

Question Paper Name: Mathematics
Subject Name: Mathematics
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Duration: 120
Total Marks: 150
Display Marks: No
Share Answer Key With Delivery Engine: Yes
Actual Answer Key: Yes

Mathematics

Group Number : 1
Group Id : 23074915
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 150

General English

Section Id : 23074972
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 21
Number of Questions to be attempted: 21
Section Marks: 25
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 23074986
Question Shuffling Allowed : Yes

Question Id : 2307492115 **Question Type :** COMPREHENSION **Sub Question Shuffling Allowed :** Yes **Group Comprehension Questions :** No

Question Numbers : (1 to 5)

Read the passage carefully and mark the correct answers for the questions that follow:

The word “adventure” embraces a company of great words, including courage, tenacity, faith and selflessness, but its most potent ingredient cannot be expressed in one word; it is the spirit that urges people to volunteer to undertake hazardous tasks, for adventure implies the readiness and desire to embark on a course of action that entails risk.

To evoke our admiration adventure need not be successful; it is enough if the adventurer is impelled by courage.

Sub questions

Question Number : 1 Question Id : 2307492116 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The writer’s definition of ‘adventure’ is _____

Options :

1. indolence
2. tenacity
3. cowardice
4. diligence

Question Number : 2 Question Id : 2307492117 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

An adventurer embarks on action and _____

Options :

1. dangers
2. risk

3. failure

4. success

Question Number : 3 Question Id : 2307492118 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The passage is about _____

Options :

1. adventure

2. faith

3. courage

4. selflessness

Question Number : 4 Question Id : 2307492119 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The antonym of hazardous is _____

Options :

1. risky

2. precarious

3. secure

4. unsafe

Question Number : 5 Question Id : 2307492120 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

For an adventurer _____ is essential.

Options :

1. faith

2. admiration

3. courage

4. spirit

Sub-Section Number: 2
Sub-Section Id: 23074987
Question Shuffling Allowed : Yes

Question Number : 6 Question Id : 2307492121 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fill in the blanks with correct articles :

There is _____ playground near my house. Within _____
hour we were in _____ playground.

Options :

1. a, an, the

2. the, a, a

3. the, the, the

4. a, the, an

Question Number : 7 Question Id : 2307492122 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Choose the sentence with appropriate article:

Options :

1. A teacher asked a student for the assignment.

2. The teacher asked the students for their assignment.

3. A teacher asked the students for the assignments.

4. The teachers asked their students for their assignments.

Question Number : 8 Question Id : 2307492123 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Fill in the blank with correct preposition:-

The brothers are always quarrelling _____ themselves.

Options :

1. between
2. within
3. among
4. in-between

Question Number : 9 Question Id : 2307492124 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fill in the blank with correct preposition:-

The monkey sprang _____ the roof of the house.

Options :

1. across
2. on
3. upon
4. over

Question Number : 10 Question Id : 2307492125 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The synonym of the word allure is:

Options :

1. entice
2. exaggerate
3. endure
4. enormous

Question Number : 11 Question Id : 2307492126 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

The antonym of the word Pragmatic is:

Options :

1. ritual
2. secular
3. idealistic
4. precede

Question Number : 12 Question Id : 2307492127 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

W.B.Yeats made several _____ to Indian mythology in his poems.
Choose the appropriate word from the following.

Options :

1. illusions
2. allusions
3. amiable
4. ingenuous

Question Number : 13 Question Id : 2307492128 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

We _____ discuss the matter with the chairman tomorrow.
Fill in the blank appropriately.

Options :

1. will
2. shall
3. would

4. could

Question Number : 14 Question Id : 2307492129 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

These phones _____ not be available till next year.
Fill in the blank correctly.

Options :

1. would

2. won't

3. shall

4. will

Question Number : 15 Question Id : 2307492130 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fill in the blank with correct phrasal verb.

He _____ me but did not acknowledge me.

Options :

1. passed on

2. passed away

3. passed by

4. passed up

Question Number : 16 Question Id : 2307492131 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Choose the word with correct spelling.

Options :

1. Audecious

2. Audacious

Question Number : 17 Question Id : 2307492132 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fill in the blank with the most suitable word:

The Psychologist _____ the truth from the patient.

Options :

1. elicited

2. illicited

3. felicitated

4. collided

Question Number : 18 Question Id : 2307492133 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Choose the correct word to complete the idiom.

Dr. Samuel Johnson was a man of _____

Options :

1. straw

2. wisdom

3. knowledge

4. letters

Question Number : 19 Question Id : 2307492134 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Choose the correct form of Indirect Speech.

He said, "The film is very interesting".

Options :

1. The film is very interesting he said.

2. He said that the film was very interesting.

3. He said the film was very interesting.

4. The film was very interesting he said that.

Question Number : 20 Question Id : 2307492135 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Change / choose the correct form of Active Voice.

The accounts are being checked by the auditors.

Options :

1. The auditors will check the accounts.

2. The auditors are seeing the accounts.

3. The auditors are checking the accounts.

4. The accounts are being checking by the auditors.

Question Number : 21 Question Id : 2307492136 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Choose the correct preposition from the following : -

The child walked _____ her mother.

Options :

1. beside

2. besides

3. with

4. by

Question Number : 22 Question Id : 2307492137 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Identify the grammatically acceptable sentence:

Options :

1. Please see my certificates.
2. Please look my certificates.
3. Kindly check at my certificates.
4. Please check my certificates.

Question Number : 23 Question Id : 2307492138 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A physician who specialises in the treatment of cancer.

Choose the correct answer:

Options :

1. Ophthalmologist
2. Orthopaedist
3. Oncologist
4. Orthodontist

Question Number : 24 Question Id : 2307492139 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Add a question tag to the following statement:

You work in a bank, _____

Options :

1. have you?
2. isn't you
3. do you?

Question Number : 25 Question Id : 2307492140 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fill in the blank with the correct form of the word:

He gave me as much money as I _____ .

Options :

1. need
2. require
3. want
4. needed

General Knowledge

Section Id :	23074973
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	15
Number of Questions to be attempted:	15
Section Marks:	15
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	23074988
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 2307492141 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Financial Action Task Force (FATF) has recently decided to keep which country on grey list for failing to curb terror funding?

ఇటీవల ఉగ్రవాదులకు నిధులు అందకుండా, చేయడం లో విఫలమైన ఏ దేశాన్ని గ్రే లిస్ట్ లోనే ఉంచుటకు ఫైనాన్షియల్ యాక్షన్ టాస్క్ ఫోర్స్(FATF) నిర్ణయించుకుంది?

Options :

North Korea
1. ఉత్తర కొరియా

Iran
2. ఇరాన్

Pakistan
3. పాకిస్తాన్

Syria
4. సిరియా

Question Number : 27 Question Id : 2307492142 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bahuda Rookery, which is in news recently, is the proposed Olive Ridley Nesting Site of which state?

ఇటీవలే వార్తలలోకి వచ్చిన బహుడ రూకీరి (Bahuda Rookery) ఆలివ్ రిడ్లీ గూడు ప్రదేశం ఏ రాష్ట్రంలో ఉంది?

Options :

Tamilanadu
1. తమిళనాడు

Odisha
2. ఒడిషా

Kerala
3. కేరళ

West Bengal
4. పశ్చిమ బెంగాల్

Question Number : 28 Question Id : 2307492143 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Simone Biles, who has become the first ever gymnast to win 13 world championship gold medals, is from which country?

ప్రపంచ చాంపియన్ షిప్ లో 13 స్వర్ణ పతకాలను గెలుచుకున్న మొట్టమొదటి జిమ్నాస్ట్ అయిన సైమన్ బైల్స్ ఏ దేశానికి చెందినవారు?

Options :

United States of America

1. అమెరికా

Australia

2. ఆస్ట్రేలియా

Brazil

3. బ్రెజిల్

South Africa

4. దక్షిణ ఆఫ్రికా

Question Number : 29 Question Id : 2307492144 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which tech giant has launched 'Bolo' app to tutor children to read in Hindi & English?

ఇటీవల ఏ టెక్ దిగ్గజం హిందీ మరియు ఇంగ్లీష్ భాషలను చిన్నారులు నేర్చుకోవడానికి ఉద్దేశించిన 'బోలో' అప్లికేషన్ ను ఆవిష్కరించింది?

Options :

Microsoft

1. మైక్రోసాఫ్ట్

Oracle

2. ఓరాకిల్

Google

3. గూగుల్

Facebook

4. ఫేస్ బుక్

Question Number : 30 Question Id : 2307492145 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who has been appointed new Chairman of the National Commission for Backward Classes (NCBC)?

వెనుకబడిన తరగతుల జాతీయ కమిషన్ (NCBC) కొత్త చైర్మన్ గా ఎవరు నియమితులు అయ్యారు?

Options :

Gegong Apang

1. గెగాంగ్ అపాంగ్

Suresh Mehta

2. సురేష్ మేహతా

Bhagat Singh Kosyari

3. భగత్ సింగ్ కొస్యరి

Bhagwan Lal Sahni

4. భగవాన్ లాల్ సాహ్ని

Question Number : 31 Question Id : 2307492146 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which international organisation has recently called for a total ban on nuclear weapons?

అణు ఆయుధాలను పూర్తిగా నిషేధించాలని ఏ అంతర్జాతీయ సంస్థ ఇటీవల ప్రకటించింది?

Options :

Red Cross

1. రెడ్ క్రాస్

Green peace

2. గ్రీన్ పీస్

UNESCO

3. యునెస్కో

UNO

4. ఐక్యరాజ్యసమితి

Question Number : 32 Question Id : 2307492147 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who has been conferred the Ashoka Chakra for the year 2019?

అశోక చక్ర పురస్కారాన్ని 2019 లో ఎవరు దక్కించుకున్నారు?

Options :

Dinesh Raghu Raman

1. దినేశ్ రఘు రామన్

Nazir Ahmad Vani

2. నజీర్ అహ్మద్ వాని

Abinandhan Vardhaman

3. అభినందన్ వర్ధమాన్

Takht Singh

4. తక్త్ సింగ్

Question Number : 33 Question Id : 2307492148 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following states have emerged as top performing states in NITI Aayog's SDG India Index 2018?

ఈ క్రింది రాష్ట్రాలలో నీతి అయోగ్ యొక్క SDG ఇండియా ఇండెక్స్ 2018 లో ఏవి అగ్రస్థానంలో నిలిచాయి?

Options :

AP, Odisha & Himachal Pradesh

1. ఆంధ్రప్రదేశ్, ఒడిషా మరియు హిమచల్ ప్రదేశ్

UP, Kerala & Assam

2. ఉత్తర ప్రదేశ్, కేరళ మరియు అస్సాం

Himachal Pradesh, Kerala & Tamilanadu

3. హిమచల్ ప్రదేశ్, కేరళ మరియు తమిళనాడు

Arumachal Pradesh, Rajastan & UP

4. అరుణాచల్ ప్రదేశ్, రాజస్థాన్ మరియు ఉత్తర ప్రదేశ్

Question Number : 34 Question Id : 2307492149 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the name of China mission launched to the far side of the Moon recently?

ఇటీవల చంద్రునికి అవతల వైపు చైనా ప్రయోగించిన మిషన్ పేరేమిటి?

Options :

Chang 'e-4'
 చాంగ్-4

1.

Tang 'e-9'
 థాంగ్-9

2.

Karman
 కర్మన్

3.

Lunar - 4
 లూనార్ - 4

4.

Question Number : 35 Question Id : 2307492150 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following cities is the venue of the 24th UN Climate Summit (COP24)?

ఈ క్రింది పేర్లోన్న ఏ నగరంలో 24వ యునైటెడ్ నేషన్స్ కాన్ ఫరెన్స్ ఆఫ్ పార్టీస్ (COP24) సదస్సు జరిగింది?

Options :

Ottawa
 ఒట్టావా

1.

Reo Di Janaro
 రియో డి జనరో

2.

Brasilia
 బ్రసిలియా

3.

4.

Question Number : 36 Question Id : 2307492151 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The UN Food and Agriculture Organisation (FAO) has decided to
Observe which year as the International Year of Millets?
యునైటెడ్ నేషన్స్ ఫుడ్ అండ్ అగ్రికల్చర్ ఆర్గనైజేషన్ (ఎఫ్ఎఓ) ఏ సంవత్సరాన్ని
అంతర్జాతీయ చిరుధాన్యాల (మిల్లెట్స్) సంవత్సరం గా పరిశీలించాలని
నిర్ణయించుకుంది?

Options :

1. 2021
2. 2022
3. 2023
4. 2024

Question Number : 37 Question Id : 2307492152 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

India's 1st environment friendly bio – fuel powered flight flew between the
following two cities:

భారతదేశం యొక్క మొట్టమొదటి పర్యావరణ అనుకూల బయో ఇంధన ఆధారిత
విమానము ఈ క్రింది నగరాల మధ్య ప్రయాణించింది?

Options :

1. Dehradun and Delhi
డెహ్రాడూన్ మరియు ఢిల్లీ
2. Delhi and Varanasi
ఢిల్లీ మరియు వారణాసి
3. Ahmedabad and Varanasi
అహ్మదాబాద్ మరియు వారణాసి

4. డెహ్రాడూన్ మరియు ఆగ్రా

Question Number : 38 Question Id : 2307492153 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

“Mission satyanishta”, is a programme on :

మిషన్ ‘సత్యనిష్ఠ’ అనే కార్యక్రమం ఈ క్రింది వానిలో దేనికి సంబంధించినది?

Options :

Ethics in Corporate Governance

1. కార్పొరేట్ గవర్నెన్స్ లో ఎథిక్స్

Ethics in International Relations

2. అంతర్జాతీయ సంబంధాల లో ఎథిక్స్

Ethics in Public places

3. పబ్లిక్ ప్రదేశాల లో ఎథిక్స్

Ethics in Public governance

4. ప్రజా పాలన లో ఎథిక్స్

Question Number : 39 Question Id : 2307492154 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Tx2 programme aims to double the population of one of the following:

Tx2 అనే కార్యక్రమం కింది వాటిలో ఒకదానిని రెట్టింపు చేయడాన్ని

లక్ష్యంగా పెట్టుకుంది.

Options :

Olive Ridley sea Turtle

1. ఆలివ్ రిడ్లీ సముద్ర తాబేలు

Tiger

2. పులి

Tiger Shark

3. పులి షార్క్

4.

Question Number : 40 Question Id : 2307492155 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PAKYONG airport is located in which of the following states?

పాక్యంగ్ విమానాశ్రయం ఈ క్రింద పేర్కొన్న ఏ రాష్ట్రం లో ఉంది?

Options :

Meghalaya

మేఘాలయా

1.

Arunachal Pradesh

అరుణాచల్ ప్రదేశ్

2.

Sikkim

సిక్కిం

3.

Manipur

మణిపూర్

4.

Section Id :

23074974

Section Number :

3

Section type :

Online

Mandatory or Optional:

Mandatory

Number of Questions:

10

Number of Questions to be attempted:

10

Section Marks:

10

Display Number Panel:

Yes

Group All Questions:

No

Sub-Section Number:

1

Sub-Section Id:

23074989

Question Shuffling Allowed :

Yes

Question Number : 41 Question Id : 2307492156 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Broad statement of instructional intent used to describe general purpose of instruction is known as

విశాల బోధన వాంఛ వాక్యమును వర్ణించు సాధారణ బోధన సంకల్పము :

Options :

Informational Objective

సమాచార ఉద్దేశ్యము

1.

Instructional Objective

బోధన ఉద్దేశ్యము

2.

Educational Goal

విద్యా గమ్యము

3.

Specific Objective

నిర్దిష్ట ఉద్దేశ్యము

4.

Question Number : 42 Question Id : 2307492157 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The use of a wide variety of instructional materials will

అధిక వైవిధ్య శిక్షణ సామగ్రి వినియోగము

Options :

Distract the attention of students

విద్యార్థుల దృష్టిని మళ్ళించును

1.

Serve as a lesson stimulus

పాఠ్య ప్రేరకముగా పనిచేయును

2.

Confuse the students

విద్యార్థులను కలవరపెట్టును

3.

4. హానికరము

Question Number : 43 Question Id : 2307492158 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

In a teaching - learning process, questioning is important to developing
చోధనాభ్యసన ప్రక్రియలో, ప్రశ్నించడం వల్ల ముఖ్యంగా దేనిని పెంపొందించవచ్చు ?

Options :

1. Reflective thinking
ప్రతిబింబించు యోచన
2. Metacognitive thinking
సంజ్ఞానాత్మకోత్తర (Metacognitive) యోచన
3. Creative thinking
సృజనాత్మక ఆలోచన
4. Reflective and metacognitive thinking
ప్రతిబింబించిన మరియు సంజ్ఞానాత్మకోత్తర (Metacognitive) యోచన

Question Number : 44 Question Id : 2307492159 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

In the following method, activities are carried out with little or no
guidance:

క్రింది పద్ధతిలో, కొద్దిగా లేదా ఏ మార్గదర్శకత్వము లేకనే కృత్యాలు చేపట్టెదరు :

Options :

1. Computer integration
కంప్యూటర్ సంకలనము (Integration)
2. Independent Study
స్వతంత్ర అధ్యయనము

3. Mastery learning
ఆధిపత్య అభ్యసనము

4. Individualized instruction
వ్యక్తిగతబోధన

Question Number : 45 Question Id : 2307492160 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A diagram of key concepts and their relationships:

ముఖ్యభావనలు మరియు వాటి సంబంధాలను తెలిపే పటము :

Options :

1. Mind map
మేథో పటము

2. Concept map
భావనపటము

3. Graphic Organizer
రేఖాపట సమకూర్పు

4. Flow chart
జిరాడు పటము

Question Number : 46 Question Id : 2307492161 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Questions that examine the validity of an author's arguments or discussion:

రచయిత వాదములు లేదా చర్చల సప్రమాణతను దృవీకరించు ప్రశ్నలు :

Options :

1. Critical questions
విమర్శనాత్మక ప్రశ్నలు

2. Connective questions
సంయోజక ప్రశ్నలు

Evaluative questions

మూల్యంకన ప్రశ్నలు

3.

Comparative questions

తులనాత్మక ప్రశ్నలు

4.

Question Number : 47 Question Id : 2307492162 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The full benefit of experiential learning is provided in

పూర్తి ప్రయోజనకరమైన అనుభవాత్మక అభ్యసనము దీనిలో వుండును :

Options :

Problem – based learning

సమస్యాధారిత అభ్యసనము

1.

Cooperative learning

సహకార అభ్యసనము

2.

Case Study Method

వ్యక్తి అధ్యయన పద్ధతి

3.

Service learning

సేవ అభ్యసనము

4.

Question Number : 48 Question Id : 2307492163 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

It facilitates ‘collective decision – making’ through an open-mindedness by encouraging and recognising multiple views of the learner:

విశాలదృక్పథముతో ప్రోత్సాహకరమైన వానితో మరియు అభ్యాసకుని బహుళ

అవలోకనాల ద్వారా సమిష్టి నిర్ణయాలు చేయుటకు యిది దోహదము చేయును

Options :

Constructivist approach

నిర్మాణాత్మక ఉపగమము

1.

విమర్శనాత్మక బోధనాద్వయన శాస్త్రము

2.

Inquiry approach

విచారణ ఉపగమము

3.

Analogy strategy

సారూప్య వ్యూహము

4.

Question Number : 49 Question Id : 2307492164 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Name the step of the 5 E-learning model 'when students share their experiences from their daily life about the concept at hand':

‘విద్యార్థులు అధ్యయనం చేస్తున్న భావనకు సంబంధించిన అనుభవాలను నిత్య జీవితం నుండి ఇతరులతో పంచుకోవడం’ అనునది 5E - అభ్యసన నమూనాలోని ఏ సోపానమిది :

Options :

Engage

ఒప్పందము

1.

Explore

సంచారము

2.

Explain

వివరణము

3.

Elaborate

విశదీకరించుట

4.

Question Number : 50 Question Id : 2307492165 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

‘Just-in-time teaching’, an inquiry-based method is a type of

‘అప్పటికప్పుడు బోధన’ (Just-in-time teaching) అను విచారణాధారిత

పద్ధతి ఈ క్రింది రకము :

Options :

Problem solving

సమస్య పరిష్కారము

1.

discussion

చర్చ

2.

Daily Quiz

దైనందిన ప్రశ్నావళి

3.

Mind dump

మనోవ్యధ

4.

Mathematics

Section Id :

23074975

Section Number :

4

Section type :

Online

Mandatory or Optional:

Mandatory

Number of Questions:

100

Number of Questions to be attempted:

100

Section Marks:

100

Display Number Panel:

Yes

Group All Questions:

No

Sub-Section Number:

1

Sub-Section Id:

23074990

Question Shuffling Allowed :

Yes

Question Number : 51 Question Id : 2307492166 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $y = \sin(ax + b)$, then $\frac{d^n y}{dx^n} =$

$y = \sin(ax + b)$ అయినప్పుడు, $\frac{d^n y}{dx^n} =$

Options :

$$a^{n+1} \sin\left(ax + b + \frac{n\pi}{2}\right)$$

1.

$$a^n \cos\left(ax + b + \frac{n\pi}{2}\right)$$

2.

$$a^{n-1} \sin\left(ax + b + \frac{n\pi}{2}\right)$$

3.

$$a^n \sin\left(ax + b + \frac{n\pi}{2}\right)$$

4.

Question Number : 52 Question Id : 2307492167 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If $y = \sin^{-1} x$, then $(1 - x^2) \frac{d^2 y}{dx^2} =$

$y = \sin^{-1} x$, అయినపుడూ, $(1 - x^2) \frac{d^2 y}{dx^2} =$

Options :

$$x \left(\frac{dy}{dx} \right)^2$$

1.

$$(x^2 - 1) \frac{dy}{dx}$$

2.

$$x \frac{dy}{dx}$$

3.

$$(x+1) \frac{dy}{dx}$$

4.

Question Number : 53 Question Id : 2307492168 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Coefficient of x^2 in the Maclaurin's series expansion of $y = \log \sec x$ is

$y = \log \sec x$ యొక్క మెక్లారిన్ విస్తరణలో x^2 యొక్క గుణకము

Options :

1. 1

2. $\frac{1}{2}$ 3. $\frac{1}{3}$ 4. $\frac{1}{4}$

Question Number : 54 Question Id : 2307492169 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $u = \log(x^3 + y^3 + z^3 - 3xyz)$ then $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} =$

$u = \log(x^3 + y^3 + z^3 - 3xyz)$ అయినప్పుడు $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} =$

Options :

1. $\frac{3}{x+y+z}$ 2. $\frac{5}{x+y+z}$

3. $\frac{6}{x+y+z}$

4. $\frac{4}{x+y+z}$

Question Number : 55 Question Id : 2307492170 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If $\frac{1}{u} = \sqrt{x^2 + y^2 + z^2}$ then $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} =$

$\frac{1}{u} = \sqrt{x^2 + y^2 + z^2}$ అయినప్పుడు $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} =$

Options :

1. u
2. $-2u$
3. $-u$
4. $2u$

Question Number : 56 Question Id : 2307492171 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If $u = f(x, y)$, $x = \phi(t)$, $y = \psi(t)$ then $\frac{du}{dt} =$

$u = f(x, y)$, $x = \phi(t)$, $y = \psi(t)$ అయినప్పుడు $\frac{du}{dt} =$

Options :

1.

$$2 \frac{dx}{dt} + \frac{dy}{dt}$$

2.

$$\frac{\partial u}{\partial x} \cdot \frac{dx}{dt} + \frac{\partial u}{\partial y} \cdot \frac{dy}{dt}$$

3.

$$\frac{\partial u}{\partial x} \cdot \frac{dx}{dt} - \frac{\partial u}{\partial y} \cdot \frac{dy}{dt}$$

4.

$$\frac{dx}{dt} + 2 \frac{dy}{dt}$$

Question Number : 57 Question Id : 2307492172 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \rightarrow 0} \frac{1 - \cos x}{5x^2} =$$

Options :

1.

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

2.

$$\frac{1}{4}$$

3.

$$\frac{1}{10}$$

4.

$$\frac{1}{5}$$

Question Number : 58 Question Id : 2307492173 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For $a > b > 0$, $\lim_{x \rightarrow 0} \frac{a^x - b^x}{x} =$

$a > b > 0$ को, $\lim_{x \rightarrow 0} \frac{a^x - b^x}{x} =$

Options :

1. $\log b$

2. $\log a$

3. $\log\left(\frac{a}{b}\right)$

4. $\log\left(\frac{b}{a}\right)$

Question Number : 59 Question Id : 2307492174 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

$\lim_{x \rightarrow 1} (1-x) \tan \frac{\pi x}{2} =$

Options :

1. $\frac{8}{\pi}$

2. $\frac{6}{\pi}$

3. $\frac{5}{\pi}$

4. $\frac{2}{\pi}$

Question Number : 60 Question Id : 2307492175 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \rightarrow 0} (a^x + x)^{\frac{1}{x}} =$$

Options :

1. $\frac{a^2}{e}$

2. $a^2 e$

3. ae

4. $\frac{a}{e}$

Question Number : 61 Question Id : 2307492176 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The radius of curvature of the curve $y = e^x$ at P (0,1) is

P(0,1) వద్ద $y = e^x$ అనే వక్రానికి వక్రతా వ్యాసార్థం

Options :

1. $2\sqrt{2}$

2. $3\sqrt{2}$

3. $4\sqrt{2}$

4. $5\sqrt{2}$

Question Number : 62 Question Id : 2307492177 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The asymptote of the curve $x^3 + y^3 - 3axy = 0$ is

$x^3 + y^3 - 3axy = 0$ అనే వక్రానికి గల అనంతస్థర రేఖ

Options :

1. $2x + y + a = 0$

2. $x + y + a = 0$

3. $x - y + a = 0$

4. $x + 2y + a = 0$

Question Number : 63 Question Id : 2307492178 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following straight line is not an asymptote of the curve $y^2(x - 2) = x^2(y - 1)$?

ఈ క్రింద నీయబడిన సరళరేఖలలో $y^2(x - 2) = x^2(y - 1)$ వక్రానికి అనంత స్థరరేఖ కానిది ఏది?

Options :

1. $y - 1 = x$

2. $x = 2$

3. $x = 3$

4. $y = 1$

Question Number : 64 Question Id : 2307492179 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $u = f(y - z, z - x, x - y)$ then $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} =$

$u = f(y - z, z - x, x - y)$ అయినప్పుడు $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} =$

Options :

1. 1
2. 0
3. 3
4. u

Question Number : 65 Question Id : 2307492180 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Stationary point of the function $z = x^2 - 3xy + y^2 + 2x$ is

$z = x^2 - 3xy + y^2 + 2x$ అనే ప్రమేయపు స్థావరబిందువు

Options :

1. $\left(\frac{4}{5}, \frac{6}{5}\right)$
2. $\left(\frac{6}{5}, \frac{4}{5}\right)$
3. $\left(\frac{3}{5}, \frac{4}{5}\right)$
4. $\left(\frac{4}{5}, \frac{3}{5}\right)$

Question Number : 66 Question Id : 2307492181 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The maximum value of xyz such that $x + y + z = 15$ is

$x + y + z = 15$ అయ్యే విధంగా xyz యొక్క గరిష్ట విలువ

Options :

1. 45
2. 108
3. 120
4. 125

Question Number : 67 Question Id : 2307492182 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$y = ae^{2x} + bxe^{2x}$ (where a, b are arbitrary constants) is a solution of the differential equation

a, b లు యాదృచ్ఛిక స్థిరరాశులయినపుడు $y = ae^{2x} + bxe^{2x}$ ను సాధనగా కల్గిన అవకలన సమీకరణం.

Options :

1. $y'' - 4y' + 4y = 0$
2. $y'' + 4y' - 4y = 0$
3. $4y'' + y' - y = 0$
4. $4y'' - y' - y = 0$

Question Number : 68 Question Id : 2307492183 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $\sqrt{1-x^2} \sin^{-1} x \, dy + y \, dx = 0$ is

అవకలన సమీకరణం $\sqrt{1-x^2} \sin^{-1} x \, dy + y \, dx = 0$ యొక్క సాధారణ సాధన

(Here C is arbitrary constant)

ఇక్కడ C ఒక యాదృచ్ఛిక స్థిరరాశి.

Options :

1. $x \sin^{-1} y = C$

2. $y \sin^{-1} x = C$

3. $y \sin x = C$

4. $y \cos x = C$

Question Number : 69 Question Id : 2307492184 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

$$d \left[\log \left(\frac{y}{x} \right) \right] =$$

Options :

1. $\frac{xdx + ydy}{xy}$

2. $\frac{xdy - ydx}{xy}$

3. $\frac{xdy + ydx}{x^2 + y^2}$

4. $\frac{xdy - ydx}{x - y}$

Question Number : 70 Question Id : 2307492185 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $xdy - ydx = xy^2 dx$ is

$xdy - ydx = xy^2 dx$ అనే అవకలన సమీకరణపు సాధారణ సాధన

(Here c is arbitrary constant)

(ఇక్కడ c ఒక యాదృచ్ఛిక స్థిరరాశి)

Options :

1. $xy - 2x = 2cy$

2. $xy^2 - 2x = cy$

3. $x^2y + 2x = 2cy$

4. $x - y^2 = cy$

Question Number : 71 Question Id : 2307492186 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An integrating factor of the differential equation $2xy dy - (x^2 + y^2 + 1)dx = 0$ is

$2xy dy - (x^2 + y^2 + 1)dx = 0$ అనే అవకలన సమీకరణపు ఒక సమాకలన గుణకం

Options :

1. x^2

2. y^2

3. $\frac{1}{y^2}$

4. $\frac{1}{x^2}$

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $x \log x \frac{dy}{dx} + y = 2 \log x$ is

(Here $x > 0$)

$x \log x \frac{dy}{dx} + y = 2 \log x$ అనే అవకలన సమీకరణపు సాధన (ఇక్కడ $x > 0$)

(Here c is arbitrary constant)

ఇక్కడ c ఒక యాదృచ్ఛిక స్థిరరాశి

Options :

1. $y \log x = (\log x)^2 + c$

2. $\log x = y \log x + c$

3. $\log x = x + y + c$

4. $\log x = x - y + c$

Question Number : 73 Question Id : 2307492188 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $(x^2 - 4y)dx + (y^2 - 4x)dy = 0$

అవకలన సమీకరణం $(x^2 - 4y)dx + (y^2 - 4x)dy = 0$ యొక్క సాధారణ సాధన

(Here c is an arbitrary constant)

ఇక్కడ c ఒక యాదృచ్ఛిక స్థిరరాశి

Options :

1. $x^3 + 12xy - y^3 = c$

2. $x^3 + 12xy + y^3 = c$

3. $x^3 - 12xy + y^3 = c$

4.

$$x^3 - 2xy - y^3 = c$$

Question Number : 74 Question Id : 2307492189 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If $p = \frac{dy}{dx}$, then the general solution of the differential equation

$$x^2 p^2 + 5xyp + 6y^2 = 0 \text{ is}$$

$p = \frac{dy}{dx}$ అయినపుడు అవకలన సమీకరణం $x^2 p^2 + 5xyp + 6y^2 = 0$ యొక్క సాధారణ సాధన

(Here c is an arbitrary constant)

ఇక్కడ c ఒక యాదృచ్ఛిక స్థిరరాశి

Options :

1. $(y^2 + x - c)(y^2 - x - c) = 0$

2. $(yx^3 - c)(yx^2 - c) = 0$

3. $(y + x - c)(y - x - c) = 0$

4. $(y + x^2 - c)(y - x^2 - c) = 0$

Question Number : 75 Question Id : 2307492190 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The singular solution of the differential equation $y = px - p^2$, (where $p = \frac{dy}{dx}$) is

అవకలన సమీకరణం $y = px - p^2$ (ఇక్కడ $p = \frac{dy}{dx}$) యొక్క విలక్షణ సాధన

Options :

1. $y^2 + 4x = 0$

2. $y^2 - 4x = 0$

3. $x^2 - 4y = 0$

4. $x^2 + 4y = 0$

Question Number : 76 Question Id : 2307492191 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The orthogonal trajectories of the family of curves $y = ax^n$, where a is a parameter, is

a పరామితి అయినపుడు, $y = ax^n$ అనే వక్రాల కుటుంబపు లంబ సంభేదములు

(Here c is an arbitrary constant)

ఇక్కడ c ఒక యాదృచ్ఛిక స్థిరరాశి

Options :

1. $x - ny = c$

2. $x^2 + ny = c$

3. $x + ny^2 = c$

4. $x^2 + n y^2 = c$

Question Number : 77 Question Id : 2307492192 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $(D^3 - 7D^2 + 12D)y = 0$

(where $D \equiv \frac{d}{dx}$) is

అవకలన సమీకరణం $(D^3 - 7D^2 + 12D)y = 0$ యొక్క సాధారణ సాధన

(ఇక్కడ $D \equiv \frac{d}{dx}$)

(Here c_1, c_2, c_3 are arbitrary constants)

ఇక్కడ c_1, c_2, c_3 లు యాదృచ్ఛిక స్థిరరాశులు

Options :

$$y = c_1 + c_2 e^{3x} + c_3 e^{-4x}$$

1.

$$y = c_1 + c_2 e^{-3x} + c_3 e^{4x}$$

2.

$$y = c_1 + c_2 e^{-3x} + c_3 e^{-4x}$$

3.

$$y = c_1 + c_2 e^{3x} + c_3 e^{4x}$$

4.

Question Number : 78 Question Id : 2307492193 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A particular integral of the differential equation $(D^2 - 1)y = 5x + 2$ is

(where $D \equiv \frac{d}{dx}$)

అవకలన సమీకరణం $(D^2 - 1)y = 5x + 2$ యొక్క ప్రత్యేక సమాకలని

(ఇక్కడ $D \equiv \frac{d}{dx}$)

Options :

$$-5x - 2$$

1.

$$-2x - 5$$

2.

3. $5x - 2$

4. $5x + 2$

Question Number : 79 Question Id : 2307492194 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\frac{1}{D^2 + 4} 2 \sin 2x =$$

Options :

1. $\frac{x}{8} \cos 2x$

2. $\frac{x}{4} \cos 2x$

3. $-\frac{x}{2} \cos 2x$

4. $\frac{x}{2} \cos 2x$

Question Number : 80 Question Id : 2307492195 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\frac{1}{D^2 - 2D + 1} x e^x =$$

Options :

1. $\frac{x^2 e^x}{3}$

2. $\frac{x^3 e^x}{2}$

3. $\frac{x^2 e^x}{6}$

Question Number : 81 Question Id : 2307492196 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $(x^2 D^2 + xD + 4)y = 0$ is

అవకలన సమీకరణం $(x^2 D^2 + xD + 4)y = 0$ యొక్క సాధారణ సాధన

(Here c_1, c_2 are arbitrary constants)

ఇక్కడ c_1, c_2 , లు యాదృచ్ఛిక స్థిరరాశులు

Options :

1. $y = c_1 e^x + c_2 e^{2x}$

2. $y = c_1 \cos(2 \log x) + c_2 \sin(2 \log x)$

3. $y = c_1 \cos(\log x) + c_2 \sin(\log x)$

4. $y = c_1 \cos x + c_2 \sin x$

Question Number : 82 Question Id : 2307492197 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The complete solution of the differential equation $\frac{dx}{y} = \frac{dy}{-x} = \frac{dz}{2x-3y}$ is

$\frac{dx}{y} = \frac{dy}{-x} = \frac{dz}{2x-3y}$ అనే అవకలన సమీకరణపు సంపూర్ణ సాధన

(Here c_1, c_2 are arbitrary constants)

ఇక్కడ c_1, c_2 , లు యాదృచ్ఛిక స్థిరరాశులు

Options :

1. $x^2 + y^2 = c_1, 2x - 3y - z = c_2$

2. $x^2 - y^2 = c_1, 3x - 2y - z = c_2$

3. $x^2 - y^2 = c_1, 3x - 2y + z = c_2$

4. $x^2 + y^2 = c_1, 3x + 2y + z = c_2$

Question Number : 83 Question Id : 2307492198 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

The partial differential equation obtained by eliminating the arbitrary constants a, b from $z = (x - a)^2 + (y - b)^2$ is

$z = (x - a)^2 + (y - b)^2$ నుండి a, b లను తొలగింప చేయగా లభించు పార్శ్వక అవకలన సమీకరణం

Options :

1. $\left(\frac{\partial z}{\partial x}\right)^2 - \left(\frac{\partial z}{\partial y}\right)^2 = 2z$

2. $\left(\frac{\partial z}{\partial x}\right)^2 - \left(\frac{\partial z}{\partial y}\right)^2 = 4z$

3. $\left(\frac{\partial z}{\partial x}\right)^2 + \left(\frac{\partial z}{\partial y}\right)^2 = 4z$

4. $\left(\frac{\partial z}{\partial x}\right)^2 + \left(\frac{\partial z}{\partial y}\right)^2 = 2z$

Question Number : 84 Question Id : 2307492199 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

The partial differential equation obtained by eliminating the arbitrary function f from $z = f(x^2 + y^2)$ is

$z = f(x^2 + y^2)$ నుంచి యాదృచ్ఛిక ప్రమేయం f ను తొలపింపచేయగా లభించు పాక్షిక అవకలన సమీకరణం

Options :

1. $x \left(\frac{\partial z}{\partial x} \right) - y \left(\frac{\partial z}{\partial y} \right) = 0$

2. $y \left(\frac{\partial z}{\partial x} \right) - x \left(\frac{\partial z}{\partial y} \right) = 0$

3. $y \left(\frac{\partial z}{\partial x} \right) + x \left(\frac{\partial z}{\partial y} \right) = 0$

4. $x \left(\frac{\partial z}{\partial x} \right) + y \left(\frac{\partial z}{\partial y} \right) = 0$

Question Number : 85 Question Id : 2307492200 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

The general solution of the partial differential equation

$$p \tan x + q \tan y = \tan z \text{ (where } p = \frac{\partial z}{\partial x}, q = \frac{\partial z}{\partial y} \text{) is}$$

$p \tan x + q \tan y = \tan z$ అనే పాక్షిక తో లభించు పాక్షిక అవకలన సమీకరణపు

$$\text{సాధన ఇక్కడ } (p = \frac{\partial z}{\partial x}, q = \frac{\partial z}{\partial y})$$

(Here ϕ is an arbitrary constant)

(ఇక్కడ ϕ ఒక యాదృచ్ఛిక ప్రమేయం)

Options :

$$\frac{\sin x}{\sin y} = \phi\left(\frac{\sin y}{\sin z}\right)$$

1.

$$\sin x = \phi(\sin y)$$

2.

$$\sin y = \phi(\sin z - \sin x)$$

3.

$$\sin 2x = \phi(\sin y)$$

4.

Question Number : 86 Question Id : 2307492201 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The complete integral of the partial differential equation $p = e^q$

where $p = \frac{\partial z}{\partial x}$, $q = \frac{\partial z}{\partial y}$ is

$p = e^q$ అనే పాక్షిక అవకలన సమీకరణపు సంపూర్ణ సాధన (ఇక్కడ $p = \frac{\partial z}{\partial x}$, $q = \frac{\partial z}{\partial y}$)

(Here a, b are arbitrary constants)

ఇక్కడ a, b లు యాదృచ్ఛిక స్థిరరాశులు

Options :

$$z = ax^2 - by^2$$

1.

$$z = ax + \frac{b}{x}$$

2.

$$z = ax + y \log a + b$$

3.

$$z = \frac{a}{x} + yb$$

4.

Question Number : 87 Question Id : 2307492202 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The general solution of the partial differential equation

$$(2D^2 + 5DD' + 2D'^2)z = 0 \text{ is } \left(\text{Where } D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y} \right)$$

$(2D^2 + 5DD' + 2D'^2)z = 0$ అనే పార్షియల్ అవకలన సమీకరణపు సాధారణ సాధన

ఇక్కడ $\left(D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y} \right)$

(Here are ϕ_1, ϕ_2 arbitrary functions)

(ఇక్కడ ϕ_1, ϕ_2 లు యాదృచ్ఛిక ప్రమేయాలు)

Options :

1. $z = \phi_1(2y - x) + \phi_2(y - 2x)$

2. $z = \phi_1(y + x) + \phi_2(y - x)$

3. $z = \phi_1(y + x) + x\phi_2(y + x)$

4. $z = \phi_1(y - 2x) + x\phi_2(y - 2x)$

Question Number : 88 Question Id : 2307492203 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\frac{1}{(bD - aD')^n} \phi(ax + by) =$$

$$\left(\text{Where } D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y} \right)$$

Options :

$$\frac{x^{n+1}(n+1)!}{b^{n-1}} \phi(ax + by)$$

1.

2.

$$\frac{x^n n!}{b^{n+1}} \phi(ax+by)$$

3.

$$\frac{x^n}{b^n} \phi(ax+by)$$

4.

$$\frac{x^n}{b^n n!} \phi(ax+by)$$

Question Number : 89 Question Id : 2307492204 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\frac{1}{D^2 + DD' - 2D'^2} e^{x+y} =$$

$$\left(\text{Where } D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y} \right)$$

Options :

$$\frac{x}{4} e^{x+y}$$

1.

$$\frac{x}{2} e^{x+y}$$

2.

$$\frac{x}{3} e^{x+y}$$

3.

$$\frac{x}{5} e^{x+y}$$

4.

Question Number : 90 Question Id : 2307492205 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The solution of the partial differential equation $3u_x + u_y = 0$ where $u(0, y) = 5e^{-6y}$ is

$u(0, y) = 5e^{-6y}$ అయినపుడు $3u_x + u_y = 0$ అనే పాక్షిక అవకలన సమీకరణపు సాధన

$$u(x, y) = 5e^{2x-6y}$$

1.

$$u(x, y) = 5e^{3x-6y}$$

2.

$$u(x, y) = 5e^{4x-6y}$$

3.

$$u(x, y) = 5e^{8x-6y}$$

4.

Question Number : 91 Question Id : 2307492206 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is an increasing sequence?

ఈ క్రింది వాటిలో ఆరోహణను క్రమం ఏది?

Options :

$$x_n = \frac{1}{n} \quad \forall n \geq 1$$

1.

$$x_n = \frac{1}{n^2 + 1} \quad \forall n \geq 1$$

2.

$$x_n = \frac{-1}{n} \quad \forall n \geq 1$$

3.

$$x_n = -(n^2 + 1) \quad \forall n \geq 1$$

4.

Question Number : 92 Question Id : 2307492207 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $x_1 = 2, x_{n+1} = 2 + \frac{1}{x_n} \quad \forall n \geq 1$ then $\lim_{x \rightarrow \infty} x_n =$

$x_1 = 2, x_{n+1} = 2 + \frac{1}{x_n} \quad \forall n \geq 1$ అయినపుడు $\lim_{x \rightarrow \infty} x_n =$

Options :

1. $1 - \sqrt{3}$

2. $1 + \sqrt{2}$

3. $1 + \sqrt{3}$

4. $1 - \sqrt{2}$

Question Number : 93 Question Id : 2307492208 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is a bounded sequence but not a Cauchy sequence?

ఈ క్రింది వాటిలో పరిబద్ధ అనుక్రమం అవుతూ కోషీ అనుక్రమం కానిది ఏది?

Options :

1. $x_n = \frac{1}{n^2} \quad \forall n \geq 1$

2. $x_n = \frac{n+1}{n} \quad \forall n \geq 1$

3. $x_n = \frac{1}{n} \quad \forall n \geq 1$

4. $x_n = (-1)^n \quad \forall n \geq 1$

Question Number : 94 Question Id : 2307492209 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $x_n = \sin\left(\frac{n\pi}{3}\right)$ then the limit superior of $x_n =$

$x_n = \sin\left(\frac{n\pi}{3}\right)$ అయినపుడు x_n యొక్క ఉన్నత అవధి

Options :

1. $\frac{\sqrt{3}}{2}$

2. $-\frac{\sqrt{3}}{2}$

3. $\frac{1}{2}$

4. $-\frac{1}{2}$

Question Number : 95 Question Id : 2307492210 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $x_n = (-1)^n \left(1 + \frac{1}{n}\right)$ then the limit inferior of $x_n =$

$x_n = (-1)^n \left(1 + \frac{1}{n}\right)$ అయినపుడు x_n యొక్క నిమ్న అవధి

Options :

1. -2

2. 2

3. -1

4. 1

Question Number : 96 Question Id : 2307492211 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\sum_{n=0}^{\infty} \frac{1}{(n+1)(n+2)} =$$

Options :

1. 3

2. 2

3. 1

4. 4

Question Number : 97 Question Id : 2307492212 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The series $\sum_{n=1}^{\infty} \frac{n^2}{n^a + 1}$ is convergent if $a =$

తేదీ $\sum_{n=1}^{\infty} \frac{n^2}{n^a + 1}$ అభిసరిస్తే $a =$

Options :

1. 1

2. 2

3. 3

4

4.

Question Number : 98 Question Id : 2307492213 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following series is convergent?

ఈ క్రింది వాటిలో అభిసరించే శ్రేణి ఏది?

Options :

$$\sum_{n=1}^{\infty} \sin\left(\frac{1}{n^2}\right)$$

1.

$$\sum_{n=1}^{\infty} \sin\left(\frac{1}{\sqrt{n}}\right)$$

2.

$$\sum_{n=1}^{\infty} \frac{1}{n+3}$$

3.

$$\sum_{n=1}^{\infty} \frac{1}{\sqrt{n} + \sqrt{n+1}}$$

4.

Question Number : 99 Question Id : 2307492214 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \rightarrow \infty} \left(1 + \frac{1}{\sqrt{n}}\right)^{-n^{1/2}} =$$

Options :

$$\frac{4}{e}$$

1.

$$\frac{3}{e}$$

2.

3. $\frac{2}{e}$

4. $\frac{1}{e}$

Question Number : 100 Question Id : 2307492215 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following series is absolutely convergent

ఈ క్రింది వాటిలో సంపూర్ణాభిసరణం చెందే శ్రేణి ఏది?

Options :

1. $\sum_{n=1}^{\infty} \frac{(-1)^{n+1} \cdot n}{n^2 + 1}$

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

3. $\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n^2 + 1}$

4. $\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{\sqrt{n} + 1}$

Question Number : 101 Question Id : 2307492216 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The 'c' value of Lagrange's mean value theorem for the function $f(x) = 2x^2 - 7x + 10$ on $[2, 5]$ is

$[2, 5]$ అంతరంలో $f(x) = 2x^2 - 7x + 10$ అనే ప్రమేయానికి లెగ్రాంజ్ మధ్యమ మూల్య సిద్ధాంతపు 'c' విలువ

Options :

1. $\frac{5}{2}$

2. $\frac{7}{2}$

3. $\frac{3}{2}$

4. $\frac{9}{2}$

Question Number : 102 Question Id : 2307492217 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The envelope of the family of straight lines $x \cos \alpha + y \sin \alpha = a$ where α is a parameter

α ను పరామితిగా కల్గిన సరళ రేఖల కుటుంబము $x \cos \alpha + y \sin \alpha = a$ యొక్క ఆవరణిక

Options :

1. $x + y = a$

2. $x^2 - y^2 = a^2$

3. $x^2 + y^2 = a^2$

4. $x - y^2 = a$

Question Number : 103 Question Id : 2307492218 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

For which of the following functions Rolle's mean value theorem is applicable?

ఈ క్రింది ఇచ్చిన ప్రమేయాలలో దేనికి రోలె మధ్యమ మూల్య సిద్ధాంతము అనువర్తించ గలము?

Options :

1. $f(x) = |x|$ on $[-2, 2]$

2. $f(x) = x^3 - 3x$ on $[-3, 3]$

3. $f(x) = 1 - |x-1|$ on $[0, 2]$

4. $f(x) = (x-1)^{\frac{2}{3}}$ on $[0, 3]$

Question Number : 104 Question Id : 2307492219 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $f: \mathbb{R} \rightarrow \mathbb{R}$ be a function such that $|f(x) - f(y)| \leq (x-y)^2$ for all $x, y \in \mathbb{R}$ then

$f: \mathbb{R} \rightarrow \mathbb{R}$ అనే ప్రమేయం, ప్రతి $x, y \in \mathbb{R}$ కు $|f(x) - f(y)| \leq (x-y)^2$ అయ్యేవిధంగా ఉన్నట్లయితే

Options :

1. $f(x) = x^5 \quad \forall x \in \mathbb{R}$

2. $f(x) = x^3 \quad \forall x \in \mathbb{R}$

3. $f(x) = x^2 \quad \forall x \in \mathbb{R}$

4. $f(x) = k \quad \forall x \in \mathbb{R}$ (Here k is constant)
ప్రతి $x \in \mathbb{R}$ (ఇక్కడ k ఒక స్థిరాంకం)

Question Number : 105 Question Id : 2307492220 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\int_0^{4.7} [x] dx =$$

Options :

1. 3.8

2. 5.8

3. 8.8

4. 6.8

Question Number : 106 Question Id : 2307492221 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $f: \mathbb{R} \rightarrow \mathbb{R}$ is a continuous function. If for $x \in \mathbb{R}$ $F(x) = \int_{x-1}^{x+1} f(t) dt$

then $F'(x) =$

$f: \mathbb{R} \rightarrow \mathbb{R}$ ఒక అవిచ్ఛిన్న ప్రమేయం, $x \in \mathbb{R}$, కు $F(x) = \int_{x-1}^{x+1} f(t) dt$ అయినప్పుడు $F'(x) =$

Options :

1. $f(2x) - f(x)$

2. $f(x+1) - f(x)$

3. $f(x) - f(x-1)$

4. $f(x+1) - f(x-1)$

Question Number : 107 Question Id : 2307492222 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $\left| \int_{-2\pi}^{2\pi} x^2 \sin^8(e^x) dx \right| \leq A$ then $A =$

$$\left| \int_{-2\pi}^{2\pi} x^2 \sin^8(e^x) dx \right| \leq A \text{ అయితే } A =$$

Options :

1. $\frac{16\pi^3}{3}$

2. $\frac{8\pi^3}{3}$

3. $\frac{4\pi^3}{3}$

4. $\frac{12\pi^3}{3}$

Question Number : 108 Question Id : 2307492223 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following sequence of functions converges point wise on $[0,1]$?

$[0,1]$ అంతరం పై ఈ క్రింద ఇవ్వబడిన ప్రమేయాల అనుక్రమాలలో బిందురూప అభిసరణం చెందునది ఏది?

Options :

1. $f_n(x) = x^n \quad \forall \quad n \geq 1$

2. $f_n(x) = \frac{\sin(n^2 x)}{n} \quad \forall \quad n \geq 1$

3. $f_n(x) = x^n(1-x) \quad \forall \quad n \geq 1$

4. $f_n(x) = n^3 x^n(1-x)^4 \quad \forall \quad n \geq 1$

Question Number : 109 Question Id : 2307492224 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the sequence of functions $\{f_n\}$ is defined on $[0, 1]$ by

$$f_n(x) = \frac{1}{1+(nx-1)^2} \quad \forall \quad n \geq 1 \text{ then } \lim_{n \rightarrow \infty} f_n(x) =$$

$[0, 1]$ అంతరంపై ప్రమేయాల అనుక్రమం $\{f_n\}$ ను $f_n(x) = \frac{1}{1+(nx-1)^2}$

$\forall \quad n \geq 1$ గా నిర్వచిస్తే $\lim_{n \rightarrow \infty} f_n(x) =$

Options :

1. $f(x) = x^2 - 1 \quad \forall \quad x \in [0, 1]$

2. $f(x) = 1 - x \quad \forall \quad x \in [0, 1]$

3. $f(x) = \begin{cases} \frac{1}{2}, & x = 0 \\ 0, & x \in [0, 1] \end{cases}$

4. $f(x) = x \quad \forall \quad x \in [0, 1]$

Question Number : 110 Question Id : 2307492225 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $f(x) = \sum_{n=1}^{\infty} \frac{\cos nx}{1+n^2}$ for all $x \in \left[\frac{\pi}{6}, \frac{11\pi}{6}\right]$ then $f'(x) =$

$x \in \left[\frac{\pi}{6}, \frac{11\pi}{6}\right]$ కు $f(x) = \sum_{n=1}^{\infty} \frac{\cos nx}{1+n^2}$ అయినపుడు $f'(x) =$

Options :

1. $\sum_{n=1}^{\infty} \frac{2n \cos nx}{1+n^2}$

2. $\sum_{n=1}^{\infty} \frac{n \cos nx}{1+n^2}$

3. $\sum_{n=1}^{\infty} \frac{-n \sin nx}{1+n^2}$

4. $\sum_{n=1}^{\infty} \frac{n \sin nx}{1+n^2}$

Question Number : 111 Question Id : 2307492226 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

The number of binary operations defined on a set containing 4 elements is

4 మూలకాల సమితిపై నిర్వచించదగ్గ యుగ్మ పరిక్రియల సంఖ్య

Options :

1. 4^{12}

2. 4^8

3. 4^{16}

4. 4^4

Question Number : 112 Question Id : 2307492227 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Let $*$ be the binary operation defined on $Q^* = Q - \{0\}$ by $a * b = \frac{ab}{5}$

$\forall a, b \in Q^*$ then the identity element is

$Q^* = Q - \{0\}$ పై $*$ అనే యుగ్మ పరిక్రియను $a * b = \frac{ab}{5} \forall a, b \in Q^*$

గా నిర్వచిస్తే, తత్వమ మూలకం

Options :

1. 2

2. 1

3. 3

4. 5

Question Number : 113 Question Id : 2307492228 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

If the centre $Z(G)$ of a group G is such that $\frac{G}{Z(G)}$ is cyclic then G is

ఒక సమూహం G యొక్క కేంద్రం $Z(G)$ అవుతూ $\frac{G}{Z(G)}$ చక్రియం అయితే అప్పుడు G

Options :

Cyclic

చక్రియం

1.

Abelian

ఎబీలియన్

2.

$$Z(G) \neq G$$

3.

Non abelian

ఎబీలియన్ కాదు (వినిమయం కాదు)

4.

Question Number : 114 Question Id : 2307492229 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Let G be a finite group and H, K are any two sub groups of G . If $|H| = 17$, $|K| = 31$ then $|H \cap K| =$

G ఒక పరిమిత సమూహమనీ మరియు H, K లు G కి ఉపసమూహాలనీ అనుకొనుము.
 $|H| = 17$, $|K| = 31$ అయినపుడు $|H \cap K| =$

Options :

9

1.

14

2.

1

3.

5

4.

Question Number : 115 Question Id : 2307492230 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Let G be a group and $a, b \in G$ then which of the following statements is false?

G ఒక సమూహం మరియు $a, b \in G$ అయినపుడు ఈ క్రింది ప్రవచనాలలో ఏది అసత్యము (నిజం కాదు ?)

Options :

1. $o(a) = o(a^{-1})$
2. $o(ab) = o(ba)$
3. $o(a) = o(xax^{-1})$ for all $x \in G$
ప్రతి $x \in G$ కి
4. $o(ab) = o(a) o(b)$

Question Number : 116 Question Id : 2307492231 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

Let G be a cyclic group of order 360. Then the number of generators of G is

360 ని తరగతిగా కల్గిన చక్రియ సమూహం G యొక్క జనక మూలకాల సంఖ్య

Options :

1. 98
2. 96
3. 94
4. 92

Question Number : 117 Question Id : 2307492232 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

Let G and H be any two finite groups such that $\gcd(|G|, |H|) = 1$ then the number of homomorphisms $f: G \rightarrow H$ are

గనాభా $(|G|, |H|) = 1$ అయ్యే విధంగా G, H లను పరిమిత సమూహాలనీ అనుకొనుము.
 ఇప్పుడు $f: G \rightarrow H$ అయ్యే విధంగా ఉండే సమరూపతల సంఖ్య

Options :

1. 4
2. 3
3. 2
4. 1

Question Number : 118 Question Id : 2307492233 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Let $\mathbb{R}^* = \mathbb{R} - \{0\}$, $\mathbb{C}^* = \mathbb{C} - \{0\}$ denote the multiplicative groups of non-zero real and complex numbers. If the homomorphism $\phi: \mathbb{C}^* \rightarrow \mathbb{R}^*$ is defined by $\phi(z) = |z|$ then $\text{Ker } \phi =$

$\mathbb{R}^* = \mathbb{R} - \{0\}$, $\mathbb{C}^* = \mathbb{C} - \{0\}$ లు వరుసగా శూన్యేతర వాస్తవ మరియు సంకీర్ణ సంఖ్యల గుణక సమూహాలను సూచిస్తాయనుకోండి. $\phi: \mathbb{C}^* \rightarrow \mathbb{R}^*$ అనే సమరూపతను $\phi(z) = |z|$ గా నిర్వచిస్తే $\text{Ker } \phi =$

Options :

1. $\{-1, -i\}$
2. $\{2, i\}$
3. $\{\pm 1, \pm i\}$
4. $\{1+i, 1-i\}$

Question Number : 119 Question Id : 2307492234 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following statements is false?

ఈ క్రింది ప్రవచనాలలో ఏది నిజము కాదు?

Options :

A_3 is an abelian group

A_3 ఒక ఎబీలియన్ సమూహం

1.

Product of two odd permutations in S_n is again an odd permutation

S_n లో రెండు బేసి ప్రస్తారాల లబ్ధం తిరిగి బేసి ప్రస్తారం అవుతుంది

2.

$|S_n| = n!$

3.

There exists an element of order 20 in S_9

S_9 లో 20ని తరగతిగా గల మూలకం వ్యవస్థితం అవుతుంది

4.

Question Number : 120 Question Id : 2307492235 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the ring $(\mathbb{Z}_{40}, +_{40}, \times_{40})$, $39 \times_{40} 27 =$

$(\mathbb{Z}_{40}, +_{40}, \times_{40})$ అనే వలయంలో $39 \times_{40} 27 =$

Options :

13

1.

12

2.

15

3.

14

4.

Question Number : 121 Question Id : 2307492236 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a field?

ఈ క్రింది వాటిలో క్షేత్రము కానిది ఏది?

Options :

$\mathbb{Q}$, the set of rational numbers

$\mathbb{Q}$, అకరణీయ సంఖ్యా సమితి

1.

$\mathbb{R}$, the set of real numbers

$\mathbb{R}$, వాస్తవ సంఖ్యా సమితి

2.

$\mathbb{Z}$, the set of all integers

$\mathbb{Z}$, పూర్ణ సంఖ్యల సమితి

3.

$\mathbb{C}$, the set of all complex numbers

$\mathbb{C}$, సంకీర్ణ సంఖ్యల సమితి

4.

Question Number : 122 Question Id : 2307492237 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let X be any non empty set and $P(X)$ be its power set.

Then in the ring $(P(X), \Delta, \cap)$, the zero element and the identity are

(Where Δ denotes the symmetric difference $A, B \in P(X)$ $A \Delta B = (A \cup B) - (A \cap B)$)

X ఏదేని శూన్యేతర సమితి అనీ, $P(X)$ దాని ఘాత సమితి అనీ

అనుకొనుము. వలయం $(P(X), \Delta, \cap)$ లో శూన్య మూలకం,

తత్వమ మూలకాలు వరుసగా (ఇక్కడ Δ సౌష్ఠవ భేదాన్ని సూచిస్తుంది,

$A, B \in P(X)$, $A \Delta B = (A \cup B) - (A \cap B)$)

Options :

X, X

1.

ϕ, X

2.

X, ϕ

3.

ϕ, ϕ

4.

Correct Marks : 1 Wrong Marks : 0

The number of subrings of the ring $(\mathbb{Z}_{10}, +_{10}, \times_{10})$ is $(\mathbb{Z}_{10}, +_{10}, \times_{10})$ వలయానికి గల ఉపవలయాల సంఖ్య

Options :

1. 1
2. 4
3. 2
4. 3

Question Number : 124 Question Id : 2307492239 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The characteristic of the ring $\mathbb{Z}_{16} \times \mathbb{Z}_{28}$ is $\mathbb{Z}_{16} \times \mathbb{Z}_{28}$ అనే వలయ లాక్షణికం

Options :

1. 84
2. 96
3. 102
4. 112

Question Number : 125 Question Id : 2307492240 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is true?

ఈ క్రింది ప్రవచనాలలో ఏది నిజము?

Options :

1. If I, J are any two ideals in a ring $(R, +, \cdot)$ then $I \cup J$ is an ideal of R
 $(R, +, \cdot)$ వలయంలో I, J లు రెండు ఆదర్శాలు అయితే $I \cup J$ కూడా ఒక ఆదర్శమవుతుంది

2. Every subring in a ring is an ideal
 ఏదేని వలయం యొక్క ప్రతి ఉపవలయం ఆదర్శమవుతుంది

3. Every ideal in a ring is a subring
 ఏదేని వలయంలో ప్రతి ఆదర్శం - ఒక ఉపవలయం అవుతుంది

4. Every integral domain is a field
 ప్రతి పూర్ణంక ప్రదేశం క్షేత్రమవుతుంది

Question Number : 126 Question Id : 2307492241 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

In the vector space $\mathbb{R}^3(\mathbb{R})$, which of the following sets is linearly Independent?

$\mathbb{R}^3(\mathbb{R})$, అనే సదిశాంతరాళంలో, ఈ క్రింద ఇచ్చిన వాటిలో ఋజు స్వాతంత్ర్య సమితి ఏది?

Options :

1. $A_1 = \{(1,2,0), (0,3,1), (-1,0,1)\}$

2. $A_2 = \{(1,2,3), (4,5,6), (2,4,6)\}$

3. $A_3 = \{(-1,2,1), (3,0,-1), (-5,4,3)\}$

4. $A_4 = \{(1,2,3), (1,0,0), (0,1,0), (0,0,1)\}$

Question Number : 127 Question Id : 2307492242 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

If $(3+4i, 6i, 3+7i) = a(1,0,0) + b(1,1,0) + c(1,1,1)$ then $(a,b,c)=$

$(3+4i, 6i, 3+7i) = a(1,0,0) + b(1,1,0) + c(1,1,1)$ అయినప్పుడు $(a,b,c)=$

Options :

1. $(3-7i, 3+i, -3-i)$
2. $(3+2i, 3+i, -3-7i)$
3. $(3-2i, 3-i, 3+7i)$
4. $(3-2i, -3-i, 3+7i)$

Question Number : 128 Question Id : 2307492243 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

The dimension of the subspace $W = \{(x_1, x_2, x_3, x_4, x_5) / 2x_1 + x_3 + x_5 = 0\}$ as a subspace of the vector space $\mathbb{R}^5(\mathbb{R})$

$\mathbb{R}^5(\mathbb{R})$ అనే సదిశాంతరాళంలో $W = \{(x_1, x_2, x_3, x_4, x_5) / 2x_1 + x_3 + x_5 = 0\}$ అనే ఉపాంతరాళ పరిమాణం

Options :

1. 3
2. 4
3. 1
4. 2

Question Number : 129 Question Id : 2307492244 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

Let $T: \mathbb{R}^3(\mathbb{R}) \rightarrow \mathbb{R}^3(\mathbb{R})$ be the linear transformation defined as $T(a, b, c) = (2b + c, a - 4b, 3a)$ then the matrix of T with respect to the ordered basis $B = \{(1, 1, 1), (1, 1, 0), (1, 0, 0)\}$ is

$T: \mathbb{R}^3(\mathbb{R}) \rightarrow \mathbb{R}^3(\mathbb{R})$ అనే ట్రిన్సార్మేషన్ $T(a, b, c) = (2b + c, a - 4b, 3a)$ గా నిర్వచించారు. క్రమ ఆధారం $B = \{(1, 1, 1), (1, 1, 0), (1, 0, 0)\}$ ద్వారా T యొక్క మాత్రిక

Options :

$$[T]_B = \begin{bmatrix} 3 & 3 & 3 \\ -6 & 2 & 1 \\ 6 & 3 & 3 \end{bmatrix}$$

1.

$$[T]_B = \begin{bmatrix} 3 & 3 & 3 \\ -6 & -6 & -2 \\ 6 & 5 & -1 \end{bmatrix}$$

2.

$$[T]_B = \begin{bmatrix} 3 & 3 & 3 \\ -6 & 6 & 2 \\ 6 & 5 & 1 \end{bmatrix}$$

3.

$$[T]_B = \begin{bmatrix} 3 & 3 & 3 \\ 6 & -6 & 1 \\ 5 & 6 & 2 \end{bmatrix}$$

4.

Question Number : 130 Question Id : 2307492245 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

Let A be any 3×3 matrix then $\det(2A) =$

A ఒక 3×3 మాత్రిక అయినపుడు $\det(2A) =$

Options :

1. 8 det A
2. 16 det A
3. 4 det A
4. 2 det A

Question Number : 131 Question Id : 2307492246 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $\mathbb{R}$ be the field of real numbers which of the following is not a subspace of the vector space $\mathbb{R}^3(\mathbb{R})$?

వాస్తవ సంఖ్యల క్షేత్రమును $\mathbb{R}$ సూచిస్తుంది. ఈ క్రింది వాటిలో, $\mathbb{R}^3(\mathbb{R})$ అనే సదిశాంతరాళానికి ఉపాంతరాళం కానిది ఏది?

Options :

1. $W_1 = \{(x, 2y, 3z) / x, y, z \in \mathbb{R}\}$
2. $W_2 = \{(x, y, z) / x + y + z = 0, x, y, z \in \mathbb{R}\}$
3. $W_3 = \{(x, y, z) / x, y, z \in \mathbb{R}\}$
4. $W_4 = \{(x, y, 0) / x, y \in \mathbb{R}\}$

Question Number : 132 Question Id : 2307492247 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The rank of the matrix $A = \begin{bmatrix} 2 & 1 & 1 \\ 1 & 3 & 2 \\ 1 & 1 & -1 \\ 1 & -2 & 3 \end{bmatrix}$

$$A = \begin{bmatrix} 2 & 1 & 1 \\ 1 & 3 & 2 \\ 1 & 1 & -1 \\ 1 & -2 & 3 \end{bmatrix} \quad \text{అనే మాత్రిక యొక్క క్రోటి}$$

Options :

1. 4
2. 2
3. 3
4. 1

Question Number : 133 Question Id : 2307492248 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Trace of the matrix $A = \begin{bmatrix} -9 & 4 & 4 \\ -8 & 3 & 4 \\ -16 & 8 & 7 \end{bmatrix}$ is

$$\text{మాత్రిక } A = \begin{bmatrix} -9 & 4 & 4 \\ -8 & 3 & 4 \\ -16 & 8 & 7 \end{bmatrix} \quad \text{యొక్క జాడ (ట్రేస్)}$$

Options :

1. 2
2. 1

3. 4

4. 3

Question Number : 134 Question Id : 2307492249 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The characteristic polynomial of the matrix $A = \begin{bmatrix} 0 & 0 & 3 \\ 1 & 0 & 2 \\ 0 & 1 & 1 \end{bmatrix}$ is

మాత్రిక $A = \begin{bmatrix} 0 & 0 & 3 \\ 1 & 0 & 2 \\ 0 & 1 & 1 \end{bmatrix}$ యొక్క లాక్షణిక బహుపది

Options :

1. $x^3 - 3x^2 - x - 2$

2. $x^3 - 3x^2 - 2x - 1$

3. $x^3 - x^2 - 2x - 3$

4. $x^3 + x^2 + 2x + 3$

Question Number : 135 Question Id : 2307492250 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Let 0, 1 are the eigen values of a 2×2 matrix A. then
 $4A^4 + 5A^3 - 6A^2 + 7A + I =$

A అనే ఒక 2×2 చతురస్ర మాత్రికకు 0, 1 ఐగన్ విలువలు అయినప్పుడు
 $4A^4 + 5A^3 - 6A^2 + 7A + I =$

Options :

1. $10I - A$

2. $10I + A$

3. $I - 10A$

4. $I + 10A$

Question Number : 136 Question Id : 2307492251 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following is a characteristic vector of the matrix

$$A = \begin{bmatrix} 7 & 4 & -1 \\ 4 & 7 & -1 \\ -4 & -4 & 4 \end{bmatrix} ?$$

ఈ క్రింది వాటిలో ఏది $A = \begin{bmatrix} 7 & 4 & -1 \\ 4 & 7 & -1 \\ -4 & -4 & 4 \end{bmatrix}$ అనే మాత్రికకు లాక్షణిక సదిశ అవుతుంది?

Options :

1. $\begin{bmatrix} 1 \\ 0 \\ 2 \end{bmatrix}$

2. $\begin{bmatrix} 1 \\ 0 \\ -4 \end{bmatrix}$

3. $\begin{bmatrix} -1 \\ 0 \\ 4 \end{bmatrix}$

$$\begin{bmatrix} 1 \\ 0 \\ 4 \end{bmatrix}$$

4.

Question Number : 137 Question Id : 2307492252 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

If the characteristic (eigen) values of a matrix A are 1, -2, 3 then the characteristic of $A^2 + I$ are

1, -2, 3 లు A అనే మాత్రికకు లాక్షణిక విలువలు (ఐగన్ విలువలు) అయితే $A^2 + I$ అనే మాత్రిక యొక్క లాక్షణిక విలువలు

Options :

1. 2, 5, -10

2. 2, 5, 10

3. 2, -5, 10

4. -2, 5, 10

Question Number : 138 Question Id : 2307492253 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical
 Correct Marks : 1 Wrong Marks : 0

Let α, β be any two orthonormal vectors. Then $\|\alpha - \beta\| =$

α, β రెండు లంబాభిలంబ సదిశలు అయినపుడు $\|\alpha - \beta\| =$

Options :

3 units

3 యూనిట్లు

1.

1 unit

1 యూనిట్

2.

$\sqrt{2}$ units

$\sqrt{2}$ యూనిట్ లు

3.

$\sqrt{3}$ units

$\sqrt{3}$ యూనిట్ లు

4.

Question Number : 139 Question Id : 2307492254 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let V be a real inner product space then which of the following is false?

where $S \subseteq V$

వాస్తవ సంఖ్యాక్షేత్రము పై V ఒక అంతర్లబ్ధాంతరాళమనీ అనుకొనుము. అప్పుడు ఈ క్రింది వాటిలో ఏది అసత్యము? ఇక్కడ $S \subseteq V$

Options :

1. $\{0\}^\perp = V$

1.

2. $V^\perp = \{0\}$

2.

3. $S^\perp = S^{\perp\perp}$

3.

4. $S^\perp = L(S)$

4.

Question Number : 140 Question Id : 2307492255 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $S = \{\alpha_1, \alpha_2, \dots, \alpha_n\}$ be any finite orthonormal set in an inner product space V . Then which of the following statements is false?

V అనే అంతర్లబ్ధాంతరాళంలో $S = \{\alpha_1, \alpha_2, \dots, \alpha_n\}$ ను ఒక పరిమిత

లంబాభిలంబ సమితి అనుకొనుము. అప్పుడు ఈ క్రింది ప్రవచనాలలో ఏది అసత్యము ?

Options :

1. $L(S) = V$

If $(\beta, \alpha_i) = 0$ for $1 \leq i \leq n$ then $\beta \neq 0$

$1 \leq i \leq n$ కు $(\beta, \alpha_i) = 0$ అయితే $\beta \neq 0$

2.

If $\beta \in V$ then $\beta = \sum_{i=1}^n (\beta, \alpha_i) \alpha_i$

$\beta \in V$ అయినప్పుడు $\beta = \sum_{i=1}^n (\beta, \alpha_i) \alpha_i$

3.

If $\beta \in V$ then $\sum_{i=1}^n |(\beta, \alpha_i)|^2 = \|\beta\|^2$

$\beta \in V$ అయినప్పుడు $\sum_{i=1}^n |(\beta, \alpha_i)|^2 = \|\beta\|^2$

4.

Question Number : 141 Question Id : 2307492256 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The third iteration to the root of the equation $x^3 - x - 1 = 0$ in the interval $(1, 2)$ using bisection method is

సమద్విఖండన పద్ధతిలో $x^3 - x - 1 = 0$ అనే సమీకరణానికి $(1, 2)$ అంతరంలో ఉండే మూలానికి మూడో పునరుక్తము

Options :

1. 1.375

2. 1.5

3. 1.9

4. 1.175

Question Number : 142 Question Id : 2307492257 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The convergence rate of Newton-Raphson method.

న్యూటన్ రాఫ్సన్ పద్ధతి యొక్క అభిసరణ రేటు

Options :

1. 4
2. 1
3. 2
4. 1.62

Question Number : 143 Question Id : 2307492258 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is an iterative formula to find the inverse of $b \in \mathbb{N}$ using Newton – Raphson method?

న్యూటన్ రాఫ్సన్ పద్ధతిని $b \in \mathbb{N}$ యొక్క విలోమాన్ని కనుగొనడానికి ఉపయోగించే పునరుక్త సూత్రం ఈ క్రింది వాటిలో ఏది?

Options :

1. $x_{n+1} = x_n^2(2 - bx_n)$
2. $x_{n+1} = x_n(2 + bx_n)$
3. $x_{n+1} = x_n(2 - bx_n)$
4. $x_{n+1}^2 = x_n(2 - bx_n^2)$

Question Number : 144 Question Id : 2307492259 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The lagrange linear interpolating polynomial which fits the following data

ఈ క్రింది దత్తాంశాన్ని సందానించే లెగ్రాంజ్ రేఖీయ అంతర్వేశన బహుపది

x	1	3
$f(x)$	8	18

Options :

1. $f(x) = 6x + 3$

2. $f(x) = 1 + 7x$

3. $f(x) = 3 + 5x$

4. $f(x) = 4x + 4$

Question Number : 145 Question Id : 2307492260 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
 Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The first divided difference of $f(x) = \frac{1}{x}$ using the points x_0, x_1 is

$f(x) = \frac{1}{x}$ ప్రమేయానికి x_0, x_1 లను బిందువులనుపయోగించి గణించిన

మొదటి విభాజిత భేదం

Options :

1. $-\frac{x_0}{x_1}$

2. $-\frac{1}{x_1 x_0}$

3. $-\frac{x_1}{x_0}$

4. $\frac{1}{x_1 x_0}$

Question Number : 146 Question Id : 2307492261 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let Δ denotes the forward difference operator then the second divided difference $f[x_0, x_1, x_2] =$
[Here $x_i - x_{i-1} = h$]

Δ పురోగమన భేద పరికర్తను సూచిస్తుందనుకొనుము. అప్పుడు రెండవ విభజిత భేదము
[ఇక్కడ $x_i - x_{i-1} = h$]

Options :

1. $\frac{1}{2!h^2} \Delta^2 f(x_0)$

2. $\frac{1}{2!h} \Delta^2 f(x_0)$

3. $\frac{1}{3!h^2} \Delta^2 f(x_0)$

4. $\frac{1}{3!h} \Delta^2 f(x_0)$

Question Number : 147 Question Id : 2307492262 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $f(x_i) = f_i$ and $x_i - x_{i-1} = h \quad \forall \quad i \geq 1$ then $\Delta(f_i^2) =$

$f(x_i) = f_i$ అని $x_i - x_{i-1} = h \quad \forall \quad i \geq 1$ గా తీసికొనుము అప్పుడు $\Delta(f_i^2) =$

Options :

1. $(f_{i+1} - f_i) \Delta f_{i+1}$

2. $(f_{i+1} + f_i)\Delta f_i$

3. $(f_i - f_{i+1})\Delta f_{i+1}$

4. $(f_i - f_{i-1})\Delta f_i$

Question Number : 148 Question Id : 2307492263 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is a multiple root of $f(x) = e^x - x - 1 = 0$?

ఈ క్రింది వాటిలో $f(x) = e^x - x - 1 = 0$ నకు పునరావృత మూలం ఏది?

Options :

1. $x = 3$

2. $x = 2$

3. $x = 1$

4. $x = 0$

Question Number : 149 Question Id : 2307492264 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $y = e^x$ is a solution of the differential equation $y'' + P(x)y' + Q(x)y = 0$, then

$y'' + P(x)y' + Q(x)y = 0$ అనే అవకలన సమీకరణానికి $y = e^x$ ఒక సాధన అయితే

Options :

1. $xP(x) + Q(x) - 1 = 0$

2. $P(x) + xQ(x) = 0$

3. $1 - P(x) + Q(x) = 0$

4. $1 + P(x) + Q(x) = 0$

Question Number : 150 Question Id : 2307492265 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\frac{1}{D+3D'} y \cos x =$$

$$(\text{Where } D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y})$$

$$(\text{ಇಲ್ಲಿ } D \equiv \frac{\partial}{\partial x}, D' \equiv \frac{\partial}{\partial y})$$

Options :

1. $y \sin x + 3 \cos x$

2. $y \cos x + 3 \sin x$

3. $y \cos x - \sin x$

4. $y \sin x - \cos x$