

Banaras Hindu University

Notations :

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

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RET_Mathematics

Group Number :	1
Group Id :	76221155
Group Maximum Duration :	0
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Break time:	0
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Research_Methodology

Section Id :	762211109
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	40
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Section Marks:	120
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	762211109

Question Number : 1 Question Id : 7622115401 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Probability sampling is otherwise called :

सम्भाव्यता प्रतिदर्श को जाना जाता है :

Options :

Multiple choice

1. ✖ बहुविकल्पीय चयन

Uni-variate Analysis

2. ✖ यूनी-वैरिएट विश्लेषण

Random Sampling

3. ✔ यादृच्छिक प्रतिदर्श

Bi-variate Analysis

4. ✖ बाई-वैरिएट विश्लेषण

Question Number : 2 Question Id : 7622115402 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A Research Report is a formal statement of

एक शोध रिपोर्ट का एक औपचारिक विवरण है।

Options :

Research Process

1. ✔ अनुसंधान प्रक्रिया

Research Problem

2. ✖ अनुसंधान समस्या

Data collection

3. ✖ आंकड़ा संग्रहण

Data Editing

4. ✖ डाटा एडिटिंग

Question Number : 3 Question Id : 7622115403 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is **not** covered under Intellectual Property Rights ?

निम्नलिखित में से कौन बौद्धिक संपदा अधिकारों के अंतर्गत **नहीं** आता है ?

Options :

Copyrights

1. ✖ कॉपीराइट

Patents

2. ✖ पेटेंट

Trademarks

3. ✖ ट्रेडमार्क

Thesaurus

4. ✔ थिसॉरस

Question Number : 4 Question Id : 7622115404 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A bar chart or graph which shows the frequency of occurrence of each value of the variable which is being analysed is termed as :

स्तंभ चार्ट या ग्राफ जो चर के प्रत्येक मान को प्राप्त करने की आवृत्ति को दिखाता है जिसका विश्लेषण किया जा रहा है, को कहा जाता है :

Options :

Bar chart

1. ✖ स्तंभ चार्ट के रूप में

Histogram

2. ✔ कालिकचित्र के रूप में

Candle stick

3. ✖ कैंडल स्टिक के रूप में

Tabulation

4. ✖ सारणीयन के रूप में

Question Number : 5 Question Id : 7622115405 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The depth of research can be judged by :

शोध की गहराई का अंदाजा इससे लगाया जा सकता है :

Options :

Title of the research work

1. ✖ शोध कार्य का शीर्षक

Objective of research

2. ✔ शोध का उद्देश्य

Total expenditure of research

3. ✖ शोध का कुल खर्च

Duration of research

4. ✖ शोध की अवधि

Question Number : 6 Question Id : 7622115406 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The mean of a set scores is 50 and standard deviation is 10. If the score of each student is doubled the new median will be :

समुच्चय अंकों का माध्य 50 है तथा मानक विचलन 10 है। यदि प्रत्येक छात्र के अंकों को दोगुना कर दिया जाय, नई माध्यिका :

Options :

Remain unchanged

1. ✖ अपरिवर्तित रहेगी

Increase by double

2. ✔ दोगुना वृद्धि होगी

Decrease by half

3. ✖ आधा कम होगी

Become equal to the mean

4. ✖ माध्य के बराबर होगी

Question Number : 7 Question Id : 7622115407 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* a type of research question ?

निम्न में से कौन अनुसंधान प्रश्न का प्रकार *नहीं* है ?

Options :

Predicting an outcome

1. ✖ परिणाम की भविष्यवाणी

Evaluating a phenomenon

2. ✖ घटना का मूल्यांकन

Developing good practice

3. ✖ अच्छी प्रक्रिया को बढ़ाना

A hypothesis

4. ✔ एक परिकल्पना

Question Number : 8 Question Id : 7622115408 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

All of the following are types of non-probability sampling techniques except :

निम्न में से सभी गैर-प्रायिकता प्रतिदर्श तकनीक के प्रकार हैं सिवाय :

Options :

Purposive sampling

1. ✖ सोद्देश्य प्रतिदर्श के

Snowball sampling

2. ✖ स्नोबॉल प्रतिदर्श के

Convenience sampling

3. ✖ सुविधा प्रतिदर्श के

Random sampling

4. ✓ यादृच्छिक प्रतिदर्श के

Question Number : 9 Question Id : 7622115409 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

To test null hypothesis, a researcher does *not* use :

नगण्य परिकल्पना का परीक्षण करने हेतु अनुसंधानकर्ता निम्न में से किसका प्रयोग *नहीं* करते हैं ?

Options :

Chi-square test

1. ✗ काई-स्क्वेयर परीक्षण

t-test

2. ✗ टी-परीक्षण

ANOVA

3. ✗ एनोवा

Factorial analysis

4. ✓ क्रमगुणित विश्लेषण

Question Number : 10 Question Id : 7622115410 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

P-value stands for :

पी० मूल्य का अभिप्राय है :

Options :

Probability value

1. ✓ प्रायिकता मूल्य

Preference value

2. ✗ वरीयता मूल्य

Pre-determined value

3. ✗ पूर्व-निश्चित मूल्य

Prescribed value

4. ✖ निर्धारित मूल्य

Question Number : 11 Question Id : 7622115411 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the process of conducting research "Formulation of Hypothesis" is followed by :

अनुसंधान करने की प्रक्रिया में "परिकल्पना के सूत्रीकरण" के बाद किया जाता है :

Options :

Statement of Objectives

1. ✖ उद्देश्यों का विवरण

Analysis of Data

2. ✖ आँकड़ों का विश्लेषण

Selection of Research Tools

3. ✔ अनुसंधान साधनों का चयन

Collection of Data

4. ✖ आँकड़ों का संग्रह

Question Number : 12 Question Id : 7622115412 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Longitudinal studies of cohort groups

दस्ता समूहों का अनुदैर्घ्य अध्ययन है :

Options :

Study the same people over time

1. ✖ कुछ समय पर एक ही लोगों का अध्ययन

Use panel members as participants

2. ✖ भागीदार के रूप में पैनल सदस्यों का उपयोग

Study attitudes at a single point in time

3. ✖ एक समय पर दृष्टिकोण का अध्ययन

Use different participants for each sequenced measurement

4. ✓ प्रत्येक अनुक्रमित मापन हेतु विभिन्न भागीदारों का उपयोग

Question Number : 13 Question Id : 7622115413 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A deductive theory is one that :

निगमनिक सिद्धांत है :

Options :

Allows theory to emerge out of the data

1. ✗ जो सिद्धांत को आँकड़ों से व्युत्पन्न होने देता है

Involves testing an explicitly defined hypothesis

2. ✓ जिसमें स्पष्ट तथा परिभाषित परिकल्पना का परीक्षण शामिल है

Allows for findings to feed back into the stock of knowledge

3. ✗ जिसका उद्देश्य है ज्ञान के संचय में प्रतिपुष्टि हेतु निष्कर्ष देना

Uses qualitative methods whenever possible

4. ✗ जो जब भी संभव हो गुणात्मक पद्धति का प्रयोग करता है

Question Number : 14 Question Id : 7622115414 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Meta data is the data that :

मेटा डाटा वह डाटा है जो :

Options :

Distribute other data

1. ✗ अन्य डाटा को बाँटता है

Collect other data

2. ✗ अन्य डाटा को एकत्रित करता है

Describes the other data

3. ✓ डाटा को बताता है

Destroy the data

4. ✗ डाटा को नष्ट करता है

Question Number : 15 Question Id : 7622115415 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Randomization is done to :

यादृच्छिकीकरण की जाती है :

Options :

Increase bias

1. ✖ अभिनति को बढ़ाने के लिए

Reduce bias

2. ✔ अभिनति को कम करने के लिए

For making hypothesis

3. ✖ परिकल्पना करने के लिए

To increase drug efficacy

4. ✖ औषधि क्षमता को बढ़ाने के लिए

Question Number : 16 Question Id : 7622115416 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Data is represented in form of notes, recordings and video tapes in :

आँकड़ा को नोट, रेकार्डिंग एवं वीडियोटेप के रूप में निरूपित किया जाता है :

Options :

Qualitative Research

1. ✔ गुणात्मक अनुसंधान में

Quantitative Research

2. ✖ परिमाणात्मक अनुसंधान में

Experimental Research

3. ✖ प्रयोगात्मक अनुसंधान में

Descriptive Research

4. ✖ वर्णनात्मक अनुसंधान में

Question Number : 17 Question Id : 7622115417 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Grounded theory is often used in formulation of :
ग्राउंडेड थ्योरी का प्रयोग प्रतिपादन में बहुधा किया जाता है :

Options :

Policies and Programme evaluation research

1. ✓ नीतियों एवं कार्यक्रम मूल्यांकन अनुसंधान के

Opportunity for exploring the facts

2. ✗ तथ्यों का पता लगाने हेतु अवसर के

Categorizing data

3. ✗ आँकड़ा को श्रेणीबद्ध करने के

Understanding the culture

4. ✗ संस्कृति को समझने के

Question Number : 18 Question Id : 7622115418 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Read the statement **A** and **B** and choose the correct option :

कथन **क** एवं **ख** को पढ़िए तथा सही विकल्प चुनिए :

Statement A : Variables can be manipulated, controlled or observed by the experimenter.

कथन **क** : चरों को प्रयोगकर्ता द्वारा काम में लाया, नियंत्रित या अवलोकित किया जा सकता है।

Statement B : Variables are not related to theoretical concepts.

कथन **ख** : चर सैद्धांतिक अवधारणाओं से संबंधित नहीं हैं।

Options :

Both the statements are true

1. ✗ दोनों कथन सत्य हैं

Statement **A** is true but **B** is false

2. ✓ कथन **क** सत्य है किन्तु कथन **ख** असत्य है

Both the statements are false

3. ✗ दोनों कथन असत्य हैं

Statement **A** is false but **B** is true

4. ✗ कथन **क** असत्य है किन्तु कथन **ख** सत्य है

Question Number : 19 Question Id : 7622115419 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is not a category of legal research ?

निम्नलिखित में कौन-सा विधिक शोध की श्रेणी में नहीं आता है ?

Options :

- a parasitic discipline of law
1. ✓ परजीवी विषय के रूप में
- a practical discipline of law
2. ✗ व्यावहारिक विषय के रूप में
- an aspect of the humanities
3. ✗ मानविकी के एक पहलू के रूप में
- an aspect of social sciences
4. ✗ सामाजिक विज्ञान के पहलू के रूप में

Question Number : 20 Question Id : 7622115420 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Rejection of null hypothesis when it is true is called :

सत्य होने की स्थिति में नगन्य परिकल्पना की अस्वीकृति क्या कहलाती है ?

Options :

- Type II error
1. ✗ टाइप II त्रुटि
- Type I error
2. ✓ टाइप I त्रुटि
- Sampling error
3. ✗ प्रतिदर्श त्रुटि
- Standard error
4. ✗ मानक त्रुटि

Question Number : 21 Question Id : 7622115421 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In a research study one of the variables selected was (students') parents' occupation such as business, farming, service etc. What level of measurement is this ?

“अनुसंधान अध्ययन में चयनित एक चर माता-पिता का व्यवसाय जैसे व्यापार, खेती, सेवा इत्यादि। यह किस प्रकार का मापन है ?”

Options :

- Nominal
- 1. ✓ सांकेतिक
- Ordinal
- 2. ✗ क्रमसूचक
- Interval
- 3. ✗ अन्तराल
- Ratio
- 4. ✗ अनुपात

Question Number : 22 Question Id : 7622115422 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is standard error ?

मानक त्रुटि क्या है ?

Options :

- Standard deviation of the sampling distribution of a statistic
- 1. ✓ सांख्यिकीय के प्रतिदर्श बंटन का मानक विचलन
- Modal error value of the standard range of a statistic
- 2. ✗ सांख्यिकीय के मानक रेंज का मॉडल त्रुटि मान
- Error in the calculation of standard deviation of a statistic
- 3. ✗ सांख्यिकीय के मानक विचलन के गणना में त्रुटि
- Standardized statistic to minimize error
- 4. ✗ त्रुटि को कम करने के लिए मानकीकृत सांख्यिकीय

Question Number : 23 Question Id : 7622115423 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is helpful in determining sample size ?

प्रतिदर्श आकार का निर्धारण करने में निम्न में से कौन सहायक है ?

Options :

- ☐ Russell 2000 index
1. ✗ रसेल 2000 सूचकांक
- ☒ Cochran's formula
2. ✓ कोकरन का नियम
- ☐ Tussad's formula
3. ✗ तुसाद का नियम
- ☐ Spearman's formula
4. ✗ स्पीयरमैन का नियम

Question Number : 24 Question Id : 7622115424 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is not true about the case study method ?

‘केस अध्ययन’ के बारे में निम्नलिखित में से क्या सत्य नहीं है ?

Options :

- ☐ It is an expensive method of research
1. ✗ यह एक महंगी पद्धति है
- ☐ There are many chances of making errors
2. ✗ इसमें त्रुटि होने की बहुत संभावना होती है
- ☐ It is mainly qualitative in nature
3. ✗ यह मुख्यतया गुणात्मक होता है
- ☒ It is quantitative in nature
4. ✓ यह मात्रात्मक होता है

Question Number : 25 Question Id : 7622115425 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Read statement A and B and Choose the correct option :

कथन क एवं ख को पढ़िए तथा सही विकल्प का चुनाव कीजिए :

Statement A : The Latin square design has an advantage over randomized block design because it is possible to control the effects of two secondary variables.

कथन क : लैटिन स्क्वायर डिजाइन यादृच्छिक ब्लॉक डिजाइन से अधिक लाभदायक है क्योंकि यह दो गौण चरों के प्रभाव को नियंत्रित करने में संभव है।

Statement B : A $2 \times 2 \times 2$ factorial design has six independent variables.

कथन ख : एक $2 \times 2 \times 2$ क्रमगुणित डिजाइन में छह स्वतंत्र चर होते हैं।

Options :

Both A and B are true

1. ✖ क एवं ख दोनों सत्य हैं

A is true and B is false

2. ✔ क सत्य है तथा ख असत्य है

Both A and B are false

3. ✖ क एवं ख दोनों असत्य हैं

A is false but B is true

4. ✖ क असत्य है लेकिन ख सत्य है

Question Number : 26 Question Id : 7622115426 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A researcher is investigating teacher's attitude towards year-round schooling. She is particularly interested in describing the attitude of teachers from small, medium, and large schools. Which sampling procedure should be used by her to ensure her sample is representative of these types of schools ?

एक अनुसंधानकर्ता वर्ष भर स्कूलिंग के प्रति अध्यापक के मनोवृत्ति का अन्वीक्षण कर रही है। वह छोटे, मध्यम तथा बड़े स्कूलों से शिक्षकों के मनोवृत्ति की व्याख्या में विशेष रूप से दिलचस्पी ले रही है। उसे किस प्रतिदर्श विधि का प्रयोग करना चाहिए जिससे उसके प्रतिदर्श इन स्कूलों का सही प्रतिनिधित्व कर सकें ?

Options :

Cluster

1. ✖ समूह

Quota

2. ✖ कोटा

Systematic

3. ✖ योजनाबद्ध

Stratified

4. ✔ स्तरित

Question Number : 27 Question Id : 7622115427 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following type of research focuses on amending the prevailing situations ?

निम्न में से किस प्रकार का अनुसंधान अभिभावी स्थितियों को सुधारने पर संकेन्द्रित करता है ?

Options :

Action research

1. ✔ क्रियाविधि अनुसंधान

Experimental research

2. ✖ प्रयोगात्मक अनुसंधान

Fundamental research

3. ✖ मूलभूत अनुसंधान

Conclusive research

4. ✖ निर्णयात्मक अनुसंधान

Question Number : 28 Question Id : 7622115428 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If there are eight categories or classes in a goodness of fit test, what will be the degree of freedom ?

यदि गुडनेस ऑफ फिट टेस्ट में आठ श्रेणियाँ या वर्ग हैं, तो स्वातंत्र्य कोटि क्या होगी ?

Options :

1. ✖ 8

2. ✔ 7

3. ✖ 6

Cannot tell on the basis of the information given

4. ✖ दिये गये जानकारी के आधार पर बताया नहीं जा सकता है

Question Number : 29 Question Id : 7622115429 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Qualitative research helps in collecting data under more situations.

गुणात्मक अनुसंधान अधिक स्थितियों में आँकड़ा एकत्रित करने में सहायता करता है।

Options :

Normal

1. ✖ सामान्य

Natural

2. ✔ प्राकृतिक

Experimental

3. ✖ प्रयोगात्मक

Artificial

4. ✖ कृत्रिम

Question Number : 30 Question Id : 7622115430 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Read statement A and B and choose the correct option :

कथन क एवं ख को पढ़िए तथा सही विकल्प चुनिए :

Statement A : A case study can be used only in clinical psychology.

कथन क : वृत्त अध्ययन (केस स्टडी) का प्रयोग केवल क्लिनिकल मनोविज्ञान में किया जा सकता है।

Statement B : The approach of case study is based on the artificial atmosphere.

कथन ख : वृत्त अध्ययन (केस स्टडी) का दृष्टिकोण कृत्रिम परिवेश पर आधारित है।

Options :

Both A and B are true

1. ✖ क एवं ख दोनों सत्य हैं

Statement A is true and but B is false

2. ✖ कथन क सत्य है लेकिन ख असत्य है

Both A and B are false

3. ✓ क एवं ख दोनों असत्य हैं

Statement A is false but B is true

4. ✗ कथन क असत्य है लेकिन ख सत्य है

Question Number : 31 Question Id : 7622115431 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which type of research focus on what will be ?

किस प्रकार का अनुसंधान क्या होगा पर फोकस करता है ?

Options :

Experimental

1. ✓ प्रयोगात्मक

Case study

2. ✗ वृत्त अध्ययन (केस स्टडी)

Survey

3. ✗ सर्वेक्षण

Ex-post facto

4. ✗ पूर्व प्रभावी

Question Number : 32 Question Id : 7622115432 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following should be up to date, complete and affordable for proper sampling ?

निम्न में से कौन उचित प्रतिदर्श हेतु अद्यतन, पूर्ण तथा संभव होना चाहिए ?

Options :

Sampling technique

1. ✗ प्रतिदर्श तकनीक

Sample frame

2. ✓ प्रतिदर्श फ्रेम

Respondents

3. ✖ प्रतिक्रिया दिखाने वाले

Tools for data collection

4. ✖ ऑकड़ा संग्रह हेतु साधन

Question Number : 33 Question Id : 7622115433 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is a research design ?

अनुसंधान अभिकल्प क्या है ?

Options :

A way of conducting research that is not grounded in theory

1. ✖ अनुसंधान करने का तरीका जो सिद्धांत में आधारित नहीं है

The choice between using qualitative or quantitative methods

2. ✖ गुणात्मक एवं परिमाणात्मक पद्धतियों का प्रयोग करने के बीच विकल्प

The style in which you present your research findings, e. g. a graph

3. ✖ शैली जिसमें आप अपने अनुसंधान निष्कर्ष अर्थात ग्राफ को प्रस्तुत करते हैं

A framework for every stage of the collection and analysis of data

4. ✔ ऑकड़ा के विश्लेषण तथा संग्रह के प्रत्येक प्रक्रम हेतु ढाँचा

Question Number : 34 Question Id : 7622115434 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If a study is "reliable", this means that :

यदि अध्ययन विश्वसनीय है, इसका मतलब है कि :

Options :

It was conducted by a reputed researcher who can be trusted

1. ✖ यह प्रतिष्ठित अनुसंधानकर्ता द्वारा की जाती है जिस पर विश्वास किया जा सकता है

The measures devised for concepts are stable on different occasions

2. ✔ अवधारणाओं हेतु कल्पित उपाय विभिन्न अवसरों पर स्थिर होता है

The findings can be generalized to other social settings

3. ✖ निष्कर्ष को अन्य सामाजिक वातावरण के लिए सामान्यीकृत किया जा सकता है

The methods are stated clearly enough for the research to be replicated

4. ✖ अनुसंधान की प्रतिकृति किये जाने हेतु पद्धतियों को स्पष्ट रूप से पर्याप्त बताया गया है

Question Number : 35 Question Id : 7622115435 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Ethical norms in research does *not* involve guidelines for which of the following ?

अनुसंधान में नीतिपरक मानक में निम्न में किसके लिए दिशा-निर्देश शामिल *नहीं* है ?

Options :

Thesis Format

1. ✔ शोध प्रबन्ध प्रारूप

Copyright

2. ✖ कॉपीराइट

Patenting policy

3. ✖ पेटेंट नीति

Data sharing policy

4. ✖ डाटा शेयरिंग नीति

Question Number : 36 Question Id : 7622115436 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

..... is *not* a source of Hypothesis.

..... परिकल्पना का एक स्रोत *नहीं* है।

Options :

Intuition

1. ✖ सहज बोध

Knowledge

2. ✖ ज्ञान

Energy

3. ✓ ऊर्जा

Theory

4. ✗ सिद्धान्त

Question Number : 37 Question Id : 7622115437 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following variables cannot be expressed in quantitative terms ?

निम्नलिखित में से किस चर को मात्रात्मक शब्दों में व्यक्त नहीं किया जा सकता है ?

Options :

Socio-economic status

1. ✗ सामाजिक आर्थिक स्थिति

Marital status

2. ✗ वैवाहिक स्थिति

Numerical aptitude

3. ✓ संख्यात्मक अभिरुचि

Professional aptitude

4. ✗ पेशेवर अभिरुचि

Question Number : 38 Question Id : 7622115438 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* a citation style ?

निम्नलिखित में से कौन एक उद्धरण विधि *नहीं* है ?

Options :

A.P.A.

1. ✗ ए० पी० ए०

M.L.A.

2. ✗ एम० एल० ए०

Chicago

3. ✖ शिकागो

Ohio

4. ✔ ओहियो

Question Number : 39 Question Id : 7622115439 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is not a defining characteristics of non-doctrinal research ?

निम्नलिखित में से क्या गैर-सैद्धान्तिक शोध का परिभाषिक लक्षण नहीं है ?

Options :

It is organized around legal principles and appellate court decisions.

यह विधिक सिद्धान्तों और अपीलिय न्यायालय के निर्णयों के चारों तरफ व्यवस्थित होता है।

1. ✔

It puts lesser emphasis upon doctrines.

2. ✖ यह सिद्धान्तों पर कम बल देता है।

It seeks to answer broader and numerous questions.

3. ✖ यह वृहद् एवम् अनेक प्रश्नों के उत्तर खोजने की कोशिश करता है।

It may involve the use of research tools and perspectives not peculiar to law.

इसमें ऐसा शोध औजार और दृष्टिकोण प्रयुक्त हो सकता है जो केवल विधि तक

4. ✖ सीमित नहीं होते हैं।

Question Number : 40 Question Id : 7622115440 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* true about positivism ?

निम्नलिखित में से कौन यथार्थवाद (पोजिटिविज्म) के संबंध में सही *नहीं* है ?

Options :

It is associated with Auguste Comte

1. ✖ यह अगस्ट कॉम्ट के साथ जुड़ा है

It denies metaphysical speculation

2. ✖ यह तत्त्वमीमांसिक अटकलबाजी की अवहेलना करता है

It emphasises on objectivity

3. ✖ यह वस्तुनिष्ठता पर जोर देता है

It is a method used in qualitative research

4. ✔ यह एक विधि है जिसका प्रयोग गुणात्मक शोध में होता है

Subject_&Area Concerned

Section Id :	762211110
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	60
Number of Questions to be attempted:	60
Section Marks:	180
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	762211110
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 7622115441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following statements is *not* true ?

Options :

1. ✔ If range of a function is countable then its domain is also countable.

2. ✖ The set of all algebraic numbers is countable.

3. ✖ The family of all finite subsets of a countable set is countable.

4. ✖ If the domain of a function is countable then its range is also countable.

Question Number : 42 Question Id : 7622115442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let M denote the collection of all Lebesgue measurable subsets of the set of real number $\mathbb{R}$. Then which of the following statements is *not* true ?

Options :

1. ✖ $A_1, A_2 \in M \Rightarrow A_1 \cap A_2 \in M$

2. ✖ $A \in M \Rightarrow \mathbb{R} \setminus A \in M$

3. ✖ If A is a subset of $\mathbb{R}$ and Lebesgue measure of A is zero, then $A \in M$

If $A_i \in M$ for each natural number i , then $m\left(\bigcup_{i=1}^{\infty} A_i\right) = \sum_{i=1}^{\infty} m(A_i)$, where m

4. ✔ denotes the Lebesgue measure

Question Number : 43 Question Id : 7622115443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $(X, \mathbb{B}, \mu)$ be a measure space, $1 \leq p \leq \infty, f \in L^p(X, \mathbb{B}, \mu)$ and $g = 2f$, then :

Options :

1. ✖ $\|f + g\|_p = 2(\|f\|_p + \|g\|_p)$

2. ✔ $\|f + g\|_p = \|f\|_p + \|g\|_p$

3. ✖ $\|f + g\|_p < \|f\|_p + \|g\|_p$

4. ✖ $\|f + g\|_p = \|f\|_p^2 + \|g\|_p^2$

Question Number : 44 Question Id : 7622115444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If $(X, \mathbb{B}, \mu)$ is a signed measure space then μ is :

Options :

1. ✖ a measure on X

2. ✖ monotone

3. ✔ finitely additive

4. ✖ countably subadditive

Question Number : 45 Question Id : 7622115445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $\mathbb{R}$ denote the set of real numbers, $\mathbb{B}$ denote the σ -algebra of all Lebesgue measurable subsets of $\mathbb{R}$ and m denote Lebesgue measure. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ be defined as $f(x) = \begin{cases} 1 & , \text{ when } x \text{ is irrational} \\ x & , \text{ when } x \text{ is rational} \end{cases}$, then $\|f\|_{\infty}$ is :

Options :

1. ✖ 0

2. ✖ 2

3. ✔ 1

4. ✖ 3

Question Number : 46 Question Id : 7622115446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The infinite series $\sum_{n=1}^{\infty} \sin nx, \forall x \in (0, \pi)$:

Options :

1. ✖ converges to 0

2. ✖ converges to 1

3. ✖ converges to 1/2

4. ✔ does not converge

Question Number : 47 Question Id : 7622115447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let N be a normed linear space and $S = \{x \in N : \|x\| = 1\}$. Consider the following statements :

I : N is a Banach space if S is complete.

II : If N is a Banach space then S is complete.

then :

Options :

1. ✖ Both I and II are false

2. ✔ Both I and II are true

3. ✖ I is true and II is false

4. ✖ II is true but I is false

Question Number : 48 Question Id : 7622115448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $1 < p < \infty$ and q is such that $\frac{1}{p} + \frac{1}{q} = 1$. Then the following is false :

Options :

1. ✖ $l_p^* = l_q$

2. ✖ $l_1^* = l_\infty$

3. ✔ $l_\infty^* = l_1$

4. ✖ $l_2^* = l_2$

Question Number : 49 Question Id : 7622115449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $C^1[0, 1]$ denote the vector space of all continuously differentiable functions on $[0, 1]$. For $f \in C^1[0, 1]$ define $\|f\| = |f(0)| + \int_0^1 |f'(t)| dt$. Then $\|\cdot\|$ is :

Options :

1. ☒ a norm on $C^1[0, 1]$
2. ☐ not a norm but is a semi-norm
3. ☐ not a semi-norm
4. ☐ not a function on $C^1[0, 1]$

Question Number : 50 Question Id : 7622115450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $T : L^1[0, 1] \rightarrow L^1[0, 1]$ be defined as $(Tf)(x) = \int_0^x t f(t) dt \quad \forall f \in L^1[0, 1]$, then :

Options :

1. ☐ T is an unbounded linear operator
2. ☐ T is a bounded linear operator and $\|T\| > 1$
3. ☒ T is a bounded linear operator and $\|T\| \leq 1$
4. ☐ T is not a linear operator

Question Number : 51 Question Id : 7622115451 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let H be a Hilbert space. Then the following statement is *true* :

Options :

1. ☐ If $S \subseteq H$, then $S^{\perp\perp} = S$
2. ☐ $\|x + y\|^2 = \|x\|^2 + \|y\|^2 \quad \forall x, y \in H$
3. ☒ $\|x + y\|^2 + \|x - y\|^2 = 2\{\|x\|^2 + \|y\|^2\} \quad \forall x, y \in H$

4. ✖ Every convex subset of H has a unique element of smallest norm.

Question Number : 52 Question Id : 7622115452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let T be a bounded linear operator on a Hilbert space H . Then T is a normal operator if :

Options :

1. ✖ $\|T\| = 1$

2. ✖ $\|T_x\| = \|x\| \quad \forall x \in H$

3. ✖ $\|T^*x\| = \|x\| \quad \forall x \in H$

4. ✔ $\|T^*x\| = \|Tx\| \quad \forall x \in H$

Question Number : 53 Question Id : 7622115453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let l_2 denote the Hilbert space of all square summable sequences of complex numbers and let $S = \{e_n : n \geq 1\}$. Then S is :

Options :

1. ✖ bounded but not closed

2. ✖ closed but not bounded

3. ✖ compact

4. ✔ bounded and closed but is not compact

Question Number : 54 Question Id : 7622115454 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $f(z) = \begin{cases} \frac{(\bar{z})^2}{z} & , \quad z \neq 0 \\ 0 & , \quad \text{when } z = 0 \end{cases}$ then :

Options :

1. ✖ $C - R$ equations are not satisfied at $z = 0$
2. ✔ $C - R$ equations are satisfied at $z = 0$ but f is not differentiable at $z = 0$
3. ✖ $C - R$ equations are satisfied at $z = 0$ and f is differentiable at $z = 0$
4. ✖ f is analytic at $z = 0$

Question Number : 55 Question Id : 7622115455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $f(z) = \frac{2}{(4z^2 - 1)}$ and C denote the positively oriented circle centred at the

origin of radius 2 then the value of integral $\int_C f(z)dz$ is :

Options :

1. ✔ 0
2. ✖ $2\pi i$
3. ✖ πi
4. ✖ $-\pi i$

Question Number : 56 Question Id : 7622115456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $f(z) = \text{Log } z$, then $z = 0$ is :

Options :

1. ✖ a pole of $f(z)$

2. ☒ non-isolated singularity for $f(z)$
3. ☐ removable singularity of $f(z)$
4. ☐ essential isolated singularity of $f(z)$

Question Number : 57 Question Id : 7622115457 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The radius of convergence of the power series $\sum_{n=1}^{\infty} \left(1 + \frac{1}{n}\right)^{n(n!)^2} z^{(n!)^2}$ is :

Options :

1. ☒ $\frac{1}{e}$
2. ☐ e
3. ☐ 1
4. ☐ e^2

Question Number : 58 Question Id : 7622115458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $f(z) = \frac{z}{(z-1)(z-3)}$, then the residue of $f(z)$ at $z = 1$ is :

Options :

1. ☐ $\frac{1}{2}$
2. ☒ $-\frac{1}{2}$
3. ☐ 1
4. ☐ -2

Question Number : 59 Question Id : 7622115459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Number of non-isomorphic abelian groups of order 20 is :

Options :

1. ✖ 1

2. ✖ 3

3. ✖ 4

4. ✔ 2

Question Number : 60 Question Id : 7622115460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let p be a prime number, then the number of conjugacy classes in a non-abelian group of order p^3 is :

Options :

1. ✔ $p^2 + p - 1$

2. ✖ $p^2 - 1$

3. ✖ $p^2 - p + 1$

4. ✖ p

Question Number : 61 Question Id : 7622115461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The order of any non-identity element of the group $\mathbb{Z}_3 \times \mathbb{Z}_3$ is :

Options :

1. ✖ 9

2. ✖ 6

3. ✔ 3

4. ✖ 12

Question Number : 62 Question Id : 7622115462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The number of Sylow 3-subgroups of S_4 is :

Options :

1. ✖ 2

2. ✔ 4

3. ✖ 3

4. ✖ 5

Question Number : 63 Question Id : 7622115463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let Q denote the field of rational numbers. The degree of splitting field of $x^3 - 2$ over Q is :

Options :

1. ✔ 6

2. ✖ 2

3. ✖ 3

4. ✖ 4

Question Number : 64 Question Id : 7622115464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The number of elements in a basis of $Q(\sqrt{3}, \sqrt{5})$ over Q is :

Options :

1. ✖ 2

2. ✖ 3

3. ✔ 4

4. ✖ 5

Question Number : 65 Question Id : 7622115465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let R be a commutative ring and A be an ideal of R . Let $N(A) = \{x \in R : x^n \in A \text{ for some } n \geq 1\}$. Then :

Options :

1. ✖ A is not contained in $N(A)$

2. ✖ A is contained in $N(A)$ and $N(A)$ is not an ideal of R

3. ✔ A is contained in $N(A)$ and $N(A)$ is an ideal of R

4. ✖ $N(A)$ need not be an ideal of R

Question Number : 66 Question Id : 7622115466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let A and B be subsets of $\mathbb{R}$, then :

Options :

1. ✖ A and B are convex implies $A \cup B$ is convex

2. ✔ A and B are convex implies $A \cap B$ is convex

3. ✖ $A \cup B$ is convex implies either A or B is convex

4. ✖ $A \cap B$ is convex implies both A and B are convex

Question Number : 67 Question Id : 7622115467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Consider the following statements :

I : Compactness is a topological property.

II : Compactness is a hereditary property.

Options :

1. ✖ Both I and II are correct

2. ✖ II is correct and I is false

3. ✔ I is correct and II is false

4. ✖ Both I and II are false

Question Number : 68 Question Id : 7622115468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Only one of the following statements is true :

Options :

1. ✔ If A is connected then its closure $\overline{A}$ is connected.

2. ✖ If $\overline{A}$ is connected then A is connected.

3. ✖ If interior of A is connected then A is connected.

4. ✖ Complement of a connected set is connected.

Question Number : 69 Question Id : 7622115469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let f_l denote the lower limit topology on $\mathbb{R}$. Then $(\mathbb{R}, f_l)$ is :

Options :

1. ☒ first countable and separable
2. ☐ second countable and separable
3. ☐ second countable but not separable
4. ☐ first countable but not separable

Question Number : 70 Question Id : 7622115470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

One of the following statements is *not* true ?

Options :

1. ☐ Every metrizable topological space is normal
2. ☒ Every metrizable topological space is second countable
3. ☐ Every compact Hausdorff space is normal
4. ☐ Every compact subset of a Hausdorff space is closed

Question Number : 71 Question Id : 7622115471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let V be an n -dimensional real vector space and V' denotes dual. Let V_s^r be the space of all tensors of type (r, s) formed by V and V' . Then the dimension of V_s^r is :

Options :

1. ☒ $r + s$
2. ☐ $r \cdot s$
3. ☐ n^{rs}
4. ☐ n^{r+s}

Question Number : 72 Question Id : 7622115472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let M denote an n -dimensional smooth manifold. Then the dimensional of its tangent bundle TM is :

Options :

1. ✖ n

2. ✖ n^2

3. ✖ n^n

4. ✔ $2n$

Question Number : 73 Question Id : 7622115473 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The Cartan formula, connecting Lie derivative and exterior derivative is :

Options :

1. ✖ $L_X = i_X \circ d - d \circ i_X$

2. ✔ $L_X = i_X \circ d + d \circ i_X$

3. ✖ $d = L_X \circ i_X - i_X \circ L_X$

4. ✖ $d = L_X \circ i_X + i_X \circ L_X$

Question Number : 74 Question Id : 7622115474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which one of the followings is locally conformally flat ?

Options :

1. ✖ Euclidean n -space $\mathbb{R}^n$

2. ✖ The sphere $S^n(a)$

3. ✖ The upper half plane $|H|^2$

4. ✓ A 3-dimensional Lorentzian manifold

Question Number : 75 Question Id : 7622115475 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let (M, g) be a Riemannian manifold and let $\alpha : [a, b] \rightarrow M$ be a regular curve.
Then the length of the curve α is :

Options :

1. ✗
$$L_g(\alpha) = \int_a^b \|\dot{\alpha}(t)\|^2 dt$$

2. ✓
$$L_g(\alpha) = \int_a^b \|\dot{\alpha}(t)\| dt$$

3. ✗
$$L_g(\alpha) = \int_a^b \sqrt{\|\dot{\alpha}(t)\|} dt$$

4. ✗
$$L_g(\alpha) = \int_a^b \dot{\alpha}(t) dt$$

Question Number : 76 Question Id : 7622115476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the spherical polar coordinates (r, θ, ϕ) , the gradient of a smooth function f is
given by :

Options :

1. ✗
$$\text{grad } f = \frac{\partial f}{\partial r} \cdot \frac{\partial}{\partial v} + \frac{\partial f}{\partial \theta} \frac{\partial}{\partial \theta} + \frac{\partial f}{\partial \phi} \cdot \frac{\partial}{\partial \phi}$$

2. ✗
$$\text{grad } f = \frac{\partial f}{\partial r} + \frac{\partial f}{\partial \theta} + \frac{\partial f}{\partial \phi}$$

3. ✗
$$\text{grad } f = r \cdot \frac{\partial f}{\partial r} + \theta \frac{\partial f}{\partial \theta} + \phi \frac{\partial f}{\partial \phi}$$

4.  $\text{grad } f = \frac{\partial f}{\partial r} \cdot \frac{\partial}{\partial r} + \frac{1}{r^2} \frac{\partial f}{\partial \theta} \cdot \frac{\partial}{\partial \theta} + \frac{1}{r^2 \sin \theta} \frac{\partial f}{\partial \phi} \cdot \frac{\partial}{\partial \phi}$

Question Number : 77 Question Id : 7622115477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let T be a linear operator on $\mathbb{R}^3$ defined as $T(x_1, x_2, x_3) = (3x_1, x_1 - x_2, 2x_1 + x_2 + x_3)$, then :

Options :

1.  $\text{Rank}(T) = 1$

2.  $\text{Rank}(T) = 2$

3.  $\text{Rank}(T) = 4$

4.  $\text{Rank}(T) = 3$

Question Number : 78 Question Id : 7622115478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let a, b, c be real numbers such that $a > 0$ and $a\lambda^2 + 2b\lambda + c \geq 0$ for all real numbers λ . Then :

Options :

1.  $b^2 \geq 4ac$

2.  $b^2 \leq 4ac$

3.  $b^2 \geq ac$

4.  $b^2 \leq ac$

Question Number : 79 Question Id : 7622115479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $(V, \langle, \rangle)$ be a finite dimensional inner product space and f be a linear functional on V . Then :

Options :

1. ✖ There exists a unique vector $v_0 \in V$ such that $f(v_0) = 0$
2. ✔ There exists a unique vector $v_0 \in V$ such that $f(v) = \langle v, v_0 \rangle \forall v \in V$
3. ✖ There exists a unique vector $v_0 \in V$ such that $f(v) = \langle v_0, v \rangle \forall v \in V$
4. ✖ There exists a unique vector $v_0 \in V$ such that $f(v_0) \neq 0$

Question Number : 80 Question Id : 7622115480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let S and T be two nilpotent linear transformation on a vector space V . Now consider the following statements :

- I. ST is nilpotent if $ST = TS$.
- II. $S + T$ is nilpotent if $ST = TS$.

Options :

1. ✖ I is correct and II is false
2. ✖ II is correct and I is false
3. ✖ Both I and II are false
4. ✔ Both I and II are correct

Question Number : 81 Question Id : 7622115481 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let V be the set of all real functions $y = f(x)$ satisfying

$$\frac{d^3 y}{dx^3} - 6 \frac{d^2 y}{dx^2} + 11 \frac{dy}{dx} - 6y = 0. \text{ Then } V \text{ is a :}$$

Options :

1. ✖ One dimensional vector space
2. ✖ Two dimensional vector space

3. ✓ Three dimensional vector space

4. ✗ Not a vector space

Question Number : 82 Question Id : 7622115482 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

For the differential equation $\frac{dx}{dt} = 2x(x-5)\left(1 - \frac{x}{10}\right)$ with $x(0) = 4$, which of the following statements is correct ?

Options :

1. ✓ $\lim_{t \rightarrow \infty} x(t) = 0$

2. ✗ $\lim_{t \rightarrow \infty} x(t) = 4$

3. ✗ $\lim_{t \rightarrow \infty} x(t) = 5$

4. ✗ $\lim_{t \rightarrow \infty} x(t) = 10$

Question Number : 83 Question Id : 7622115483 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The solution of the differential equation $x \sin 2x \cdot \frac{dy}{dx} - \sin 2x \cdot y = 2x^2$ is :

Options :

1. ✗ $y = cx - x \log (\cos x)$

2. ✓ $y = cx + x \log (\tan x)$

3. ✗ $y = cx + x \log (\sin x)$

4. ✗ $y = cx - x \log (\sin x)$

Question Number : 84 Question Id : 7622115484 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The singular solution of $p = \log(px - y)$, where $p = \frac{dy}{dx}$, is :

Options :

1. ✖ $y = x \log x$
2. ✖ $y = \log x - x$
3. ✖ $y = x \log x + x$
4. ✔ $y = x \log x - x$

Question Number : 85 Question Id : 7622115485 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Let $P_n(x)$ denote Legendre polynomial. Then the value of $\int_{-1}^1 x^2 P_2(x) dx$ is :

Options :

1. ✖ 0
2. ✖ $\frac{2}{5}$
3. ✖ $\frac{2}{3}$
4. ✔ $\frac{4}{15}$

Question Number : 86 Question Id : 7622115486 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The differential equation $\frac{dy}{dx} = y^{2/3}$, $y(0) = 0$ has :

Options :

1. ✖ No solution
2. ✖ Unique solution

3. ✓ Two solution

4. ✗ Infinitely many solutions

Question Number : 87 Question Id : 7622115487 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The solution of partial differential equation $\frac{\partial u}{\partial t} + 3 \frac{\partial u}{\partial x} + 2u = 0$ with $u(x, 0) = \sin x^2$,
is :

Options :

1. ✗ $\sin(x^2 - 4t^2)$

2. ✗ $e^{-2t} \cdot \sin(x - 3t)$

3. ✓ $e^{-2t} \sin(x - 2t)^2$

4. ✗ $e^{-2t} \sin x^2$

Question Number : 88 Question Id : 7622115488 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of $\frac{1}{D^2 - DD' + D' - 1} \cdot \cos(x + 2y)$, where $D \equiv \frac{\partial}{\partial x}$ and $D' \equiv \frac{\partial}{\partial y}$, is :

Options :

1. ✗ $\frac{1}{2} \cos(x + 2y)$

2. ✓ $\frac{1}{2} \sin(x + 2y)$

3. ✗ $\frac{1}{4} \cos(x + 2y)$

4. ✗ $-\frac{1}{2} \sin(x + 2y)$

Question Number : 89 Question Id : 7622115489 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The partial differential equation $y \frac{\partial^2 u}{\partial x^2} + x \frac{\partial^2 u}{\partial y^2} = x + y$ is hyperbolic in :

Options :

1. ✓ the second and fourth quadrants
2. ✗ the second and third quadrants
3. ✗ the first and second quadrants
4. ✗ the first and third quadrants

Question Number : 90 Question Id : 7622115490 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A bounded solution to the partial differential equation $\frac{\partial u}{\partial t} = \frac{\partial^2 u}{\partial x^2} + e^{-t}$ is :

Options :

1. ✓ $u(x, t) = -e^{-t}$
2. ✗ $u(x, t) = e^{-x} e^{-t}$
3. ✗ $u(x, t) = e^{-x} + e^{-t}$
4. ✗ $u(x, t) = e^{-x} - e^{-t}$

Question Number : 91 Question Id : 7622115491 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

For a fluid in motion, the equation of continuity is a mathematical presentation of law of conservation of :

Options :

1. ✗ volume
2. ✗ momentum
3. ✗ velocity

4. ✓ mass

Question Number : 92 Question Id : 7622115492 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

One of the following fluids does not experience shearing stress :

Options :

1. ✓ Ideal fluid
2. ✗ Pseudoplastic fluid
3. ✗ Dilatant fluid
4. ✗ Newtonian fluid

Question Number : 93 Question Id : 7622115493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

For a fluid having rotational motion :

Options :

1. ✗ velocity potential exists
2. ✓ velocity potential does not exist
3. ✗ stream lines become straight lines
4. ✗ stream lines become ellipses

Question Number : 94 Question Id : 7622115494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The surface $F(x, y, z, t) = 0$ will be a possible boundary surface if the material derivative of F satisfies the following condition :

Options :

1. ✓ $\frac{DF}{Dt} = 0$
2. ✗ $\frac{DF}{Dt} > 0$

3. ✖ $\frac{DF}{Dt} < 0$

4. ✖ $\frac{DF}{Dt} \rightarrow \infty$

Question Number : 95 Question Id : 7622115495 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The complex potential at a point z of a fluid (in 2D motion) due to a doublet of strength at the origin with x -axis as doublet's axis is :

Options :

1. ✖ $\frac{\mu^2}{z}$

2. ✖ $\frac{\mu^2}{z^2}$

3. ✔ $\frac{\mu}{z}$

4. ✖ $\frac{\mu}{z^2}$

Question Number : 96 Question Id : 7622115496 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Stress and rate of strain relationship for a Newtonian fluid is :

Options :

1. ✖ Parabolic type

2. ✖ Hyperbolic type

3. ✔ Linear type

4. ✖ Inverse type

Question Number : 97 Question Id : 7622115497 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Due to earth rotation the coriolis force experienced by a moving object is small because :

Options :

1. ✖ the gravitational force of earth is very large
2. ✖ the centrifugal force is large
3. ✔ the angular velocity of earth is small
4. ✖ the moving object is small compared to earth

Question Number : 98 Question Id : 7622115498 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The degree of freedom of a rigid body moving in a plane is :

Options :

1. ✖ 2
2. ✔ 3
3. ✖ 4
4. ✖ 5

Question Number : 99 Question Id : 7622115499 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If T and V are kinetic and potential energies of a moving body under conservative finite forces, then the Lagrangian L is given by :

Options :

1. ✖ $L = T + V$
2. ✔ $L = T - V$

3. ✖ $L = T \cdot V$

4. ✖ $L = \frac{T}{V}$

Question Number : 100 Question Id : 7622115500 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If for a rigid body motion n generalized coordinates exist, then the Hamiltonian is, in general, a function of :

Options :

1. ✖ n variables

2. ✖ $(n + 1)$ variables

3. ✖ $2n$ variables

4. ✔ $2n + 1$ variables