TS SET

Question Paper Name :	MATHEMATICAL SCIENCES 5th July 2019 Shift 1 Set1
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Teaching and Research Aptitude

Group Number :	1
Group Id :	6824703
Group Maximum Duration :	60
Group Minimum Duration :	60
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Teaching and Research Aptitude

Section Id :	6824703
Section Number :	1

Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	42
Number of Questions to be attempted :	42
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	68247013
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 682470154 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

A successful teacher is one who is

విజయవంతమైన ఉపాధ్యాయుడెవరనగా...

Options :

682470601. Compassionate and disciplinarian.

సహృదయం, క్రమశిక్షణగలవాడు

682470602. Quite and reactive.

మౌనంతో మరియు ప్రతిస్పందించువాడు

682470603. Tolerant and dominating.

సహనశీలత మరియు ఆదిపత్య భావంగలవాడు

Passive and active.

స్తబ్దత మరియు చురుకుదనంగలవాడు

682470604.

Question Number : 2 Question Id : 682470155 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

As per modern concept of teaching/learning process which of the following statements is most appropriate?

క్రిందివానిలో బోధనాభ్యసన ప్రక్రియకు సంబందించిన ఆధునిక భావన ప్రకారం ఏది సరైన ప్రతిపాధన

Options :

Teachers can teach students to gain knowledge.

విద్యార్థుల జ్ఞానార్జనకు ఉపాధ్యాయులు భోదించగలరు.

682470605.

Teachers help can create in a student a desire to learn.

విద్యార్థులలో అభ్యసించాలనే ఆసక్తిని పెంచుటలో ఉపాధ్యాయులు తోడ్పడగలరు

682470606.

Lecture Method can be used for developing thinking.

ఆలోచనాభివృద్ధికి ఉపన్యాస పద్ధతిని ఉపయోగించవచ్చు

682470607.

Teachers are born as teaching is an art.

బోధనే ఒకకళగా ఉపాధ్యాయులు స్వతసిద్ధంగా జన్మిస్తారు

682470608.

Question Number : 3 Question Id : 682470156 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If majority of students in your class are slow in grasping, as a teacher you should
నీ తరగతి గదిలో విద్యార్థులలో ఎక్కువ మంది పట్టు సాధించుటలో వెనుకబడి ఉన్నచో ఉపాధ్యాయునిగా నీవు ఏమి చేయాలి?

Options :

682470609. Not care about the intelligent students
ప్రజ్ఞావంతులైన విద్యార్థులను పట్టించుకోను

682470610. Keep your speed of teaching fast so that students comprehension level may increase
విద్యార్థుల అవగాహనస్థాయిని పెంచే విధంగా మీ బోధనా వేగాన్ని పెంచాలి.

682470611. Keep your teaching slow
నీ బోధనను నెమ్మదిగా కొనసాగించడం

682470612. Keep your teaching slow along with some extra guidance to bright pupils
బోధనను నెమ్మదిగా కొనసాగిస్తూ ప్రతిభావంతులైన విద్యార్థులకు అదనపు మార్గదర్శకత్వం కల్పించడం.

Question Number : 4 Question Id : 682470157 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If a student in your class stutters as a teacher you should
నీ తరగతిలో ఒక విద్యార్థి నత్తిగా మాట్లాడినట్లైతే ఒక ఉపాధ్యాయునిగా నీవు ఏమి చేయాలి?

Options :

682470613.

Help him/her by supplying the words he/she wants to say.
ఆ విద్యార్థి మాట్లాడవలసిన పదాలను అందిస్తాను

682470614. Have him take part in all the oral activities of the class.
తరగతిలో మౌఖిక కృత్యాలన్నింటిలో పాల్గొనేట్లు చూస్తాను

682470615. Give him word drill on the words on which he stutters.
నత్తిగా పలికే పదాలను సాధన చేయిస్తాను

682470616. Provide situations in which his/her sense of self worth is built up.
తన స్వీయ విలువను పెంపొందించే సన్నివేశాలను కల్పిస్తాను.

Question Number : 5 Question Id : 682470158 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

A teacher's major contribution towards the self-realization of the student is affected through:
ఒక విద్యార్థి స్వీయ పరిపూర్ణతను పెంపొందించడంలో ఉపాధ్యాయుని సహకారం ఏవిధంగా ప్రభావితం చేస్తుంది.

Options :

682470617. Constant fulfillment of the students' needs
విద్యార్థి అవసరాలను నిరంతరం తీర్చడం

682470618. Strict control of class-room activities
తరగతి కృత్యాలను కఠినంగా నియంత్రించడం

682470619.

Sensitivity to students' needs, goals and purposes

విద్యార్థి అవసరాలు, గమ్యాలను ఉద్దేశ్యాల పట్ల సున్నితత్వం కలిగిఉండుట

Strict reinforcement of academic standards

విద్యా ప్రమాణాలను ఖచ్చితంగా పునర్బలనం చేయడం

682470620.

Question Number : 6 Question Id : 682470159 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following is not a characteristic of scientific research?

క్రింది వానిలో శాస్త్రీయ పరిశోధన లక్షణం కానిది ఏది?

Options :

Empirical

అనుభావిక

682470621.

Theoretical

సిద్ధాంతిక

682470622.

Experimental

ప్రయోగాత్మక

682470623.

Popular belief

ప్రజాధరణ పొందిన నమ్మకం

682470624.

Sub-Section Number : 2

Sub-Section Id : 68247014

Question Shuffling Allowed : Yes

Question Number : 7 Question Id : 682470160 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Research can be classified as:
పరిశోధనా రకాలను క్రింది విధంగా వర్గీకరించవచ్చు

Options :

682470625. Basic, Applied and Action Research
ప్రాథమిక, అనువర్తిత మరియు చర్యాత్మక పరిశోధన

682470626. Quantitative and Qualitative Research
పరిమాణాత్మక మరియు గుణాత్మక పరిశోధనలు

682470627. Philosophical, Historical, Survey and Experimental Research
తాత్విక, చరిత్రాత్మక, సర్వే మరియు ప్రయోగాత్మక పరిశోధనలు

682470628. All the above
పైవన్ని

Sub-Section Number : 3

Sub-Section Id : 68247015

Question Shuffling Allowed : Yes

Question Number : 8 Question Id : 682470161 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

A research paper
పరిశోధనా వ్యాసం అనగా

Options :

682470629. is a compilation of information on a topic.
ఒక అయానికి సంబంధించిన సమాచార సంకలనం

682470630. contains original research as deemed by the author.
పరిశోధకుడు పొందుపరచిన స్వీయ-పరిశోధనాంశాలు మాత్రమే కలది

682470631. contains peer-reviewed original research or evaluation of research conducted by others.
స్వీయ పరిశోధనకు సంబంధించిన అంశాలు లేక ఇతరుల పరిశోధనాంశాల మూల్యాంకనం

682470632. can be published in more than one journal.
ఒకటి కంటె ఎక్కువ పరిశోధనా పత్రికలందు ప్రచురించదగినది.

Question Number : 9 Question Id : 682470162 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Selection or manipulation of variables is always a part of
చరాశుల ఎంపిక లేక నియంత్రణ ఈ పరిశోధనా రకంలో అంతర్భాగం

Options :

682470633. Historical research
చారిత్రాత్మక పరిశోధన

682470634. Fundamental research
ప్రాథమిక పరిశోధన

682470635. Descriptive research
వర్ణనాత్మక పరిశోధన

682470636. Experimental research
ప్రయోగాత్మక పరిశోధన

Question Number : 10 Question Id : 682470163 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which technique is generally followed in sampling when the population is finite?
జనాభా లెక్కించదగిన సంఖ్యలో ఉన్నపుడు సాధారణంగా ఉపయోగించే ప్రతిచయన పద్ధతి.

Options :

682470637. Area Sampling Technique
ఏరియా ప్రతిచయనం

682470638. Purposive Sampling Technique
ఉద్దేశ్యపూర్వక ప్రతిచయనం

682470639.

Systematic Sampling Technique
క్రమమైన ప్రతిచయనం

Quota sampling
కోటా ప్రతిచయనం

682470640.

Sub-Section Number :	4
Sub-Section Id :	68247016
Question Shuffling Allowed :	No

Question Id : 682470164 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Question Numbers : (11 to 15)

Question Label : Comprehension

Read the passage and answers the questions from 11 to 15:

There is a rise of terrorist activities in different parts of the world. The terrorists believe in the power of the gun and want to achieve their objects overnight. While some of these groups are fighting for control over some pieces of land, others are fighting for spreading their own ideology or religious philosophies. They choose to defy public opinion and refuse to see the reason. They think that their own view point or stand is the only right view point or stand, and that they have a right to convert other people to their thinking by force. For this avowed purpose they do not hesitate to commit the worst of crimes including murder of innocent citizens, looting or burning property, kidnapping people, hijacking planes and creating terror in one way or the other.

A group of Al- Qaeda terrorists, guided and supported by the Taliban leader Osama Bin Laden based in Afghanistan, struck terror in the USA in a big way. They hijacked four US planes from some US civilian airports. While one of these planes hit against the US headquarters in Pentagon, another two planes brought down the towering World Trade Centre, killing at least 5000 innocent US citizens.

USA swung into action and ordered its air force to attack Afghanistan and bring the terrorists to book. In a massive attack, the Talibans were defeated and destroyed. Similarly America attacked Iraq as President Saddam Hussain himself appeared to be a big terror. Iraq was badly damaged.

11 నుంచి 15 వరకు గల ప్రశ్నలకు సంబంధించిన పాఠ్యభాగము ఈ క్రింద ఇవ్వబడినది. దానితోపాటు 5 బహుళ ఐచ్ఛిక ప్రశ్నలు ఇవ్వబడినవి. సరైన జవాబును ఎంచుకొని రాయండి.

ప్రపంచంలోని వేరువేరు ప్రాంతాలలో తీవ్రవాద కార్యకలాపాలు పెరుగుతున్నాయి. తీవ్రవాదులు తుపాకీ గొట్టము శక్తిని విశ్వసిస్తారు. మరియు వారి లక్ష్యాలను అతి త్వరగా సాధించాలని అనుకుంటారు. కొన్ని తీవ్రవాద సంస్థలు కొన్ని భూభాగాలపై నియంత్రణ కోసం పోరాడితే, మరికొన్ని తీవ్రవాద సంస్థలు తమ తమ సిద్ధాంతాల కోసమో లేక మతతత్వ సిద్ధాంతాల వ్యాప్తి కోసమో పోరాడుతున్నాయి. ఇలాంటి సంస్థలు ప్రజాభిప్రాయాన్ని సహేతుకమైన కారణాలను కూడా స్వీకరించరు. ఇట్టి సంస్థలు వారి దృక్పథం మాత్రమే సరియైనదనీ, ఇతరుల అభిప్రాయాలను దృక్పథాలను బలవంతగానైనా తమకు అనుకూలంగా మార్చుకొనే హక్కు తమకు ఉందని భావిస్తారు. ఇలాంటి భయానకమైన ఉద్దేశ్య సాధన కోసం వారు అమాయకులైన ప్రజల హత్యకు, ఆస్తుల దోపిడికి లేదా దహనానికి, పౌరులను అపహరించడం, విమానాలను దారి మళ్ళింపులాంటి నేరాలు, భయానక వాతావరణాన్ని కల్పించుటకు ప్రయత్నిస్తారు.

అఫ్ఘనిస్తాన్‌లోని తీవ్రవాద సంస్థ యొక్క నేత ఒసామా బిన్ లాడెన్ యొక్క మార్గదర్శకత్వం మరియు మద్దతుతో అల్‌ఖైదా అనే తీవ్రవాద సంస్థ అమెరికాలో తీవ్రస్థాయిలో భయానక వాతావరణాన్ని సృష్టించింది. వారు అమెరికా పౌర విమానాశ్రయాల నుండి నాలుగు విమానాలను హైజాక్ చేశారు. ఈ విమానాల్లో ఒకటైన విమానమే పెంటగాన్‌లోని అమెరికా ప్రధాన కార్యాలయాలపై దాడి చేయగా మరో రెండు విమానాలు వరల్డ్ ట్రేడ్ సెంటర్‌ని ఢీకొట్టి సుమారుగా ఐదువేల అమాయక అమెరికా పౌరుల మృతికి కారణమైనాయి.

ఇట్టి దాడిని ఖండిస్తూ అమెరికా వెంటనే రంగంలోకి దిగి తీవ్రవాదాన్ని నిరోధించే దిశగా అఫ్ఘనిస్తాన్‌పై, వైమానిక దళాన్ని దాడికి అదేశించింది. తీవ్రవాదులను వెంటనే తగిన విధంగా నిర్భంధించేందుకు ప్రయత్నించింది. ఈ సందర్భంగా జరిగిన దాడులలో తాలిబన్లు పెద్ద సంఖ్యలో ఓడిపోయి అంతమొందారు. ఇదే విధంగా అమెరికా ఇరాక్‌లోని సద్దాంహుసేన్ కూడా ఒక తీవ్రవాదిగా పరిగణిస్తూ ఇరాక్ పై దాడి చేసి దేశాన్ని తీవ్రంగా దెబ్బ తీయడమైనది. ఈ సందర్భంలో ఇరాక్ తీవ్రంగా నష్టపోయింది.

Sub questions

Question Number : 11 Question Id : 682470165 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

According to the paragraph, what do the terrorists trust in?

పాఠ్యభాగం ప్రకారంగా తీవ్రవాదులు ఏమి విశ్వసిస్తారు?

Options :

682470641. Power of barrel

తుపాకి గొట్టపు శక్తి

682470642. Killing innocent people

అమాయక ప్రజలను చంపటం

682470643. Create violence without a cause

కారణం లేకుండా హింసను సృష్టించడం

682470644. Occupying some places of other counties

ఇతర దేశాలలోని కొన్ని ప్రాంతాలను అక్రమించటం

Question Number : 12 Question Id : 682470166 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The terrorists belive in one of **the** following:

తీవ్రవాదులు ఈ క్రింది ఇచ్చిన వాటిలో ఒక దానిని నమ్ముతారు:

Options :

682470645. Honour public opinion

ప్రజాభిప్రాయాన్ని గౌరవిస్తారు

682470646.

Challenge public opinion

ప్రజాభిప్రాయాన్ని సవాలు చేస్తారు

Go with public opinion

ప్రజాభిప్రాయంతో వెళ్ళడం

682470647.

Mould public opinion

ప్రజాభిప్రాయాన్ని మార్చటం

682470648.

Question Number : 13 Question Id : 682470167 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Select the correct answer from the following sentences: Terrorists commit crimes of

ఈ క్రింది వాక్యాల నుండి సరైన సమాధానాలు ఎంచుకొండి: తీవ్రవాదులు చేసే నేరాలు

Options :

Murder and kidnapping celebrities

ప్రముఖుల హత్య మరియు కిడ్నాప్

682470649.

Kidnapping politicians, murder of police and beating rich people

రాజకీయ నాయకులు, పోలీసుల హత్య, ధనవంతులని కొట్టడం

682470650.

Murder of innocent citizens, burning property, kidnapping people and hijacking planes.

అమాయక పౌరుల హత్య ఆస్తి దహనం, ప్రజలను అపహరించడం మరియు విమానాలను హైజాక్ చేయటం

682470651.

Burning buses and murder of the police

బస్సుల దహనం మరియు పోలీసులను హత్య చేయటం

682470652.

Question Number : 14 Question Id : 682470168 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Who attacked Iraq and why?

ఇరాక్‌పై ఎవరు ఎందుకు దాడి చేశారు?

Options :

US air force attacked Iraq as President Ahmad Hassan is an enemy of Americans.

అమెరికా వైమానిక ధలం ఇరాక్‌పై దాడి చేసింది, అధ్యక్షుడు అహ్మద్ హస్సన్ అమెరికన్ల శత్రువు కావటం వల్ల

682470653.

America attacked Iraq to destroy the country and kill many innocents in Iraq

అమెరికా ఇరాక్‌పై దాడి చేసి, ఇరక్‌లో అనేక మంది అమాయకులను చంపేశారు

682470654.

Pakistan attacked Iraq as Iraq attacked Pakistan more than four times

ఇరాక్ నాలుగుసార్లు పాకిస్తాన్‌పై దాడి చేసింది, అందుకని పాకిస్తాన్ ఇరాక్‌పై దాడి చేసింది

682470655.

America attacked Iraq as President Saddam became a dangerous man.

అధ్యక్షుడు సద్దాం ప్రమాదకరమైన వ్యక్తిగా మారాడని అమెరికా ఇరాక్‌పై దాడి చేసింది.

682470656.

Question Number : 15 Question Id : 682470169 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Two of the following things are not co-related to the episode of US planes hijacking. Find them out.

ఈ రెండు విషయాలలో అమెరికా విమానాల హైజాకింగ్ యొక్క ఎపిసోడ్‌కు సహసంబంధము లేదు. వాటిని కనుగొనండి.

i. Al Qaeda terrorists

అల్ ఖైదా తీవ్రవాదులు

ii. World Trade Organization

వరల్డ్ ట్రేడ్ అర్గనైజేషన్

iii. Afghanistan

అఫ్ఘనిస్తాన్

iv. Five planes

ఐదు విమానాలు

v. Osama Bin Laden

ఒసామా బిన్ లాడెన్

vi. 5000 people were dead

5000 మంది ప్రజలు మరణించారు.

Options :

682470657. i and iii

i మరియు iii

682470658. ii and iv

ii మరియు iv

682470659. v and vi

v మరియు vi

682470660. iii and vi

iii మరియు vi

Sub-Section Number : 5

Sub-Section Id : 68247017

Question Shuffling Allowed : Yes

Question Number : 16 Question Id : 682470170 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Find out which one of the following elements is not important in non-verbal communication?

ఈ క్రింద పేర్కొన్న విషయాలలో ఏది పదములు లేని సమాచార ప్రసారంలో ముఖ్యమైనది కాదు?

Options :

682470661. The body language of the speaker
వ్యక్తి యొక్క హావ భావాలు (బాడీ లాంగ్వేజ్)

682470662. The eye contact of the speaker
వ్యక్తి యొక్క కంటి చూపులు

682470663. The volume of the speaker
వ్యక్తి యొక్క స్వరస్థాయి

682470664. The facial expressions of the speaker
వ్యక్తి యొక్క ముఖ కవళికలు

Question Number : 17 Question Id : 682470171 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which one of the following contexts refer to the background similarity between the sender and the receiver?

ఈ క్రింది సందర్భాల్లో ఏది పంపినవారు మరియు గ్రహీత (రిసీవర్) మధ్య నేపథ్యాల సారూప్యతకు సంబంధించినది?

Options :

682470665. Cultural

సంస్కృతిక

682470666. Physical

శారీరక

682470667. Social

సామాజిక

682470668. Chronological

కాలానుక్రమ

Question Number : 18 Question Id : 682470172 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

A teacher should be effective in asking questions. He should ask _____

ప్రశ్నలను అడగడంలో ఉపాధ్యాయుడు ప్రభావితం చేసే ప్రశ్నలు ఏవి?

Options :

682470669. Thought provoking questions

ఆలోచనలు రేకెత్తించే ప్రశ్నలు

682470670.

Meaningful questions

అర్థవంతమైన ప్రశ్నలు

682470671. As many questions as possible

సాధ్యమైనంత ఎక్కువ ప్రశ్నలు

682470672. Confusing questions

తీకమకపెట్టె ప్రశ్నలు

Question Number : 19 Question Id : 682470173 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The term 'media' comes from the _____ plural of _____.

'మీడియా' అనే పదం _____ యొక్క _____ బహువచనం నుండి వచ్చింది.

Options :

682470673. Greek _____Medium

గ్రీకు _____ మీడియం

682470674. French …… Media

ఫ్రెంచ్ _____ మీడియం

682470675. Latin ……. Medium

లాటిన్_____ మీడియం

682470676.

German …… Medium

జర్మన్ _____ మీడియం

Question Number : 20 Question Id : 682470174 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Rearrange the following steps in the process of interpersonal communication:

వ్యక్తుల మధ్య సంభాషన ప్రక్రియలో క్రింది దశలను సరైన క్రమంలో వ్రాయండి.

A. Message
   సందేశం

B. Encoding
   ఎన్‌కోడింగ్

C. Receiver
   స్వీకర్త

D. Decoding
   డికోడింగ్

E. Sender
   పంపినవారు

F. Channel
   మాధ్యమం

G. Feedback
   ప్రతిస్పందన

The right answer according to the code is

కోడ్ ప్రకారం సరైన సమాధానం

Options :

682470677. 5261374

682470678. 5216437

682470679. 5126347

682470680. 5216347

Sub-Section Number : 6

Sub-Section Id : 68247018

Question Shuffling Allowed : Yes

Question Number : 21 Question Id : 682470175 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The incomes of A and B are in the ratio of 3:4 and their expenditures are in the ratio 4:5.

If B saves one third of his income, the ratio of their savings is

A మరియు B యొక్క ఆదాయాలు 3: 4 నిష్పత్తిలో ఉన్నాయి మరియు వారి వ్యయాలు నిష్పత్తి 4: 5 లో ఉన్నాయి. B తన ఆదాయంలో మూడో వంతును ఆదా చేస్తే, వారి పొదుపు నిష్పత్తి

Options :

682470681. 12 : 16

682470682. 12 : 20

682470683. 13 : 20

682470684. 16 : 20

Question Number : 22 Question Id : 682470176 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

'A' started a business with Rs. 25,000 and after 4 months B joined him with Rs. 60,000. 'A' received Rs. 58,000/- including 10% of the profits as commission for managing the business. What amount did B receive (in Rs.)?

ఒక వ్యాపారమును 'A' రూ. 25,000 తో ప్రారంభించాడు మరియు 4 నెలల తరువాత 'B' అతడితో రూ. 60,000 లతో భాగస్వామి అయ్యాడు. వ్యాపారాన్ని నిర్వహించడానికి కమిషన్‌తో కూడిన లాభంతో సహా 10%, 'A' రూ. 58,000 లు తీసుకున్నాడు. అయితే ఎంత మొత్తాన్ని B అందుకుంది (రూ.)?

Options :

682470685. 25,000

682470686. 58,000

682470687. 72,000

682470688. 1,30,000

Question Number : 23 Question Id : 682470177 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Two trains of lengths 700 m and 800 m are running on parallel tracks towards each other. What is the distance travelled by the two trains together (in meters) from the time they start to cross each other to the time thus completely cross each other.

పరస్పరం సమాంతరముగానున్న పట్టాలపై పరుగెడుతున్న రెండు రైళ్లు యొక్క పొడవులు 700 మీ. మరియు 800 మీటర్లు. అవి మొదలు పెట్టిన సమయము నుండి ఒక దానినొకటి పూర్తిగా దాటుటకు తీసుకున్న సమయములో, ఆ రెండు రైళ్లు ప్రయాణించిన దూరము

Options :

682470689. 1500

682470690. 1400

682470691. 160

682470692. 100

Question Number : 24 Question Id : 682470178 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

'AMOUNT' is coded as 'ZNLFMG'. Then the code for 'ORANGE' is

'AMOUNT' 'ZNLFMG' గా కోడ్ చేయబడింది. అప్పుడు 'ORANGE' కోసం కోడ్

Options :

682470693. LJZMTH

682470694. LJZMTF

682470695. LIZMTV

682470696. LHZMTF

Question Number : 25 Question Id : 682470179 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Missing group of letters in the following sequence is

క్రింది క్రమంలో లోపించిన అక్షరాల సమూహం

WXCD, UVEF, _____ , QRIJ, OPKL

Options :

682470697. JPRQ

682470698. QBBZ

682470699. RRMY

682470700. STGH

Question Number : 26 Question Id : 682470180 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The missing number in the sequence: 5, 13, 25, 41, 61, _____

అనుక్రమంలో లోపించిన సంఖ్య: 5, 13, 25, 41, 61, ____ .

Options :

682470701. 81

682470702. 85

682470703. 96

682470704. 99

Question Number : 27 Question Id : 682470181 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Statements: All girls are good.
Some women are good

వాక్యములు: అందరు బాలికలు మంచివారు.
మంచిగానున్న కొందరు మహిళలు

Conclusions: I. Some women are girls.
II. No women is a girl.

ముగింపు: I. కొందరు మహిళలు బాలికలు.
II. ఎ మహిళ కూడా బాలిక కాదు

Options :

682470705. I and II are true
I మరియు II ఒప్పు

682470706. I is true and II is false
I ఒప్పు మరియు II తప్పు

682470707. I is false and II is true
I తప్పు మరియు II ఒప్పు

682470708. I and II are false
I మరియు II తప్పు

Question Number : 28 Question Id : 682470182 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The odd one among the following is

క్రిందివానిలో నున్న, ఒక సరిపోలని సంఖ్య

Options :

682470709. 17

682470710. 27

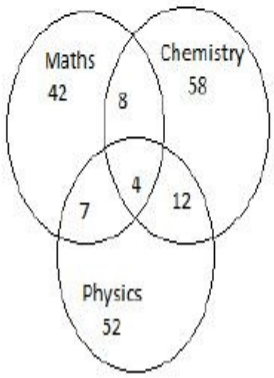
682470711. 37

682470712. 47

Question Number : 29 Question Id : 682470183 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The following Venn diagram represents the number of students opted for various subjects of skill enhancement courses offered by the three Departments: Mathematics, Physics and Chemistry. The total number of students is

గణితశాస్త్రము, భౌతికశాస్త్రము మరియు రసాయనశాస్త్రము అను మూడు విభాగములు అందించు చున్న వివిధ విషయ నైపుణ్యత ను పెంపొందించు కోర్సులను ఎంచుకున్న విద్యార్థులు సంఖ్యలను క్రింది వెన్ చిత్రము సూచించును. అయితే మొత్తము విద్యార్థుల సంఖ్య



Options :

682470713. 24

682470714. 183

682470715. 152

682470716. 31

Question Number : 30 Question Id : 682470184 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

C is the brother of D. A is the husband of B. B is the mother of C. E is the wife of D. How B is related to E.
C, D యొక్క సోదరుడు. A, B యొక్క భర్త, B, C యొక్క తల్లి. E, D యొక్క భార్య. B కి E తో గల సంబంధము

Options :

682470717. Mother
తల్లి

682470718. Father
తండ్రి

682470719. Mother in law
అత్త

682470720. Father in law
మామ

Sub-Section Number :	7
Sub-Section Id :	68247019
Question Shuffling Allowed :	No

Question Id : 682470185 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Question Numbers : (31 to 35)

Question Label : Comprehension

Note: The questions Q. 31 to Q. 35 are based on the following information:

గమనిక: ప్రశ్నలు Q. 31 నుండి Q. 35 వరకు , క్రింది సమాచారం ఆధారంగా ఉన్నాయి

The total expenditure incurred by a management training institute in years 2014-15 is Rs. 25.0 lakhs and 2015-16 is Rs. 32.0 Lakhs. The percentage of expenditure incurred in the two financial years: 2014-15 and 2015-16 are presented in the following table.

2014-15లో నిర్వహణా శిక్షణ సంస్థ (management training institute) యొక్క మొత్తం వ్యయం రూ. 25.0 లక్షలు మరియు 2015-16 రూ. 32.0 లక్షలు. రెండు ఆర్థిక సంవత్సరాల్లో వెచ్చించే శాతం: 2014-15 మరియు 2015-16 లలోక్రింది పట్టికలో సమర్పించబడ్డాయి

S.No	Expenditure Particulars (ఖర్చుల వివరాలు)	2014-15	2015-16
1	Faculty (ఫ్యాకల్టీ)	25.0 %	27.0 %
2	Advertising (ప్రకటనలు)	20.0 %.	15.0 %
3	Material preparation (మెటీరియల్ తయారీ)	10.0 %	7.0 %
4	Printing (ముద్రణ)	25.0 %	20.0 %
5	Administration (పరిపాలన)	7.5 %	8.0 %
6	Salaries (వేతనములు)	5.0 %	8.0 %
7	Others (ఇతరములు)	7.5 %	15.0 %

Sub questions

Question Number : 31 Question Id : 682470186 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In the two years, total expenditure incurred towards salaries (in lakhs) is

రెండు సంవత్సరాల్లో, వేతనాలకు చెల్లించాల్సిన మొత్తం వ్యయం (లక్షలలో)

Options :

682470721. 1.25

682470722. 2.56

682470723. 3.81

682470724. 6.25

Question Number : 32 Question Id : 682470187 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In the year 2014-15, the total expenditure incurred towards faculty and material preparation (in lakhs) is

2014-15 సంవత్సరంలో, అధ్యాపకులకు మరియు మెటీరియల్ తయారీకి సంబంధించిన మొత్తం వ్యయం (లక్షలలో)

Options :

682470725. 8.75

682470726. 6.25

682470727. 8.64

682470728. 2.5

Question Number : 33 Question Id : 682470188 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The expenditure increased towards administration in 2015-16 when compared with 2014-15 is (in lakhs)

2014-15తో పోల్చితే 2015-16లో పరిపాలన కు పెరిగిన వ్యయం (లక్షలలో)

Options :

682470729. 2.39

682470730. 0.05

682470731. 2.925

682470732. 0.685

Question Number : 34 Question Id : 682470189 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In the two years, total expenditure incurred towards Advertisement and Administration (in lakhs) is

ఆ రెండు సంవత్సరాల్లో, ప్రకటన మరియు పరిపాలన (లక్షలలో) కు సంబంధించిన మొత్తం వ్యయం

Options :

682470733. 8.55

682470734. 19.325

682470735. 14.235

682470736. 4.435

Question Number : 35 Question Id : 682470190 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In 2015-16, the total expenditure incurred towards printing (in lakhs) is

2015-16 లో, ముద్రణ కు సంబంధించిన మొత్తం వ్యయం (లక్షలలో)

Options :

682470737. 8.64

682470738. 6.40

682470739. 4.80

682470740. 2.56

Sub-Section Number :	8
Sub-Section Id :	68247020
Question Shuffling Allowed :	Yes

Question Number : 36 Question Id : 682470191 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Who invented modern Computer science?

ఆధునిక కంప్యూటర్ శాస్త్రాన్ని కనుగొన్నది ఎవరు?

Options :

682470741. Charles Babbage

చార్లెస్ బాబెజ్

682470742. Allen Turing

అలన్‌టూరింగ్

682470743. Simur Cray

సిమూర్ క్రే

682470744. Augusta Adaming

అగస్టా అడామింగ్

Question Number : 37 Question Id : 682470192 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The output quality of a printer is measured by

ప్రింటర్ అవుట్ పుట్ నాణ్యత కొలత?

Options :

682470745.

Dots per square cm

డాట్స్ పర్ స్క్వేర్ సెంటీమీటర్

682470746. Dots per sq. inch

డాట్స్ పర్ స్క్వేర్ ఇంచ్

682470747. Dots per inch

డాట్స్ పర్ ఇంచ్

682470748. dots per cm

డాట్స్ పర్ సెంటీమీటర్

Question Number : 38 Question Id : 682470193 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

First page of Website is termed as.

వెబ్‌సైట్ మొదటి పేజీ

Options :

682470749. Homepage

హోమ్‌పేజీ

682470750. Index

సూచిక

682470751.

JAVA script

జావాస్క్రిప్ట

Bookmark

బుక్‌మార్క్

682470752.

Question Number : 39 Question Id : 682470194 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

VOIP stands for.....

VOIP అనగా

Options :

Virtual old IP

పాత వర్చువల్ IP

682470753.

Video over IP

వాయిస్ ఓవర్ IP

682470754.

Voice over IP

వీడియో ఒవర్ IP

682470755.

Virtual over IP

వర్చువల్ ఓవర్ IP

682470756.

Question Number : 40 Question Id : 682470195 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following is purely Indian higher education portal

క్రింది వాటిలో ఏది ఇండియా ఉన్నత విద్యా పోర్టల్.

Options :

682470757. NPTEL

682470758. WIZ IQ

682470759. Openz study

682470760. edX

Sub-Section Number :	9
Sub-Section Id :	68247021
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 682470196 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The Protected areas, National parks, Wila libe Sanctuaries and Biosphere Reserves are the Examples of...

జాతీయ ఉద్యానవనాలు, వన్యప్రాణి సంరక్షణ కేంద్రాలు, జీవావరణ నిల్వల వంటి రక్షిత ప్రాంతాల ఇవి ఉదాహరణలు

Options :

682470761. Ex-site conservation
ఎక్-సిటు సంరక్షణ

682470762. In-situ conservation
ఇన్-సిటు సంరక్షణ

682470763. Cybernetic Conservation
సైబర్నాటిక్ సంరక్షణ

682470764. Leibig's Conservation
లైబిగ్స్ సంరక్షణ

Question Number : 42 Question Id : 682470197 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Set binding targetsfor industrialized Nations to reduce emissions by 5% against 1990 levels over a perioud of 2008-2012. This was proposed in
2008-2012 మధ్యలో ఉద్గారాలను 1990 స్థాయి కంటే 5 శాతం తగ్గించుకోవాలనే లక్ష్యాన్ని పారిశ్రామిక దేశాలకు నిర్దేశించాలనే ప్రతిపాదను ఈ సమావేశంలో చేశారు.

Options :

682470765. Rio de Janeiro, Brazil, 1992
రియోడీజనీరో, బ్రెజిల్, 1992

682470766.

Stock holm, Sweden, 1972

స్టాక్‌హోం, స్వీడన్, 1972

Copenhagen, Denmark, 2009

కోపెన్‌హగన్, డెన్మార్క్, 2009

682470767.

Kyoto Protocol, Japan, 1997

క్యోటో ప్రోటో కాల్, జపాన్, 1997

682470768.

Question Number : 43 Question Id : 682470198 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In september, 1994 (UN Conference) Some 15,000 leaders and representatives from 179 Nations and nearly 1,000 NGOs met in Cairo. Egypt to discuss the problem related to

1994 సెప్టెంబర్‌లో ఐక్యరాజ్యసమితి ఆధ్వర్యంలో 179 దేశాల 15 వేల మంది నాయకులు, సుమారు వెయ్యి ప్రభుత్వేతర సంస్థలు ఈజిప్ట దేశపు కైరోల్ సమావేశమై ఈ సమస్యపై చర్చించారు.

Options :

Poverty and population

పేదరికం, జనాభా

682470769.

Carbon Emissions

కర్బన ఉద్గారాలు

682470770.

Resource Management

వనరుల నిర్వహణ

682470771.

Social Modernization

సమాజిక అధునీకీకరణం

682470772.

Question Number : 44 Question Id : 682470199 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In which conference 1690 Nations agreed to roll back CO_2, methane and nitrous oxide emissions about 5 percent below 1990 levels by 2012?

2012 నాటికి 1990 స్థాయికి 5 శాతం తక్కువగా CO_2, మీథేన్, సైట్రస్ ఆక్సైడ్ ఉద్గారాలను తగ్గించుకోవటానికి 160 దేశాల ఏ సమావేశంలో అంగీకరించాయి?

Options :

Earth Summit

ధరిత్రి సదస్సు

682470773.

Copenhagen Conference

కోపెన్‌హాగెన్ సమావేశం

682470774.

Kyoto Protocol

క్యాట్ ప్రోట్‌కాల్

682470775.

Stockholm Conference

స్టాక్‌హోం సమావేశం

682470776.

Question Number : 45 Question Id : 682470200 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which quality parameter represents the organic load in the water reservior?

నీటి రిజర్వాయర్‌లో సేంద్రియ పదార్థగాఢతకు ప్రాతినిధ్యం వహించే

Options :

682470777. Chemical Oxygen Demand

రసాయన ఆక్సీజన్ డిమాండ్

682470778. pH

హైడ్రొజన్ అయాన్ గాఢత

682470779. Conductivity

కండక్టివిటి

682470780. Biological Oxygen Demand

జైవిక ఆక్సీజన్ డిమాండ్

Sub-Section Number :	10
Sub-Section Id :	68247022
Question Shuffling Allowed :	Yes

Question Number : 46 Question Id : 682470201 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Who among the following was the founder of Gurukul system of education in India?
భారతీయ గురుకుల విద్యావ్యవస్థ స్థాపకులు ఎవరు?

Options :

682470781. Rabindranath Tagore
రవీంద్రనాథ్ ఠాగూర్

682470782. Swami Vivekananda
స్వామి వివేకానంద

682470783. Jiddu Krishna Murthy
జిద్దు క్రిష్ణమూర్తి

682470784. Mahatma Gandhi
మహత్మాగాంధీ

Question Number : 47 Question Id : 682470202 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following is not the goal of higher education in India?
భారతదేశంలో ఉన్నత విద్యా లక్ష్యం కానిది ఏది?

Options :

682470785. Accessibility
అందుబాటు

682470786. Quality and Excellence
నాణ్యత మరియు ప్రామాణికత

682470787. Value based Education
విలువలతో కూడిన విద్య

682470788. Compulsory and free education
ఉచిత నిర్భంధ విద్య

Question Number : 48 Question Id : 682470203 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The University which telecasts interactive educational programmes through its own channel is:
సొంత టెలివిజన్ ఛానల్ ద్వారా విద్యా కార్యక్రమాలను అందచేస్తున్న విశ్వవిదాలయము

Options :

682470789. B. R. Ambedkar Open University, Hyderabad
డా॥ బి.ఆర్.అంబేద్కర్ సార్వత్రిక విశ్వవిద్యాలయం, హైదరాబాదు.

682470790. I.G.N.O.U.
ఇందిరాగాంధి జాతీయ సార్వత్రిక విశ్వవిద్యాలయం

682470791. University of Pune
పూణె విశ్వవిద్యాలయం

682470792. Annamalai University
అన్నామలై విశ్వవిద్యాలయం

Question Number : 49 Question Id : 682470204 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Value education makes a student:
మౌల్య విద్య విద్యార్థులను ఇలా తీర్చిదిద్దును

Options :

682470793. Good citizen
ఉత్తమపౌరులుగా

682470794. Successful businessman
విజయవంతులైన వ్యాపారవేత్తలుగా

682470795. Popular teacher
ప్రాచుర్యంగల ఉపాధ్యాయులుగా

682470796. Efficient manager
ప్రతిభగల యజమానులుగా

Question Number : 50 Question Id : 682470205 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following body is meant for co-operation and co-ordination between the union and states in the field of education?
విద్యారంగంలో కేంద్రం మరియు రాష్ట్రాల మధ్య సమన్వయం సాధించడానికి ఉద్దేశించిన సంస్థ

Options :

682470797. NCERT
జాతీయ విద్యా పరిశోధనా మరియు శిక్షణ సంస్థ - NCERT

682470798. NCTE
జాతీయ, ఉపాధ్యాయ విద్యా మండలి - NCTE

682470799. UGC
విశ్వవిద్యాలయాల విధుల సంస్థ - UGC

682470800. CABE
కేంద్రీయ విద్యా సలహా సంస్థ - CABE

MATHEMATICAL SCIENCES

Group Number :	2
Group Id :	6824704
Group Maximum Duration :	120
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	200
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

MATHEMATICAL SCIENCES

Section Id :	6824704
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	200
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	68247023
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 682470206 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The partial differential equation

$$\left(\frac{\partial u}{\partial y}\right)^2 + \left(\frac{\partial^3 u}{\partial x^3}\right) = 0$$

is an example of

Options :

682470801. a third order linear partial differential equation.

682470802. a third order quasi-linear partial differential equation which is NOT linear.

682470803. a second order linear partial differential equation.

682470804. a second order quasi-linear partial differential equation which is NOT linear.

Question Number : 52 Question Id : 682470207 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $\xi(x,y) = 2x, \eta(x,y) = \tan^{-1} y$. In the (ξ, η) coordinate system, the partial differential equation

$$\frac{\partial^2 u}{\partial x^2} + \left(1 + y^2\right)^2 \frac{\partial^2 u}{\partial y^2} = 0$$

transforms into

$$4\frac{\partial^2 u}{\partial \xi^2} + \frac{\partial^2 u}{\partial \eta^2} + h(\eta)\frac{\partial u}{\partial \eta} = 0,$$

where $h(\eta)$ is given by

Options :

682470805. $\cos^2 \eta$

682470806. $-2\sec^2 \eta$

682470807. $2\tan \eta$

682470808. $-4\tan \eta$

Question Number : 53 Question Id : 682470208 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Let S be the set of all solutions to the partial differential equation

$$z\frac{\partial z}{\partial x}+\frac{\partial z}{\partial y}=1$$

having the property that the corresponding integral surface $z=u(x,y)$ contains the curve Γ described parametrically by

$$\Gamma\colon\ x_0=s^2,\ y_0=2s, z_0=s,\ s\in(2,3).$$

Then the set S is

Options :

682470809. an empty set.

682470810. a singleton set.

682470811. a countably infinite set.

682470812. an uncountable set.

Question Number : 54 Question Id : 682470209 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $u(x,t)$ denote the solution of the Cauchy problem given by

$$\frac{\partial u}{\partial t} + 4\frac{\partial u}{\partial x} = 1, \qquad x \in \mathbb{R}, t > 0,$$
$$u(x,0) = 1 + x^2, \qquad x \in \mathbb{R}$$

Then $u\left(1, \frac{1}{2}\right)$ is

Options :

682470813. 2

682470814. 2.5

682470815. 3

682470816. 3.5

Question Number : 55 Question Id : 682470210 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $u(x,t)$ be a twice continuously differentiable function defined for $(x,t) \in \mathbb{R} \times (0,\infty)$ and is the solution to the partial differential equation

$$\frac{\partial^2 u}{\partial t^2} = 9\frac{\partial^2 u}{\partial x^2}$$

if $u\left(\frac{1}{2}, \frac{1}{6}\right) = \frac{2}{3}$, $u\left(\frac{1}{2}, \frac{1}{2}\right) = 2$, $u\left(0, \frac{1}{3}\right) = \frac{1}{3}$ then $u\left(1, \frac{1}{3}\right)$ is equal to

Options :

682470817. $\frac{4}{3}$

682470818. $\frac{5}{3}$

682470819. 2

682470820. $\frac{7}{3}$

Question Number : 56 Question Id : 682470211 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $u\colon \mathbb{R} \times (0,\infty) \to \mathbb{R}$ be the solution to the initial value problem

$$\frac{\partial^2 u}{\partial t^2} = 16\frac{\partial^2 u}{\partial x^2}, x \in \mathbb{R}, t > 0,$$
$$u_t(x,0) = 0, x \in \mathbb{R}$$
$$\text{and } u(x,0) = \begin{cases} 0 & \infty < x < 0, \\ x^3(x-1)^3 & 0 \le x \le 1, \\ 0 & 1 < x < \infty. \end{cases}$$

If S denotes the set $\{\alpha > 0\colon u(10,t) = 0 \text{ for all } t \ge \alpha\}$, then the infimum of the set S is

Options :

682470821. $\frac{9}{16}$

682470822. $\frac{5}{8}$

682470823. $\frac{9}{4}$

682470824. $\frac{5}{2}$

Question Number : 57 Question Id : 682470212 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $u(r, \theta)$ be a harmonic function defined on $\mathbb{R}^2$. If $u(\sqrt{2}, \theta)$ is given by $3\cos(2\theta) + \pi$ (in polar coordinates), then the value of u at the origin is

Options :

682470825. π

682470826. $2\sqrt{2}\pi$

682470827. $\pi + 3$

682470828. $2\pi^2$

Question Number : 58 Question Id : 682470213 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If the interpolating polynomial for the data:

x	0	1	2	3
y	1	1	0	1

is $1-\frac{1}{2}x(x-1)+\frac{1}{2}x(x-1)(x-2)+cx(x-1)(x-2)(x-3)$ for some $c \in \mathbb{R}$, then c is given by

Options :

682470829. 1

682470830. $\frac{1}{2}$

682470831. 0

682470832. $-\frac{1}{2}$

Question Number : 59 Question Id : 682470214 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let α be a nonzero real number such that $\alpha \in \left(-\frac{\pi}{4}, \frac{\pi}{4}\right)$. Newton-Raphson method is applied to find the solution of $\sin x = 0$. If the iterative sequence (x_n) obtained by using this method with α as the initial guess i.e., $x_0 = \alpha$ satisfies, for $k \in \mathbb{N}$,

$$\alpha = x_0 = x_2 = \ldots = x_{2k} = x_{2k+2} = \ldots \text{ and}$$
$$x_1 = x_3 = \ldots = x_{2k+1} = x_{2k+3} = \ldots$$

then which one of the following equations is satisfied by α?

Options :

682470833. $\alpha\pi = 2\tan\alpha$

682470834. $\alpha = \tan \alpha$

682470835. $2\alpha = \tan \alpha$

682470836. $\alpha\pi = 4 \tan \alpha$

Question Number : 60 Question Id : 682470215 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The values of a function f are as follows:

x	1	1.25	2	1.5	1.75	2
$f(x)$	10	8	0	7	6	5

Using all the tabulated values, the approximate value of the integral $\int_1^2 f(x)\,dx$ is given by the composite Trapezoidal rule is

Options :

682470837. 7.0833

682470838. 7.125

682470839. 7.1666

682470840. 7.5

Question Number : 61 Question Id : 682470216 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Dimension of the vector subspace $W = \left\{ \begin{pmatrix} a & b \\ c & d \end{pmatrix} \middle| \, a+b=c,\ b+c=d,\ c+a=b \right\}$ of $M_2(\mathbb{C})$ is

Options :

682470841. 1

682470842. 2

682470843. 3

682470844. 4

Question Number : 62 Question Id : 682470217 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $A \in M_{4\times 5}(\mathbb{R})$ be a 4×5 matrix of rank 3, with entries from $\mathbb{R}$, and let A^t denote the transpose matrix of A. Rank of A^tA is :

Options :

682470845. 4

682470846. 5

682470847. 3

682470848. 2

Question Number : 63 Question Id : 682470218 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $A, B \in M_{4\times5}(\mathbb{R})$ be a 4×4 matrices with entries from real numbers. Then which of the following statements is true?

Options :

682470849. $\text{rank}(A+B) = \text{rank}(A) + \text{rank}(B)$

682470850. $\text{rank}(AB) = \text{rank}(A)\,\text{rank}(B)$

682470851. $\text{rank}(AB) \leq \min\{\text{rank}(A), \text{rank}(B)\}$

682470852. $\text{rank}(A+B) = \min\{\text{rank}(A), \text{rank}(B)\}$

Question Number : 64 Question Id : 682470219 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $T\colon \mathbb{R}^3 \to \mathbb{R}^3$ be a linear transformation, given by $T(x_1, x_2, x_3) := (x_3, x_2, x_1)$. Then, which of the following statements is true (where I denotes Identity matrix)?

Options :

682470853. $\det(T) = I$

682470854. $T^3 = I$

682470855. T has three distinct eigenvalues

682470856. Smallest $n \in \mathbb{N}$ such that $T^n = I$ is even.

Question Number : 65 Question Id : 682470220 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let λ_1, λ_2 be two distinct eigen values of a 2×2 matrix with complex entries. Then which of the following statements is true?

Options :

682470857. A^2 has distinct eigen values

682470858. $\text{tr}(A^n) = \lambda_1^n + \lambda_2^n$ for all $n \in \mathbb{N}$

682470859. $\det(A^2) = \lambda_1 \lambda_2$

682470860. There exists a $\lambda \in \mathbb{C}$ such that $A^n = \lambda I$, for some $n \in \mathbb{N}$, where I denotes the identity matrix.

Question Number : 66 Question Id : 682470221 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

A group of mn people are to be arranged into $m-$teams with each $n-$players. If teams do not have names, the number of ways in which it could be done is

Options :

682470861. $\frac{(mn)!}{(n!)^m m!}$

682470862. $\left(\frac{mn}{n}\right)$

682470863. $\left(\frac{m}{n}\right)$

682470864. $\left(\frac{m}{n}\right) \cdot n!$

Question Number : 67 Question Id : 682470222 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Let G denote the group $GL_2(\mathbb{Z}/(3\mathbb{Z}))$, which is the group of 2×2 matrices with entries from the group $\mathbb{Z}/(3\mathbb{Z})$. What is the order of G?

Options :

682470865. 81

682470866. 54

682470867. 48

682470868. 56

Question Number : 68 Question Id : 682470223 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Number of subgroups of $\mathbb{Z}/(9\mathbb{Z}) \times \mathbb{Z}/(4\mathbb{Z})$ other than trivial subgroup and the group itself is

Options :

682470869. 0

682470870. 2

682470871. 7

682470872. 9

Question Number : 69 Question Id : 682470224 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Number of simple groups of order 27 is

Options :

682470873. 1

682470874. 2

682470875. 0

682470876. 3

Question Number : 70 Question Id : 682470225 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let G be a simple group of order 132. Number of subgroups of order 11 is

Options :

682470877. 8

682470878. 6

682470879. 3

682470880. 12

Question Number : 71 Question Id : 682470226 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $F := \mathbb{Z}/(2\mathbb{Z})$. Number of elements in the ring $mF[X]/(X^2+1)$ is

Options :

682470881. 1

682470882. 2

682470883. 3

682470884. 4

Question Number : 72 Question Id : 682470227 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Number of units in the ring $\mathbb{Z}/(8\mathbb{Z})$ is

Options :

682470885. 1

682470886. 4

682470887. 3

682470888. 6

Question Number : 73 Question Id : 682470228 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following elements is not irreducible in the ring $\mathbb{Z}[X, Y]$?

Options :

682470889. $X^3 + 7X^2 + 49X + 7$

682470890. $Y^2 - X$

682470891. $Y^2 - X^3$

682470892. $Y^2 - X^4$

Question Number : 74 Question Id : 682470229 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider the following four sets.

$S_1 =$ The set of all maps from $\{0, 1\}$ to $\mathbb{N}$.
$S_2 =$ The set of all maps from $\mathbb{Q}$ to $\{0, 1\}$.
$S_3 =$ The set of all continuous maps from $\mathbb{R}$ to $\{0, 1\}$.
$S_4 =$ The set of all maps from $\{0, 1\}$ to $\mathbb{R}$.

Which of the followig statements is true?

Options :

682470893. There exists a bijection between S_1 and S_3

682470894. There exists a bijection between S_1 and S_4

682470895. There exists a bijection between S_2 and S_3

682470896. There exists a bijection between S_2 and S_4

Question Number : 75 Question Id : 682470230 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $k \geq 0$ and $f_k(t) = \begin{cases} t^k \cos\left(\frac{1}{t}\right) & t \neq 0 \\ 0 & t = 0 \end{cases}$.
Let $A = \{k \in [0, \infty) \mid f_k \text{ is differentiable}\}$. Then $\inf(A) =$

Options :

682470897. 1

682470898. 2

682470899. 4

682470900. 0

Question Number : 76 Question Id : 682470231 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

For a map $f : \mathbb{R} \to \mathbb{R}$ define

$$W_j(x) = \sup\left\{|f(u) - f(v)| : u, v \in \left[x - \frac{1}{j},\ x + \frac{1}{j}\right]\right\},$$

$$A_{j,n}(X) = \left\{x \in \mathbb{R} : W_j(x) < \frac{1}{n}\right\}, n \in \mathbb{N}, j \in \mathbb{N}, \text{ and}$$

$$C = \{x \in \mathbb{R} : f \text{ is continuous at } x\}.$$

Then which of the following statements is false?

Options :

682470901. $W_j(x) > W_{j+1}(x), \forall\ x \in \mathbb{R}, j \in \mathbb{N}$

682470902. $A_{j,n} \subseteq A_{j+1,n}, \forall\ n \in \mathbb{N}, j \in \mathbb{N}$

682470903. $A_{j,n}(x) \subset A_{j,n+1}, \forall\ n \in \mathbb{N}, j \in \mathbb{N}$

682470904. $C \subseteq \bigcap_{n=1}^{\infty}\left(\bigcup_{j=1}^{\infty} A_{j,n}\right)$

Question Number : 77 Question Id : 682470232 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Which of the following sequences of functions is uniformly convergent?

Options :

682470905. $f_n(x) = \cos^n(x)$, over $\left(0, \frac{\pi}{2}\right]$

682470906. $f_n(x) = \frac{1}{1 + (x - 2n)^2}$ over $(-\infty, 0)$

682470907. $f_n(x) = \frac{x^n}{4+x^n}$ over $\left(-\frac{1}{2}, \frac{5}{2}\right)$

682470908. $f_n(x) = e^{-nx}\cos(nx)$, over $(0, \infty]$

Question Number : 78 Question Id : 682470233 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

$$\lim_{n\to\infty} \frac{1}{n} \sum_{k=1}^{\lceil \frac{n}{2} \rceil} \sin\left(\frac{k\pi}{n}\right)$$

Options :

682470909. is equal to $\frac{1}{\pi}$

682470910. is equal to $\frac{2}{\pi}$

682470911. is equal to $\frac{3}{\pi}$

682470912. doesnot exist

Question Number : 79 Question Id : 682470234 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $m(E)$ denote the Lebesgue measureable subset E of $\mathbb{R}$. Then which of the following statements is true?

Options :

682470913. There exists an open set U containing $\mathbb{Q}$ such that $m(U) < 1$

682470914. There exists an open set U containing $\mathbb{R} - \mathbb{Q}$ such that $m(U) < 1$

682470915. If E is measurable and uncountable then $m(E) > 0$

682470916. If E is measurable and $m(E) > 0$ then every subset of E is measurable

Question Number : 80 Question Id : 682470235 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $f_n : \mathbb{R} \to [0, \infty]$ be measurable for every $n \in \mathbb{N}$. Then which of the following statements is always true?

Options :

682470917. $\int\limits_{\mathbb{R}} \varliminf\limits_{n\to\infty} f_n(x)\,dx = \varliminf\limits_{n\to\infty} \int\limits_{\mathbb{R}} f_n(x)\,dx$

682470918. $\int\limits_{\mathbb{R}} \varliminf\limits_{n\to\infty} f_n(x)\,dx < \varliminf\limits_{n\to\infty} \int\limits_{\mathbb{R}} f_n(x)\,dx$

682470919. If f_n decreases to f then $\int\limits_{\mathbb{R}} \varliminf\limits_{n\to\infty} f_n(x)\,dx = \varliminf\limits_{n\to\infty} \int\limits_{\mathbb{R}} f_n(x)\,dx$

If f_n increases to f then $\int_{\mathbb{R}} \underline{\lim}_{n\to\infty} f_n(x)\,dx = \underline{\lim}_{n\to\infty} \int_{\mathbb{R}} f_n(x)\,dx$

682470920.

Question Number : 81 Question Id : 682470236 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The functions $f : \mathbb{R}^2 \to \mathbb{R}$ is given by

$$f(x,y) = \begin{cases} \dfrac{x^2y^6}{x^4+y^{12}} & (x,y) \neq (0,0) \\ 0 & (x,y) = (0,0) \end{cases}$$

Options :

682470921. discontinuous at $(0,0)$ but both $f_x(0,0)$ and $f_y(0,0)$ exist

682470922. discontinuous at $(0,0)$ and only one of $f_x(0,0)$ and $f_y(0,0)$ exists

682470923. continuous at $(0,0)$ but neither $f_x(0,0)$ nor $f_y(0,0)$ exists

682470924. continuous at $(0,0)$ but $f_x(0,0)$ and $f_y(0,0)$ exist

Question Number : 82 Question Id : 682470237 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Assume that $\bar{f} : \mathbb{R}^4 \to \mathbb{R}^2$ is given by

$$\bar{f}(x, y, z, w) = \left(x^2 + y + z^2 + \sin w, x + y + \sin z + w^2\right)$$

Notice that $\bar{f}(1, 1, 0, 0) = (2, 2)$. Let $\bar{g}$ be the implicit function given by the implicit function theorem in a neighbourhood U of $(1, 1)$ such that $\bar{f}(x, y, \bar{g}(x, y)) = (2, 2), (x, y) \in U$. Then the derivative of $\bar{g}$ at $(1, 1)$ is given by the matrix

Options :

682470925. $\begin{pmatrix} -1 & -1 \\ -2 & 1 \end{pmatrix}$

682470926. $\begin{pmatrix} -1 & -1 \\ -2 & 3 \end{pmatrix}$

682470927. $\begin{pmatrix} 1 & 1 \\ 2 & 1 \end{pmatrix}$

682470928. $\begin{pmatrix} -1 & -1 \\ -2 & -1 \end{pmatrix}$

Question Number : 83 Question Id : 682470238 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Maximum of xyz subject to $x^2 + y^2 + z^2 \leq 1$ is

Options :

682470929. 0

682470930. $\frac{1}{3\sqrt{3}}$

682470931. $3\sqrt{3}$

682470932. $\frac{1}{3}$

Question Number : 84 Question Id : 682470239 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let l^p denote the normed linear space of sequences (a_n) with $\|(a_n)\|_p = \left(\sum_{n=1}^{\infty} |a_n|^p\right)^{\frac{1}{p}}$ for $p > 1$ and $\|(a_n)\|_\infty = \sup_{n\in\mathbb{N}} |a_n|$. Which of the following is NOT a separable space?

Options :

682470933. $(l^5, \|\quad\|^5)$

682470934. $(l^1, \|\quad\|_1)$

682470935. $(l^\infty, \|\quad\|_\infty)$

682470936. $(C[-1,1], \|\quad\|_\infty)$

Question Number : 85 Question Id : 682470240 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following spaces is complete?

Options :

682470937. $\left(C^1[-1,1], \| \quad \|_{C^1}\right)$ where $\|f\|_{C^1} = \sup_{x\in[-1,1]} |f(x)| + \sup_{x\in[-1,1]} |f'(x)|$

682470938. $\left(C^1[-1,1], \| \quad \|_{\infty}\right)$ where $\|P\|_{\infty} = \sup_{x\in[-1,1]} |f(x)|$

682470939. $\{P : [-1,1] \to \mathbb{R} \colon P \text{ is a polynomial}, \| \quad \|_{\infty}\}$ where $\|P\|_{\infty} = \sup_{x\in[-1,1]} |f(x)|$

682470940. $\left(C^1[-1,1], \| \quad \|_{2}\right)$ where $\|f\|_2 = \left(\int_{-1}^{1} |f(x)|^2 \, dx\right)^{\frac{1}{2}}$

Question Number : 86 Question Id : 682470241 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Let $(M_n(\mathbb{R}), d)$ denote the metric space of all $n \times n$ real matrices with $d\big((a_{ij}), (b_{ij})\big) = \left(\sum_{i,j=1}^{n} |a_{ij} - b_{ij}|^2\right)^{\frac{1}{2}}$, $(a_{ij}), (b_{ij}) \in M_n(\mathbb{R})$. Then the set of all $n \times n$ invertible matrices is

Options :

682470941. open in $M_n(\mathbb{R})$

682470942. closed in $M_n(\mathbb{R})$

682470943. connected in $M_n(\mathbb{R})$

682470944. compact in $M_n(\mathbb{R})$

Question Number : 87 Question Id : 682470242 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider $(C[0,1], d)$ where $d_\infty(f,g) = \sup_{x\in[0,1]} \sup |f(x) - g(x)|, f, g \in C[0,1]$. Then the set $A = \left\{ f \in C[0,1] \middle| f \text{ is a differentiable with } \sup_{x\in[0,1]} |f(x)| + \sup_{x\in[0,1]} |f'(x)| < 1 \right\}$ is

Options :

682470945. closed in $C[0,1]$

682470946. open in $C[0,1]$

682470947. relatively compact in $C[0,1]$

682470948. not connected in $C[0,1]$

Question Number : 88 Question Id : 682470243 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let (X, τ) be a topological space and $Y \subset X$. Then which of the following statements is true?

Options :

682470949. If Y is locally path connected, then Y is connected

682470950. If Y is locally connected, then Y is path connected

682470951. If Y is connected, then Y is locally connected

682470952. If Y is locally path connected, then Y is locally connected

Question Number : 89 Question Id : 682470244 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider the following statements.

S_1 : There exists a topology τ_1 on $\mathbb{R}$ with more than 3 open sets such that every infinite subset of $\mathbb{R}$ is connected.

S_2 : There exists a topology τ_2 on $\mathbb{R}$ such that only constant sequences are convergent sequences.

Then

Options :

682470953. both S_1 and S_2 are true

682470954. S_1 is true and S_2 is false

682470955. S_1 is false and S_2 is true

682470956. both S_1 and S_2 are false

Question Number : 90 Question Id : 682470245 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Conside the following statements

S_1 : Let (X_i, τ_i) be topological spaces for $i \in \Lambda$ (indexed set). Then the product topology is the smallest topology on $\prod_{i\in\Lambda} X_i$ such that all canonical projection maps are continuous.

S_2 : Let (X, τ) be a topological space $W \subset X$. Then the induced sub space topology is the smallest topology such that the identity maps $I : W \to X$ is continuous. Then

Options :

682470957. both S_1 and S_2 are true

682470958. S_1 is true and S_2 is false

682470959. S_1 is false and S_2 is true

682470960. both S_1 and S_2 are false

Question Number : 91 Question Id : 682470246 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Suppose $f(z)$ is analytic on $D = \{z : |z| < 3\}$. If $|f(z)| \leq |f(2-i)|$ for all $z \in D$, then $f(2i) - f(i) =$

Options :

682470961. i

682470962. $-i$

682470963. 1

682470964. 0

Question Number : 92 Question Id : 682470247 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let C be the circle $|z| = 4$ positively oriented. Then $\int_C \frac{z^3}{(z^2-4)(z^3-9)}\,\mathrm{d}z =$

Options :

682470965. πi

682470966. $2\pi i$

682470967. $1 + \pi i$

682470968. $1 + 2\pi i$

Question Number : 93 Question Id : 682470248 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let C be the circle $|z| = 2$ positively oriented. Then $\int_C \frac{z^3+3}{(z^8-1)}\,\mathrm{d}z =$

Options :

682470969. 0

682470970. πi

682470971. $2\pi i$

682470972. $-2\pi i$

Question Number : 94 Question Id : 682470249 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let C be the simple closed contour. Then $\frac{1}{2i}\int_C \bar{z}\,\mathrm{d}z$ represents

Options :

682470973. the area of the region enclosed by C

682470974. the length of C

682470975. half of the length of C

682470976. half of the region enclosded by C

Question Number : 95 Question Id : 682470250 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The number of singularities of $f(z) = \dfrac{1}{\sinh z - i}$ inside $|z| = 5$ is

Options :

682470977. 1

682470978. 2

682470979. 3

682470980. 4

Question Number : 96 Question Id : 682470251 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let W be the wronskian of two functions y_1 and y_2. Which of the following statements is false?

Options :

682470981. There exist functions y_1 and y_2 on an interval $[a, b]$ such that they are linearly independent and $W(y_1, y_2) = 0$

682470982. There exist functions y_1 and y_2 on an interval $[a, b]$ such that $W(y_1, y_2) \neq 0$

682470983. If y_1 and y_2 are two independent solutions of $y'' + P(x)y' + Q(x)y = 0$, where, P, Q are continuous functions then $W(y_1, y_2) \neq 0$

682470984. If y_1 and y_2 are two independent solutions of $y'' + P(x)y' + Q(x)y = 0$, where, P, Q are polynomials then $\exists\ x_0$ and x_1 such that $W(y_1, y_2)(x_0) \neq 0, W(y_1, y_2)(x_1) = 1$

Question Number : 97 Question Id : 682470252 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider the ordinary differential equation(ODE): $(3y^2 - x)\,dx + 2y(y^2 - 3x)\,dy = 0$. It has an integrating factor of the form $\phi(x + y^2)$ then $\phi(s)$ is

Options :

682470985. e^{-s^3}

682470986. $e^{-\frac{3}{2}s}$

682470987. $s^{-\frac{3}{2}}$

682470988. s^{-3}

Question Number : 98 Question Id : 682470253 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

A solution of $4x^2y'' - 20xy' + (35 + 4x^2)y = 0$ is of the form $y = uv$. Then a choice of u so that v satisfies $v'' + v = 0$ is

Options :

682470989. $x^{-\frac{5}{2}}$

682470990. $x^{\frac{5}{2}}$

682470991. $x^{-\frac{3}{2}}$

682470992. $x^{\frac{3}{2}}$

Question Number : 99 Question Id : 682470254 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider the system $\frac{dx}{dt} = -2x + 3y + xy, \frac{dy}{dt} = -x + y - 2xy^2$. Then $(0, 0)$ is a

Options :

682470993. node

682470994. Saddle point

682470995. Centre

682470996. Spiral

Question Number : 100 Question Id : 682470255 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let y be a nontrivial solution of $y'' + \left(\sin^2 x + 1\right) y = 0$. Then which of the following statements is true?

Options :

682470997. $y(x) > 0$ for $x > 0$

682470998. $y(x) < 0$ for $x > 0$

682470999. y has only finite number of zeros for $x > 0$

6824701000. y has infinitely many zeros for $x > 0$

Question Number : 101 Question Id : 682470256 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let m_1 and m_2 be the roots of the identical equation of the second order ordinary differential equation $x^2y'' + xy' + \left(x^2 - \frac{1}{4}\right)y = 0$, then

Options :

6824701001. $m_1 = \frac{1}{2}, m_2 = -\frac{1}{2}$ and there exists only one Frobenius solution

6824701002. $m_1 = \frac{1}{2}, m_2 = -\frac{1}{2}$ and two Frobenius series solutions exist

6824701003. $x = 0$ is a regular point for the ODE

6824701004. one of the solution is analystic

Question Number : 102 Question Id : 682470257 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The Lagrangian of a spherical pendulum in spherical polar coordinates is

Options :

6824701005. $\frac{1}{2}ma^2\left(\theta^2 + \sin^2\theta\dot{\varphi}^2\right) - mga\cos\theta$

6824701006. $\frac{1}{2}ma^2\left(\theta^2 + \sin^2\theta\dot{\varphi}^2\right) - mga\sin\theta$

6824701007. $\frac{1}{2}ma^2\left(\theta^2 + \cos^2\theta\dot{\varphi}^2\right) - mga\cos\theta$

6824701008. $\frac{1}{2}ma^2\left(\theta^2+\cos^2\theta\dot{\varphi}^2\right)+mga\sin\theta$

Question Number : 103 Question Id : 682470258 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The transformation $Q=q^\alpha\cos(\beta p)$ and $P=q^\alpha\sin(\beta p)$ is canonical if

Options :

6824701009. $\alpha=\frac{1}{2}$ and $\beta=2$

6824701010. $\alpha=2$ and $\beta=2$

6824701011. $\alpha=2$ and $\beta=\frac{1}{2}$

6824701012. $\alpha=\frac{1}{2}$ and $\beta=\frac{1}{2}$

Question Number : 104 Question Id : 682470259 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The Hamiltonian for the Lagrangian $L(x,y)=bx^{-1}\dot{y}-g\dot{y}^2-k\sqrt{x^2+y^2}$ is

Options :

6824701013.

$$-\frac{1}{4g}\left(p_y-\frac{b}{x}\right)^2+k\sqrt{x^2+y^2}$$

6824701014. $$\frac{1}{4g}\left(p_y-\frac{b}{x}\right)^2+k\sqrt{x^2+y^2}$$

6824701015. $$-\frac{1}{4g}\left(p_y-\frac{b^2}{x^2}\right)^2+k\sqrt{x^2+y^2}$$

6824701016. $$\frac{1}{4g}\left(p_y-\frac{b^2}{x^2}\right)^2+k\sqrt{x^2+y^2}$$

Question Number : 105 Question Id : 682470260 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let ϕ be a solution of $\int_0^x e^{x-t}\phi(t)\,dt = x^2$. Then

Options :

6824701017. $\phi(1)=1$ and $\phi(2)=0$

6824701018. $\phi(1)=0$ and $\phi(2)=1$

6824701019. $\phi(1)=1$ and $\phi(2)=1$

6824701020. $\phi(1)=0$ and $\phi(2)=0$

Question Number : 106 Question Id : 682470261 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The integral equation $\phi(x) + \lambda \int_0^{\pi} \cos(x)\phi(t)\,dt = f(x)$ has a solution when

Options :

6824701021. $f(x) = \cos(3x)$

6824701022. $f(x) = \sin(2x)$

6824701023. $f(x) = x\sin(x)$

6824701024. $f(x) = x\cos(x)$

Question Number : 107 Question Id : 682470262 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The number of characteristic numbers of the integral equation

$\phi(x) + \lambda \int_0^{x} t(x-1)\phi(t)\,dt + \lambda \int_x^{1} t(x-1)\phi(t)\,dt = 0$ is

Options :

6824701025.

0

6824701026. finite number only

6824701027. countably infinite

6824701028. uncountably infinite

Question Number : 108 Question Id : 682470263 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The number of extremals belonging to $C^1[0,1]$ for the functional

$$\int_0^1 \left[4xz' + 4z + (y')^2 - (z')^2\right] dx$$

subject to $\int_0^1 \left[(y')^2 - (z')^2 - xy'\right] dx = 2, y(0) = 0, z(0) = 0, y(1) = 1$ and $z(1) = 1$ is

Options :

6824701029. 0

6824701030. 1

6824701031. 2

6824701032. 3

Question Number : 109 Question Id : 682470264 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $y_0(x) = x$ for $x \in [0, 1]$. Then the functional $\int_0^1 [y + 2y']^2 \, dx$ is not continuous at $y = y_0(x)$ in the sense of

Options :

6824701033. zeroth-order proximity

6824701034. first-order proximity

6824701035. second-order proximity

6824701036. third-order proximity

Question Number : 110 Question Id : 682470265 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider the following statements.

S_1 : If a functional is continuous at any function in the sense of 2^{nd} order proximity then it will be continuous in the sense of n^{th} order proximity if $n > 2$ for $n \in \mathbb{N}$.

S_2 : The functional has an extremum if first variation of that functional is zero.

Then

Options :

6824701037. both S_1 and S_2 are true

6824701038. both S_1 and S_2 are false

6824701039. S_1 is true and S_2 is false

6824701040. S_1 is false and S_2 is true

Question Number : 111 Question Id : 682470266 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If a range of six times the standard deviation covers at least 18 class intervals, then the amount of difference made by Sheppard's correction in the corrected value of standard deviation in terms of nearest percentage is

Options :

6824701041. 0.46%

6824701042. 1.21%

6824701043. 3.12%

6824701044. 5.21%

Question Number : 112 Question Id : 682470267 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

For a distribution, the mean is 10 and variance is 16, $\gamma_1 = +1$, then its third non central moment about origin is

Options :

6824701045. 64

6824701046. 116

6824701047. 1544

6824701048. 1024

Question Number : 113 Question Id : 682470268 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let X, Y and Z be the three points taken at random on a line segment. Then the probability that Y lies between X and Z is

Options :

6824701049. 1

6824701050. $\frac{1}{2}$

6824701051. $\frac{2}{3}$

6824701052. $\frac{1}{3}$

Question Number : 114 Question Id : 682470269 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Suppose two persons 'A' and 'B' decide to flip pennies; the one coming closest to the wall wins. 'B', being the better player, has a probability 0.6 of winning on each flip. If 'B' starts with five pennies and 'A' with ten, the probability (nearest) that 'B' will wipe 'A' out is

Options :

6824701053. 0.25

6824701054.

0.50

6824701055. 0.67

6824701056. 0.87

Question Number : 115 Question Id : 682470270 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $\{X_n, n \geq 1\}$ be sequence of square integrable independent random variables with

$\sum_{n=1}^{\infty} \frac{\sigma_{x_n}^2}{n^2} < \infty$ then the sequence holds

Options :

6824701057. Bernoulli's SLLN

6824701058. Kolmogorov SLLN

6824701059. Khintchin's SLLN

6824701060. Chebychev's LLN

Question Number : 116 Question Id : 682470271 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum

Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $\{X_n, n \geq 1\}$ be sequence of independent random variables follows U $[-n, n]$. the sequence

Options :

6824701061. does not hold Central limit theorem

6824701062. holds Central limit theorem

6824701063. holds converges to Cauchy distribution

6824701064. holds all modes of convergence

Question Number : 117 Question Id : 682470272 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If X_1 and X_2 be two independent random variables having the same geometric distribution. Then the conditional distribution of X_1 given $X_1 + X_2$ is

Options :

6824701065. Geometric

6824701066. Poisson

Uniform

6824701067.

Hyper-Geometric

6824701068.

Question Number : 118 Question Id : 682470273 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let the random variable X follows standard Cauchy distribution. Then the probability density function of X^2 is

Options :

Beta-I $(\frac{1}{2}, \frac{1}{2})$

6824701069.

Beta-II $(\frac{1}{2}, \frac{1}{2})$

6824701070.

Exponential

6824701071.

Gamma $(\frac{1}{2}, \frac{1}{2})$

6824701072.

Question Number : 119 Question Id : 682470274 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $X_1, X_2, \ldots, X_n$ be independent random variables with density function $P[X_i = k] = \frac{1}{N}$,

$i = 1, 2, \ldots, N; N \in I^+$. Let Y be the maximum order statistic then $P[X_1 = x_1, X_2 = x_2, \ldots, X_n = x_n / Y = y] =$

Options :

6824701073. $\frac{1}{nN}$

6824701074. $\frac{1}{y^n - (y-1)^n}$

6824701075. $\frac{y^n - (y-1)^n}{N^n}$

6824701076. $\frac{1}{y^n (y-1)^n}$

Question Number : 120 Question Id : 682470275 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In odd samples of size n from U[0, 1] population, the variance of the distribution of

median are

Options :

6824701077. $\frac{1}{2}$

6824701078.

$\frac{1}{12}$

6824701079. $\frac{1}{12(n-2)}$

6824701080. $\frac{1}{4(n+2)}$

Question Number : 121 Question Id : 682470276 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In simple logistic regression, the *log* of ratio of odds, i.e. $log\ \frac{\pi(1)/[1-\pi(1)]}{\pi(0)/[1-\pi(0)]}$ is

Options :

6824701081. $e^{\beta 1}$

6824701082. $e^{\beta 0}$

6824701083. β_1

6824701084. β_0

Question Number : 122 Question Id : 682470277 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The k^{th} moment μ_k when $k = 2r\ (< n)$ for a t-distribution with 'n' degrees of freedom is

Options :

6824701085. $\frac{n-2}{n-4}$

6824701086. $\frac{n^r}{\Gamma(\frac{n}{2})}$

6824701087. $\frac{\Gamma(r+\frac{1}{2})\quad \Gamma(\frac{n}{2}+r)}{\Gamma(\frac{n}{2})\quad \Gamma(\frac{1}{2})}$

6824701088. $\frac{\Gamma(r+\frac{1}{2})\quad \Gamma(\frac{n}{2}-r)\quad (n^r)}{\Gamma(\frac{n}{2})\,\Gamma(\frac{1}{2})}$

Question Number : 123 Question Id : 682470278 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $y_1 < y_2 < y_3 < y_4$ denote order statistics of a random sample of size 4 drawn from a

distribution having probability density function $f(x) = 2x,\ 0 < x < 1$. Then $f(y_3) =$

Options :

6824701089. $4!\ (2y_3)^5\ [1 - 2y_3]$

6824701090. $4!\ (2y_3)^5\ [1 - (2y_3)^2]$

6824701091. $4!\ (y_3)^5\ (1 - y_3)^2$

6824701092. $4!\ (y_3)^5\ [1 - (y_3)^2]$

Question Number : 124 Question Id : 682470279 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $x_1, x_2, \ldots x_n$ follows i.i.d. Uniform over $[\theta\text{-}1, \theta\text{+}1]$ then the maximum likelihood estimator for θ is

Options :

6824701093. $\text{Min}\{X_1, \ldots, X_n\}$

6824701094. $\text{Max}\{X_1, \ldots, X_n\}$

6824701095. $(X_{(n)}\text{-}1, X_{(1)}\text{+}1)$

6824701096. $(X_{(n)}, X_{(1)})$

Question Number : 125 Question Id : 682470280 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $x_1, x_2, \ldots x_n$ be an independent random sample of size n drawn from the population $f(x,\theta) = \theta x^{\theta-1}, 0 < x < 1, \theta > 0$ then the sufficient statistic for θ is

Options :

6824701097. $x(1)$

6824701098. $x(n)$

6824701099. $\sum_{i=1}^{n} x_i$

6824701100. $\prod_{i=1}^{n} x_i$

Question Number : 126 Question Id : 682470281 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If T(x) be a sufficient statistic for θ and is at least bounded complete and U is a minimal sufficient statistic for θ then T and U are

Options :

6824701101. differ with probability unity

6824701102. differ with probability $\frac{1}{2}$

6824701103. identical with probability unity

6824701104. identical with probability $\frac{1}{2}$.

Question Number : 127 Question Id : 682470282 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The stationary distribution π of two state Markov chain whose transition probability matrix is $P = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$

Options :

6824701105. $(1,\ 0)$

6824701106. $(0,\ 1)$

6824701107. $(0.5,\ 0.5)$

6824701108. $(1,\ 1)$

Question Number : 128 Question Id : 682470283 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let us suppose that the probability of a dry day following a rainy day is $\frac{1}{3}$ and that the probability of a rainy day following a dry day is $\frac{1}{2}$. Given that May 1^{st} is dry day. The probability for May 3^{rd} is dry day is

Options :

6824701109. $\frac{1}{6}$

6824701110. $\frac{1}{4}$

6824701111. $\frac{5}{12}$

6824701112. $\frac{7}{12}$

Question Number : 129 Question Id : 682470284 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The lifetime of electric bulbs produced by a new technology is assumed to follow the exponential distribution with mean θ. A random sample of 'n' such bulbs were tested and the lifetime recorded for the first 'h' hours only and then stopped. After 'h' hours, 'm' of the 'n' bulbs were still burning. Now, the maximum likelihood estimate for θ is

Options :

6824701113. $\frac{t + hm}{n - m}$

6824701114. $\frac{t + hm}{n + m}$

6824701115. $\frac{t - hm}{n - m}$

6824701116. mh/n

Question Number : 130 Question Id : 682470285 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If the random variable X follows $B(n, p)$, the sample size (nearest integer) required by the uniformly most powerful test of size $\alpha = 0.05$ to achieve its power at least 0.9 for testing H_0: $P < 0.2$ against H_1: $P > 0.4$.

Options :

6824701117. 42

6824701118. 31

6824701119. 24

6824701120. 7

Question Number : 131 Question Id : 682470286 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

At the conclusion of the experiment it was found that the new feed gave a 10 kg bigger gain than the old feed. To test the significance of increase of mean weight gain due to a new feed compared to an old feed, a two sample t-test with the proper one sided alternative was done and the resulting p-value was 0.082. This means

Options :

6824701121. there is an 8.2 % chance the H_0 is true

6824701122. there was only 8.2% chance of observing an increase greater than 10 kg (assuming the H_0 was true)

6824701123. there was only an 8.2% chance of observing an increase greater than 10 kg (assuming the H_0 was false)

6824701124.

there is an 8.2% chance the H_1 is true.

Question Number : 132 Question Id : 682470287 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let R be the total number of runs in a random arrangement of 'm' X's and 'n' Y's

used to test H_0: F(u) = G(u), then P[R = 2r / H] =

Options :

6824701125. $\frac{2mn}{m+n}$

6824701126. $\frac{2mn(2mn - m - n)}{(m+n)^2(m+n-1)}$

6824701127. $\frac{2mn}{(m+n)(m+n-1)}$

6824701128. $2\binom{m-1}{r-1}\binom{n-1}{r-1}\Big/\binom{m+n}{m}$

Question Number : 133 Question Id : 682470288 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In the usual notations, the test which is used to test H_0: $H(x, y) = F(x)\, G(y)$ against H_1:

$H(x, y) \neq F(x)\, G(y)$ is

Options :

6824701129. Mann-Whitney U- test

6824701130. t- test

6824701131. Spearmann Rank Correlation test

6824701132. F- test

Question Number : 134 Question Id : 682470289 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In usual notations, the relationship among the quantities α, β, A and B in sequential

probability ratio tests is

Options :

6824701133. $A \geq \frac{1-\beta}{\alpha}$ and $B \geq \frac{\beta}{1-\alpha}$

6824701134. $A \geq \frac{1-\beta}{\alpha}$ and $B \leq \frac{\beta}{1-\alpha}$

6824701135.

$A \leq \frac{1-\beta}{\alpha}$ and $B \geq \frac{\beta}{1-\alpha}$

6824701136. $A \leq \frac{1-\beta}{\alpha}$ and $B \leq \frac{\beta}{1-\alpha}$

Question Number : 135 Question Id : 682470290 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Consider a four component serial system of which the components are independent and identically distributed with exponential. If R(100) = 0.95 is specified reliability, then individual component mean time to failure (approximately) is

Options :

6824701137. 128.00

6824701138. 5245.6

6824701139. 7812.5

6824701140. 8721.6

Question Number : 136 Question Id : 682470291 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No

Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

The structure function ϕ increasing in each argument has at least one relevant component if and only if

Options :

6824701141. $\phi(0) = 0$ and $\phi(1) = \infty$

6824701142. $\phi(0) = -1$ and $\phi(1) = 1$

6824701143. $\phi(0) = 0$ and $\phi(1) = 1$

6824701144. $\phi(0) = 1$ and $\phi(1) = \infty$

Question Number : 137 Question Id : 682470292 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

If (X,Y) follows bi-variate Normal with parameters $\mu_1 = 3$, $\mu_2 = 1$, $\sigma_1^2 = 16$, $\sigma_2^2 = 25$, $\rho = 0.6$ then E(Y/X=7) and V(Y/X=7) are

Options :

6824701145. $\frac{147}{25}, \frac{256}{25}$

6824701146. $4, 16$

6824701147. $1, 25$

6824701148. $3, \frac{16}{25}$

Question Number : 138 Question Id : 682470293 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $\underline{X} = Z\underline{\beta} + \underline{\varepsilon}$, where has full rank r+1 and $\underline{\varepsilon}$ is distributed as $N_p(0, \sigma^2 I)$. The estimate $\hat{\beta} = (Z'Z)^{-1}Z'X$ is distributed as

Options :

6824701149. $N(0, \sigma^2 I)$

6824701150. $F_{r+1, n-r-1 \text{ d.f.}}$ distribution

6824701151. $N(\beta, \sigma^2 I)$

6824701152. $N(\beta, \sigma^2 (Z'Z)^{-1})$

Question Number : 139 Question Id : 682470294 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

If $Z_1 = C_1' X$ and $Z_2 = C_2' X$ are the first two principal components then the $\text{Cov}(Z_1, Z_2)$ is

Options :

6824701153. 1

6824701154. 0

6824701155. $C_1' \Sigma\, C_2'$

6824701156. $C_1'\, C_2$

Question Number : 140 Question Id : 682470295 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $Y_1, Y_2, \ldots, Y_N$ be independent random variables, where 'N' is also a random variable. Then the expectation of the sum of random numbers of random variables

$E[\sum_{i=1}^{N} Y_i] =$

Options :

6824701157. $E[N]\, E[Y]$

6824701158. $N\, \overline{Y}$

6824701159. $\sum_{i=1}^{N} Y_i$

6824701160.

$N\sum_{i=1}^{N} E[Y_i]$

Question Number : 141 Question Id : 682470296 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

A sampler has two strata with relative sizes $w_1 = \frac{N_1}{N}$, $w_2 = \frac{N_2}{N}$. He believes that variances of the two stratums is equal, i.e. $S_1^2 = S_2^2$. For a given cost $C = C_1 n_1 + C_2 n_2$ when N_h is large, the ratio $\frac{V_{prop}}{V_{opt}} =$

Options :

6824701161. $\left[\frac{w_1\sqrt{C_1} + w_2\sqrt{C_2}}{w_1 C_1 + w_2 C_2}\right]^2$

6824701162. $\left[\frac{w_1 C_1 + w_2 C_2}{\left(w_1\sqrt{C_1} + w_2\sqrt{C_2}\right)^2}\right]$

6824701163. $\left[\frac{\left(w_1\sqrt{C_1} + w_2\sqrt{C_2}\right)^2}{w_1 C_1 + w_2 C_2}\right]$

6824701164. $\left[\frac{w_1\sqrt{C_1} + w_2\sqrt{C_2}}{w_1 C_1 + w_2 C_2}\right]^{1/2}$

Question Number : 142 Question Id : 682470297 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The coefficients in estimating the quadratic effect of 3^2 factorial experiment are

Options :

6824701165. $-1, 2, 1$

6824701166. $1, -2, 1$

6824701167. $-1, 0, 2$

6824701168. $-1, 0, 1$

Question Number : 143 Question Id : 682470298 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let $\mathbf{r} = \text{diag}\ (r_1, r_2, \ldots r_v)$ denote the replications of v treatments and $\mathbf{k} = \text{diag}\ (k_1, k_2, \ldots k_b)$

denote the 'b' block sizes of a general incomplete block design, then

information matrix C of a general incomplete block design in the usual notation is

Options :

6824701169. $N'N - \mathbf{r}^{-1}E_{vv}$

6824701170. $\lambda\, I_v - v^{-1}\, N'N$

6824701171. $\mathbf{r}\, I_v - N'\mathbf{k}^{-1}N$

6824701172. $(r-\lambda)I_v - \lambda\, E_{vv}$

Question Number : 144 Question Id : 682470299 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

In 2^4 factorial experiment, the principal blocks of replicates 1, 2 and 3 consist of:

Replicate-1: (1), (ab), (ac), (bc), (d), (abd), (acd), (bcd).

Replicate-2: (1), (ab), (c), (abc), (ad), (bd), (acd), (bcd).

Replicate-3: (1), (a), (bc), (abc), (bd), (abd), (cd), (acd).

The confounded interaction effects in the replicates respectively?

Options :

6824701173. ABCD, ABD, BCD

6824701174. ABC, BCD, ABCD

6824701175. ABC, ABCD, ABCD

6824701176. ABC, ABD, BCD

Question Number : 145 Question Id : 682470300 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

The determinant of the incidence matrix of a symmetric Balanced Incomplete Block Design is

Options :

6824701177. $\pm\ r\ (r - \lambda)^{v-1}$

6824701178. $\pm r\ (r - \lambda)^{v-1/2}$

6824701179. $\pm r\ (r - \lambda)^{v-1/2}$

6824701180. $\pm r\ (r - \lambda)^{v}$

Question Number : 146 Question Id : 682470301 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

An estimate $t'y$ of a linear parametric function $\lambda'\beta$, is said to be "Linear Zero Function" if

Options :

6824701181. $E(t'y) = 0$

6824701182. $E(t'y) = \lambda'$

6824701183. $E(t'y) = \beta$

6824701184. $E(t'y) = \lambda'\beta$

Question Number : 147 Question Id : 682470302 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

Let X and Ybe continuous random variables with density function $f(x, y)$. If Z = X+Y then the density function of the random variable Z is

Options :

6824701185. $\int_{-\infty}^{\infty} f(x, z-x)\, x\, dx$

6824701186. $\int_{-\infty}^{\infty} f(x, z-x) dx$

6824701187. $\int_{-\infty}^{\infty} f(x, z-x)\, |z|\, dx$

6824701188. $\int_{-\infty}^{\infty} f(x, z-x)\, z\, dx$

Question Number : 148 Question Id : 682470303 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

Which one of the following test is used for empirical distribution function

Options :

6824701189. Wilcoxon sign rank test

6824701190. Kolmogorov-Smirnov test

6824701191. Median test

6824701192. Wald-Wolfowitz run test

Question Number : 149 Question Id : 682470304 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 2 Wrong Marks : 0

At a particular railway station it is observed that, goods trains arrive at a rate of 30 trains per day. Assuming that the inter arrival time follows an exponential distribution and the service time distribution is also exponential with an average 36 minutes. The average number of trains in the station are

Options :

6824701193. 2

6824701194. 3

6824701195. 4

6824701196. 1

Question Number : 150 Question Id : 682470305 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : 0 Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes Correct Marks : 2 Wrong Marks : 0

An optimum basic feasible solution to the linear programming problem:

Minimize: $Z= \frac{15}{2}X_1 - 3X_2$

subject to the constraints:

$$3X_1 - X_2 - X_3 \geq 3;$$

$$X_1 - X_2 + X_3 \geq 2;$$

$$X_1, X_2, X_3 \geq 0,$$

is

Options :

6824701197. $\frac{125}{8}$

6824701198. $\frac{75}{8}$

6824701199. $\frac{25}{8}$

6824701200. 1