]$ میں تمام x,y کیلئے $|f(x)-f(y)| \le (x-y)^2$

تب ــــ

Options :

f is increasing

f بڑھتا ہے

1. ✖

f is a constant function

f ایک مستقل تفاعل ہے

2. ✔

f is decreasing

f گھٹتا ہے

3. ✖

f is unbounded

f ایک غیر محدود

4. ✖

Question Number : 122 Question Id : 8732654804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Taylor series expansion of e^x, for $x \in \mathbb{R}$ is

e^x کی ٹیلر سلسلہ کا پھیلاؤ، تمام $x \in \mathbb{R}$ کیلئے ہے

Options :

1. ✖ $\sum_{n=0}^{\infty} \frac{(-1)^n x^n}{n!}$

2. ✖ $\sum_{n=0}^{\infty} \frac{(-1)^n x^n}{(2n)!}$

3. ✔ $\sum_{n=0}^{\infty} \frac{x^n}{n!}$

4. ✖ $\sum_{n=0}^{\infty} \frac{(-1)^n x^{2n+1}}{(2n+1)!}$

Question Number : 123 Question Id : 8732654805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The constant C of the Lagrange's mean value theorem for the function $f(x) = x + x^2$ on $[0, 6]$ is

لیگرانجے اوسط قدری مسئلہ کا مستقل C ہے۔ جبکہ $f(x) = x + x^2$ $[0,6]$ پر موجود ہے۔

Options :

1. ✔ 3

2. ✖ 6

3. ✖ 5

4. ✖ $\frac{7}{2}$

Question Number : 124 Question Id : 8732654806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Let $p = \{a = x_0 \le x_1 \le \ldots\ldots \le x_n = b\}$ be a partition of the interval $[a, b]$. Then the norm of p is

$[a,b]$ کا ایک جزو وقفہ $p = \{a = x_0 \le x_1 \le \ldots \le x_n = b\}$ لیگرانجے

پر ہے۔ تب p کا معیار ہوگا۔

Options :

1. ✖ $\max\{|x_i - x_j| / 1 \le i, j \le n\}$

2. ✖ $\max\{|x_i - x_j| / 1 \le i, j \le n, i \ne j\}$

3. ✖ $\max\{|x_i - x_{i+1}| / 1 \le i \le n-1\}$

4. ✔ $\max\{|x_i - x_{i+1}| / 0 \le i \le n-1\}$

Question Number : 125 Question Id : 8732654807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $f:[a,b] \to \mathbb{R}$ be such that $|f|$ is Riemann integrable on $[a,b]$, then

اگر $f:[a,b] \to R$ ایسا ہے کہ $|f|$ ایک ریمن تکمیل پذیر ہے $[a,b]$ پر

Options :

1. ✖ f is Riemann integrable on $[a,b]$

f ریمن تکمیل ہے $[a,b]$ پر

2. ✖ f is continuous on $[a,b]$

f مسلسل ہے $[a,b]$ پر

3. ✖ f is differentiable on $[a,b]$

f ایک متفرق ہے $[a,b]$ پر

f is bounded on $[a, b]$

$[a, b]$ پر f ایک محدود ہے۔

4. ✔

Question Number : 126 Question Id : 8732654808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

$$\int_0^4 [x]\, dx =$$

Options :

1. ✖ 0

2. ✖ 3

3. ✖ 4

4. ✔ 6

Question Number : 127 Question Id : 8732654809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

$$\lim_{n\to\infty} \sum_{r=1}^{n} \frac{n}{n^2+r^2}$$

$\sum_{r=1}^{n} \frac{n}{n^2+r^2}$ کا $n \to \infty$

Options :

1. ✖ 2π

2. ✖ π

3. ✖ $\frac{\pi}{2}$

4. ✔ $\frac{\pi}{4}$

Question Number : 128 Question Id : 8732654810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $f : [0,1] \to \mathbb{R}$ is defined by

$$f(x) = \begin{cases} 1, \text{ if } x \text{ is rational} \\ -1, \text{ if } x \text{ is irrational} \end{cases}$$

Then which one of the following is not true?

اگر $f : [0,1] \to R$ کی وضاحت x اگر ناطق ہو 1، x اگر غیر ناطق ہو -1 $f(x)$ = { ہے۔ تب ذیل میں کونسا بیان کاذب

Options :

f is not continuous

f غیر مسلسل ہے

1. ✖

f is bounded

f محدود ہے

2. ✖

$|f|$ is a constant function

$|f|$ مستقل تناعل ہے

3. ✖

f is Riemann integrable

f ریمن تکمیلہ ہے

4. ✔

Question Number : 129 Question Id : 8732654811 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The value C of Cauchy's mean value theorem for $f(x) = \frac{1}{x^2}$ and $g(x) = \frac{1}{x}$ on $[a, b]$, $a, b > 0$ is

کوشی کا اوسطی قدر مسئلہ میں C کی قدر کے لیے $f(x)=\frac{1}{x^2}$ اور $g(x)=\frac{1}{x}$ $[a,b]$ پر ہے $a,b>0$ ۔

Options :

1. ✖ $\frac{ab}{2(a+b)}$

2. ✖ $\frac{2ab}{b-a}$

$\frac{2ab}{a+b}$

3. ✔

$\frac{a+b}{2ab}$

4. ✖

Question Number : 130 Question Id : 8732654812 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $f(x)=x^2$ on $[0,1]$ and partition $p=\left\{0, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, 1\right\}$, then $U(p,f)-L(p,f)=$

اگر $f(x)=x^2$ پر اور جز $[0,1]$ $p=\{0,\frac{1}{4},\frac{2}{4},\frac{3}{4},1\}$ تب $U(P,f)-L(P,f)=$

Options :

$\frac{5}{32}$

1. ✖

$\frac{6}{32}$

2. ✖

$\frac{8}{32}$

3. ✔

$\frac{9}{32}$

4. ✖

Question Number : 131 Question Id : 8732654813 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\alpha=(1,-2,5)$ is a vector in the vectospace $\mathbb{R}^3(\mathbb{R})$ that can be expressed as a linear combination of the vectors $e_1=(1,1,1)$, $e_2=(1,2,3)$, and $e_3=(2,-1,1)$, then $\alpha=$

اگر $\alpha=(1,-2,5)$ سمتی خلا میں $R^3(R)$ ایک سمتیہ ہے۔
جو کہ سمتیے $e_1=(1,1,1), e_2=(1,2,3)$ $e_3=(2,-1,1)$
کا خطی اجتماع ہے۔ اور یہ α = ——— ہوگا۔

Options :

1. ✔ $-6e_1+3e_2+2e_3$

2. ✖ $6e_1+3e_2-2e_3$

3. ✖ $-6e_1-3e_2+2e_3$

4. ✖ $6e_1-3e_2-2e_3$

Question Number : 132 Question Id : 8732654814 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If the set $\{(1+a,1,1),(1,1+a,1),(1,1,1+a)\}$, is a basis for $V_3(\mathbb{R})$ then

اگر سیٹ $V_3(R)$ کا بنیاد ہے $\{(1+a,1,1),(1,1+a,1),(1,1,1+a)\}$
کے لئے ——— ہے۔

Options :

1. ✖ $a\in\mathbb{R}\setminus\{0,1\}$

$a \in \mathbb{R} \setminus \{0, 3\}$

2. ✖

$a \in \mathbb{R} \setminus \{0, -1\}$

3. ✖

$a \in \mathbb{R} \setminus \{0, -3\}$

4. ✔

Question Number : 133 Question Id : 8732654815 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $W_1 = \{(a, b, c, d) | b - 2c + d = 0\}$ and $W_2 = \{(a, b, c, d) | a = d, b = 2c\}$ are two subspaces of the vector space $(\mathbb{R}^4, +, \cdot)$, then $\dim(W_1 + W_2) =$

اگر $W_1 = \{(a,b,c,d) | b-2c+d=0\}$ اور
$W_2 = \{(a,b,c,d) | a=d, b=2c\}$
سمتیہ $(R^4, +, \cdot)$ کے دو ذیلی فضاء ہیں
$\dim(W_1+W_2) =$ فضائیہ کی، تو

Options :

1. ✔ 4

2. ✖ 3

3. ✖ 2

4. ✖ 1

Question Number : 134 Question Id : 8732654816 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $T:R^3 \to R^3$ is linear transformation defined by $T(x,y,z)=(x\cos\theta - y\sin\theta,\ x\sin\theta + y\cos\theta,\ z)$, then $\dim(KerT)=$

اگر $T: R^3 \to R^3$ ایک خطی استحالہ ہے جو واضح کیا گیا ہے
تب $T(x,y,z)=(x\cos\theta - y\sin\theta, x\sin\theta + y\cos\theta, z)$
$\dim(KerT) =$ ____

Options :

1. ✗ 2

2. ✗ 3

3. ✓ 0

4. ✗ 1

Question Number : 135 Question Id : 8732654817 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If V and W are finite dimensional vector spaces and $T:V \to W$ is a surjective but not injective linear transformation, then

اگر V اور W محدود الجہتی سمتیہ فضاء اور $T: V \to W$
موضوع ہے مگر injective خطی استحالہ نہیں ہے۔ تب

Options :

1. ✗ $\dim V = 0$

2. ✖ $\dim W = 1$

3. ✖ $\dim V < \dim W$

4. ✔ $\dim V > \dim W$

Question Number : 136 Question Id : 8732654818 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If T_1 and T_2 are linear operators on $\mathbb{R}^2$ and defined by $T_1(x, y) = (y, -x)$, $T_2(x, y) = (y, 0)$ for all $(x, y) \in \mathbb{R}^2$, then $(T_1T_2 - T_2T_1)(x, y) =$

اگر T_1 اور T_2 خطی عامل ہیں R^2 پر جس کی تعریف $T_1(x,y)=(y,-x)$ ہے اور $T_2(x,y)=(y,0)$ ہے تو $(T_1T_2 - T_2T_1)(x,y) =$ ہے جب $x,y \in R^2$

Options :

1. ✖ (x, y)

2. ✖ $(-x, y)$

3. ✔ $(x, -y)$

4. ✖ $(-x, -y)$

Question Number : 137 Question Id : 8732654819 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$T: R^3 \to R^2$ is a linear transformation defined by $T(x_1, x_2, x_3) = (x_1 - x_2,\ x_1 + x_3)$ for all $(x_1, x_2, x_3) \in \mathbb{R}^3$, then nullity (T) is

ایک خطی استحالہ اسطرح بیان کیا گیا ہے $T: R^3 \to R^2$

تمام $T(x_1, x_2, x_3) = (x_1 - x_2, x_1 + x_3)$

_____ = T کی مرتبہ حدودیت کے لیے $(x_1, x_2, x_3) \in R^3$

Options :

1. ✖ 0

2. ✔ 1

3. ✖ 2

4. ✖ 6

Question Number : 138 Question Id : 8732654820 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $T: R^3 \to R^2$ is a linear transformation defined by $T(1,0,0) = (2,1)$, $T(0,1,0) = (0,1)$ and $T(0,0,1) = (1,1)$, then the rank of T is

اگر $T: R^3 \to R^2$ ایک خطی استحالہ اسطرح بیان کیا گیا ہے

$T(0,0,1) = (1,1)$ اور $T(0,1,0) = (0,1)$, $T = (1,0,0) = (2,1)$

تب T کا درجہ ← _____ ہے۔

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 2

4. ✖ 3

Question Number : 139 Question Id : 8732654821 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The rank of $T: R^2 \to R^3$ defined by $T(x, y) = (x+y, x-y, y)$ is

بیان کیا گیا ہے کہ $T: R^2 \to R^3$ کا درجہ 2 ہے

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

Options :

1. ✖ 3

2. ✖ 0

3. ✔ 2

4. ✖ 1

Question Number : 140 Question Id : 8732654822 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The characteristic equation of the matrix $\begin{bmatrix} 2 & 1 & 0 \\ 0 & 2 & 1 \\ 0 & 0 & 2 \end{bmatrix}$ is

ماٹرکس $\begin{bmatrix} 2 & 1 & 0 \\ 0 & 2 & 1 \\ 0 & 0 & 2 \end{bmatrix}$ کی امتیازی مساوات ⟵

Options :

1. ✖ $2 - \lambda = 0$

2. ✖ $(2 - \lambda)^2 = 0$

3. ✔ $(2 - \lambda)^3 = 0$

4. ✖ $(2 - \lambda) = 4$

Question Number : 141 Question Id : 8732654823 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The characteristic roots of the matrix $\begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$ are

ماٹرکس $\begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$ کے امتیازی بنیادی حل ہیں۔

Options :

1. ✖ 2, -5

2. ✔ -2, 5

3. ✖ 3, 2

4. ✖ 3, -5

Question Number : 142 Question Id : 8732654824 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Let T be a linear operator on R^2 defined by $T(x,y)=(4x-2y,\ 2x+y)$ for all $(x,y)\in\mathbb{R}^2$. Then the matrix of T relative to the basis $\{(1,1),(-1,0)\}$ is

فرض کرو کہ R^2 پر ایک خطی عامل T ہے جو اس طرح بیان کیا گیا کہ $T(x,y)=(4x-2y,\ 2x+y)$ تمام $(x,y)\in R^2$ کیلئے ہیں۔ تب ماٹرس T کو اضافی بنیاد کی ماٹرس $\{(1,1),(-1,0)\}$ ہے۔

Options :

1. ✔ $\begin{bmatrix}3 & -2\\ 1 & 2\end{bmatrix}$

2. ✖ $\begin{bmatrix}2 & 3\\ 1 & 2\end{bmatrix}$

3. ✖ $\begin{bmatrix}3 & -2\\ 2 & -1\end{bmatrix}$

4. ✖ $\begin{bmatrix}3 & 2\\ 1 & -2\end{bmatrix}$

Question Number : 143 Question Id : 8732654825 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Nullity of the matrix $\begin{bmatrix} 1 & 2 & 1 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{bmatrix}$ is

ماٹرکس $\begin{bmatrix} 1 & 2 & 1 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{bmatrix}$ کی معدومیت ____

Options :

1. -1 ✗
2. 1 ✗
3. 0 ✓
4. 2 ✗

Question Number : 144 Question Id : 8732654826 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

If $A = \begin{bmatrix} 2 & -5 & 7 \\ -5 & 11 & -8 \\ 8 & 7 & 6 \end{bmatrix}$ is a matrix, then trace of A is

اگر $A = \begin{bmatrix} 2 & -5 & 7 \\ -5 & 11 & -8 \\ 8 & 7 & 6 \end{bmatrix}$ ماٹرکس ہے، تب A کو نشانیات ____

Options :

1. ✔ 19

2. ✖ 17

3. ✖ 5

4. ✖ -5

Question Number : 145 Question Id : 8732654827 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The rank of the matrix $A=\begin{bmatrix}1 & 1 & 1\\ 2 & 5 & -2\\ 1 & 7 & -7\end{bmatrix}$ is

—— درجہ کا $\begin{bmatrix}1 & 1 & 1\\ 2 & 5 & -2\\ 1 & 7 & -7\end{bmatrix}$ ماٹرکس

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 2

4. ✖ 3

Question Number : 146 Question Id : 8732654828 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\alpha = (2,1,2)$ in an inner product space $V_3(R)$, then $\|\alpha\| =$

اگر $\alpha = (2,1,2)$ ایک فضا $V_3(R)$ پہ داخلی حاصلضرب ہے تب $\|\alpha\|$ = ——

Options :

1. ✖ 0

2. ✖ 1

3. ✖ 2

4. ✔ 3

Question Number : 147 Question Id : 8732654829 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A unit vector orthogonal to $(2,-1,6)$ in an inner product space $\mathbb{R}^3$ is

اکائی سمتیہ جو عمود وار ہے $(2,-1,6)$ جو فضا $\mathbb{R}^3$ پر ہے داخلی ترتیب ——

Options :

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

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

3. $\left(\frac{2}{3}, \frac{1}{3}, \frac{2}{3}\right)$ ✖

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

Question Number : 148 Question Id : 8732654830 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\alpha = (-1, 0, 1)$ and $\beta = (2, 0, -2)$ are elements in the inner product space $V_3(R)$, then $\|\alpha + \beta\| =$

اگر $\alpha = (-1, 0, 1)$ اور $\beta = (2, 0, -2)$ دو عامل ہیں جو متشابہ داخلی حاصل ضرب $V_3(R)$ پر ہیں $\|\alpha + \beta\| =$

Options :

1. 1 ✖

2. 2 ✖

3. $\sqrt{2}$ ✔

4. $\sqrt[3]{2}$ ✖

Question Number : 149 Question Id : 8732654831 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If α, β are vectors in a real inner product space and $\|\alpha\| = \|\beta\|$, then $(\alpha - \beta, \alpha + \beta) =$

اگر α ، β دو سمتیہ ہیں۔ داخلی فضا میں حاصل ضرب
$(\alpha - \beta, \alpha + \beta) =$ ——— ہیں۔ تب $\|\alpha\| = \|\beta\|$

Options :

1. ✖ $\alpha - \beta$

2. ✖ $\alpha + \beta$

3. ✖ 1

4. ✔ 0

Question Number : 150 Question Id : 8732654832 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If W is a subspace of a finite dimensional inner product space V, then $\dim W^{\perp} =$

اگر W ایک محدود ابعادی فضا سمتیہ ضرب V کا
ایک تحت فضا ہے۔ تب $\dim W^{\perp}$ = ———

Options :

1. ✖ V-W

2. ✔ $\dim V - \dim W$

3. ✖ $\dim V + \dim W$

4. ✖ $\dim V \cdot \dim W$