

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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Creation Date:	2019-10-22 13:18:19
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Magnifying Glass Required?:	No
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RET_Physics

Group Number :	1
Group Id :	76221133
Group Maximum Duration :	0
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Break time:	0
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Research_Methodology

Section Id :	76221165
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	40
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Section Marks:	120
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Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	76221165

Question Number : 1 Question Id : 7622113201 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 : 7622113202 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 : 7622113203 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 : 7622113204 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 : 7622113205 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 : 7622113206 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 : 7622113207 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 : 7622113208 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 : 7622113209 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 : 7622113210 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 : 7622113211 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 : 7622113212 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 : 7622113213 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 : 7622113214 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 : 7622113215 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 : 7622113216 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 : 7622113217 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 : 7622113218 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 : 7622113219 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 : 7622113220 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 : 7622113221 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 : 7622113222 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 : 7622113223 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 : 7622113224 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 : 7622113225 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 : 7622113226 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 : 7622113227 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 : 7622113228 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 : 7622113229 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 : 7622113230 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 : 7622113231 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 : 7622113232 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. ✖ आँकड़ा संग्रह हेतु साधन

Question Number : 33 Question Id : 7622113233 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. ✔ आँकड़ा के विश्लेषण तथा संग्रह के प्रत्येक प्रक्रम हेतु ढाँचा

Question Number : 34 Question Id : 7622113234 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 : 7622113235 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 : 7622113236 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 : 7622113237 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 : 7622113238 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 : 7622113239 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 : 7622113240 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 :	76221166
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

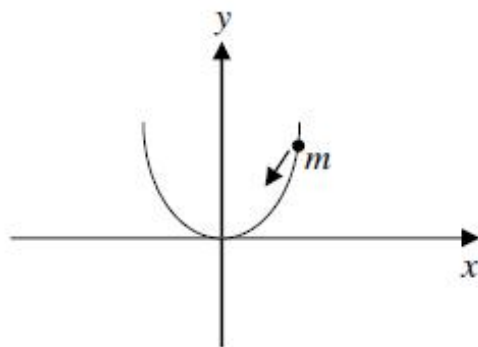
Sub-Section Number:	1
Sub-Section Id:	76221166
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 7622113241 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 particle of mass m slides under gravity without friction along the parabolic path $y = ax^2$ as shown in the figure. Here a is constant. The Lagrangian for this particle is given by :



Options :

1. ✖ $L = \frac{1}{2}m\dot{x}^2 - mgax^2$

2. ✖ $L = \frac{1}{2}m(1 + 4a^2x^2)\dot{x}^2 + mgax^2$

3. ✖ $L = \frac{1}{2}m\dot{x}^2 + mgax^2$

4. ✔ $L = \frac{1}{2}m(1 + 4a^2x^2)\dot{x}^2 - mgax^2$

Question Number : 42 Question Id : 7622113242 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 p, q are canonical variables, then which of the following pairs is not canonical ?

Options :

1. ✖ $\left(q^2, \frac{p}{2q}\right)$

2. ✖ $\left(p^2, \frac{-q}{2p}\right)$

3. ✔ $\left(\frac{p}{q}, -q^2\right)$

4. ✖ $\left(\frac{q}{2p}, p^2\right)$

Question Number : 43 Question Id : 7622113243 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 particle of mass m is moving in the potential $V(x, y, z) = ax^2 + by^2 + az^2$, where a, b are constants. Which component of the angular momenta $\vec{L} = \vec{r} \times \vec{p}$ is (are) conserved ?

Options :

1. ✖ L_x, L_y

2. ✖ L_x, L_z

3. ✖ L_x, L_y, L_z

4. ✔ L_y

Question Number : 44 Question Id : 7622113244 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 effective Lagrangian for a two body central force problem is given by :

$$L = \frac{1}{2}\mu(\dot{r}^2 + r^2\dot{\theta}^2) - \frac{\alpha}{r}, \alpha > 0$$

The long time average kinetic energy of the system is given in terms of total energy, E as :

Options :

1. ☒ $\bar{T} = -E$

2. ☐ $\bar{T} = -E/2$

3. ☐ $\bar{T} = E/2$

4. ☐ $\bar{T} = 2E$

Question Number : 45 Question Id : 7622113245 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 Lagrangian of a dynamical system in 3-d is given as $L(\vec{r}, \vec{v}) = \frac{1}{2}m(\vec{v} + \vec{a})^2$, where $\vec{a}$ is a constant vector. The Hamiltonian of the system is given by :

Options :

1. ☐ $\frac{1}{2m}(\vec{p} + \vec{a})^2$

2. ☐ $\frac{\vec{p}^2}{2m} + \vec{a} \cdot \vec{p}$

3. ☒ $\frac{\vec{p}^2}{2m} - \vec{a} \cdot \vec{p}$

4. ☐ $\frac{\vec{p}^2}{2m}$

Question Number : 46 Question Id : 7622113246 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

Suppose the spin degree of freedom of two particles (non zero rest mass and non zero spin) is described completely by a Hilbert space of 21 dimension. Which of the following could be the spin of one of the particles ?

Options :

1. ✖ $\frac{1}{2}$

2. ✔ 1

3. ✖ $\frac{3}{2}$

4. ✖ 4

Question Number : 47 Question Id : 7622113247 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 dimensional SHO described by the Hamiltonian $H = \frac{p_x^2}{2m} + \frac{1}{2}m\omega^2 x^2$ is perturbed by an interaction ax^4 . The first order correction to the ground state energy is given by (where SHO stands for simple harmonic oscillator).

Options :

1. ✖ $\frac{3\hbar^2 a}{8m^2 \omega^2}$

2. ✖ $\left(\frac{3\hbar}{4m\omega}\right)^{3/2} a$

3. ✔ $\frac{3\hbar^2 a}{4m^2 \omega^2}$

4. ✖ $\frac{3a}{4} \left(\frac{\hbar}{m\omega}\right)^{5/2}$

Question Number : 48 Question Id : 7622113248 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 possible eigen values of helicity operator for massless spin $\frac{1}{2}$ particle is :

Options :

1. ✖ only +1

2. ✖ only -1

3. ✖ ± 1 , and 0

4. ✔ ± 1

Question Number : 49 Question Id : 7622113249 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 bound state solution for a particle subjected to the potential $V(x) = -V_0 \delta(x - a)$,
 $V_0 > 0$ where V_0 and a are constants is :

Options :

1. ✖ Infinite

2. ✖ Depend on $V_0 a$

3. ✖ Depend on $V_0 a^2$

4. ✔ 1

Question Number : 50 Question Id : 7622113250 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 bilinears transforms as Lorentz vector, where ψ and $\bar{\psi}$ are
Dirac spinor and Dirac adjoint spinor respectively ?

Options :

1. ✖ $\bar{\psi} \gamma^\mu \gamma^\nu \psi$

2. ✖ $\bar{\psi} \gamma^\mu \gamma^5 \psi$

3. ✔ $\bar{\psi} \gamma^\mu \psi$

4. ✖ $\bar{\psi} \gamma^5 \psi$

Question Number : 51 Question Id : 7622113251 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 speed at which the kinetic energy of an electron is equal to twice of its rest energy is :

Options :

1. ✓ $\frac{2\sqrt{2}}{3}C$

2. ✗ $\frac{\sqrt{2}}{3}C$

3. ✗ $\frac{C}{2}$

4. ✗ $\frac{\sqrt{3}}{2}C$

Question Number : 52 Question Id : 7622113252 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 a quantum mechanical system of 1-d SHO. Three identical spin $\frac{1}{2}$ particles (non-interacting) are first placed in this system and ground state energy is found to be 15 eV. If 7 such non-interacting identical particles are placed in the same system, what will be ground state energy ?

Options :

1. ✓ 75 eV

2. ✗ 147 eV

3. ✗ 35 eV

4. ✗ 21 eV

Question Number : 53 Question Id : 7622113253 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 root mean square fluctuation in E in the canonical ensemble is given by :

Options :

1. ✗ $\frac{KT^2C_V}{U}$

2. ✓ $\frac{\sqrt{KT^2C_v}}{U}$

3. ✗ $\sqrt{\frac{KT^2C_v}{U}}$

4. ✗ $\frac{\sqrt{KTC_v}}{U}$

Question Number : 54 Question Id : 7622113254 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 two non-interacting 1-d SHO with same angular frequency (ω). If the total energy of the system is $(v + 1)\hbar\omega$, the number of possible microstates is :

Options :

1. ✓ $v + 1$

2. ✗ $v - 1$

3. ✗ v

4. ✗ $\frac{v(v-1)}{2}$

Question Number : 55 Question Id : 7622113255 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 shop sells 10 computers on the average everyday. What is the probability of selling 10 computers on a particular day ?

Options :

1. ✗ 1

2. ✗ $\frac{1}{e}$

3. ✓ $\frac{10^{10}e^{-10}}{10!}$

$$10^{10} e^{-10}$$

4. ✖

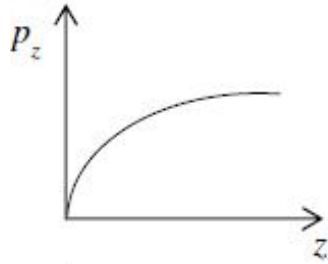
Question Number : 56 Question Id : 7622113256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load :
No Control Enable : Yes

Correct Marks : 3 Wrong Marks : 1

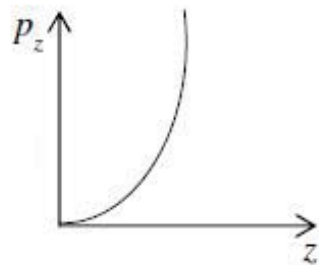
Question Label : Multiple Choice Question

The phase space trajectory of a single particle falling freely from a height will be :

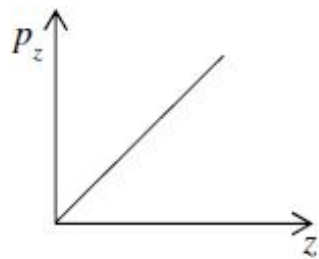
Options :



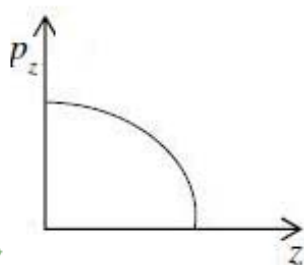
1. ✖



2. ✖



3. ✖



4. ✔

Question Number : 57 Question Id : 7622113257 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

Partition function for a single quantum SHO in one dimension, which is in contact with a heat reservoir at temperature T and having frequency ω is :

Options :

1. ✖ $\left[2 \sinh \frac{\hbar \omega}{KT} \right]^{-1}$

2. ✖ $\left[\sinh \frac{\hbar \omega}{KT} \right]^{-1}$

3. ✔ $\left[2 \sinh \frac{\hbar \omega}{2KT} \right]^{-1}$

4. ✖ $\left[\sinh \frac{\hbar \omega}{2KT} \right]^{-1}$

Question Number : 58 Question Id : 7622113258 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 sodium doublet lines arise due to ${}^2P_{3/2} \rightarrow {}^2S_{1/2}$ and ${}^2P_{1/2} \rightarrow {}^2S_{1/2}$ transitions. The ratio of intensities of spectral lines due to first transition to that of second transition is :

Options :

1. ✖ 1 : 3

2. ✔ 3 : 1

3. ✖ 2 : 3

4. ✖ 3 : 2

Question Number : 59 Question Id : 7622113259 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

Raman shift :

Options :

1. ✖ Depends on both frequency of exciting radiation and scatterer

2. ✖ Is independent of nature of scatterer

3. ✔ Is dependent on the scatterer only

4. ✖ Is dependent on the frequency of the exciting radiation

Question Number : 60 Question Id : 7622113260 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 He-Ne laser, the lasing action takes place due to transition in :

Options :

- 1. ✖ He atom
- 2. ✔ Ne atom
- 3. ✖ He, Ne atoms both
- 4. ✖ Composites of He and Ne

Question Number : 61 Question Id : 7622113261 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 laser beam of wavelength 600 nm with a Gaussian profile having radius 10 mm is focused by a lens of focal length 10 cm. The radius of focused spot is :

Options :

- 1. ✖ 0.3 μm
- 2. ✔ 3.0 μm
- 3. ✖ 6.0 μm
- 4. ✖ 30 μm

Question Number : 62 Question Id : 7622113262 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 sample absorbs at 350 nm and emits at 370 nm. The value of stoke's shift is :

Options :

- 1. ✖ 10 nm
- 2. ✔ 20 nm

3. ✖ 40 nm

4. ✖ Given data are insufficient

Question Number : 63 Question Id : 7622113263 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 minimum number of electrons to give rise to the spectroscopic term ${}^4D_{5/2}$ is :

Options :

1. ✖ 2

2. ✔ 3

3. ✖ 4

4. ✖ 5

Question Number : 64 Question Id : 7622113264 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 DNA types is the normal DNA found in physiological conditions ?

Options :

1. ✖ A type

2. ✔ B type

3. ✖ Z type

4. ✖ C type

Question Number : 65 Question Id : 7622113265 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

Enzymes have the role of catalysts. What kind of molecules makes an enzyme ?

Options :

1. ✖ Guanine

- 2. ✖ Nucleic acid
- 3. ✔ Protein
- 4. ✖ Amino acid

Question Number : 66 Question Id : 7622113266 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 most common bond that provides support to the structure of large bio-molecules is :

Options :

- 1. ✔ Hydrogen bond
- 2. ✖ Covalent bond
- 3. ✖ Ionic bond
- 4. ✖ Tetrahedral bond

Question Number : 67 Question Id : 7622113267 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 type of molecule involved in the formation of protein is :

Options :

- 1. ✖ Cytosine
- 2. ✔ mRNA
- 3. ✖ Fatty acids
- 4. ✖ Lipids

Question Number : 68 Question Id : 7622113268 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 dc voltage supply provides 60 volts when output is unloaded. When full load current is drawn from the supply, the output voltage drops to 50 volts. The value of voltage regulation is :

Options :

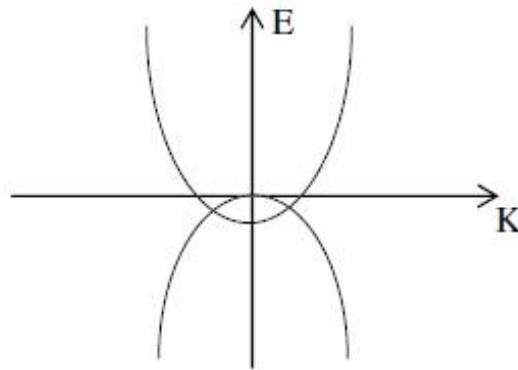
1. ✖ 10%
2. ✔ 20%
3. ✖ 40%
4. ✖ 54.5%

Question Number : 69 Question Id : 7622113269 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 energy band diagram shown in figure is for a :



Options :

1. ✖ Direct band semiconductor
2. ✖ Indirect band semiconductor
3. ✔ Semimetal
4. ✖ Insulator

Question Number : 70 Question Id : 7622113270 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 p-n junction in which breakdown occurs by a Zener mechanism, the breakdown voltage :

Options :

1. ✖ Increases linearly with temperature
2. ✔ Decreases with temperature inversely
3. ✖ Is independent of temperature
4. ✖ Increases as square of temperature

Question Number : 71 Question Id : 7622113271 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 an amplitude modulated system, if the total power is 600 W and the power in carrier is 400 W, then the modulation index is :

Options :

1. ✖ 0.50
2. ✖ 0.75
3. ✖ 0.90
4. ✔ 1.00

Question Number : 72 Question Id : 7622113272 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

PROMs are used to store :

Options :

1. ✖ Bulk information
2. ✖ Sequential information
3. ✔ Information to be accessed rarely
4. ✖ Relatively permanent information

Question Number : 73 Question Id : 7622113273 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

Simple capacitor filters are good for :

Options :

1. ✓ Low current supply
2. ✗ High current supply
3. ✗ Low voltage supply
4. ✗ High voltage supply

Question Number : 74 Question Id : 7622113274 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 gyrofrequency for inospheric radiowave propagation in the presence of earth's magnetic field ($= 0.5 \times 10^{-4}$ Tesla) is nearly :

Options :

1. ✓ 1.4 MHz
2. ✗ 2 MHz
3. ✗ 3 MHz
4. ✗ 8 MHz

Question Number : 75 Question Id : 7622113275 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 $\int_C \vec{F} \cdot d\vec{r}$, where $\vec{F} = xy\hat{i} + yz\hat{j} + zx\hat{k}$, and C is the curve

$\vec{r} = t\hat{i} + t^2\hat{j} + t^3\hat{k}$, t varying from -1 to $+1$ is :

Options :

1. ✓ $\frac{10}{7}$
2. ✗ $\frac{3}{7}$
3. ✗ $\frac{1}{14}$

4. ✖ $\frac{5}{7}$

Question Number : 76 Question Id : 7622113276 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 residue of $\frac{z^2}{z^2 + a^2}$ at $z = ia$ is :

where terms have their usual meaning.

Options :

1. ✖ $\frac{a^2}{2}$

2. ✔ $\frac{ia}{2}$

3. ✖ ia

4. ✖ $2ia$

Question Number : 77 Question Id : 7622113277 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

$J_{\frac{1}{2}}(x)$ can be written as :

Options :

1. ✔ $\sqrt{\frac{2}{\pi x}} \sin x$

2. ✖ $\sqrt{\frac{2}{\pi x}} \cos x$

3. ✖ $-\sqrt{\frac{2}{\pi x}} \sin x$

4. ✖ $-\sqrt{\frac{2}{\pi x}} \cos x$

Question Number : 78 Question Id : 7622113278 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 is a non singular matrix of order 5×5 , then the rank of A is :

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 5

Question Number : 79 Question Id : 7622113279 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 poles for the complex function $f(z) = \frac{1}{z \sin \pi z}$ is given by :

Options :

1. ✖ Simple poles at $z = 0, \pm 1, \pm 2, \dots$

2. ✖ Simple poles at $z = \pm 1, \pm 2, \dots$

3. ✖ Simple poles at $z = 0, 1, 2, \dots$

4. ✔ Pole of order 2 at $z = 0$ and simple poles at $z = \pm 1, \pm 2, \dots$

Question Number : 80 Question Id : 7622113280 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 glancing angle for (111) plane of a rock salt crystal ($a = 2.88 \text{ \AA}$) corresponding to second order diffraction maximum for the X-ray of wavelength $0.3081 \text{ \AA}$ is :

Options :

1. ✖ 20°

2. ✔ 30°

3. ✖ 45°

4. ✖ 60°

Question Number : 81 Question Id : 7622113281 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 effective mass of an electron in a band is :

Options :

1. ✖ Always negative

2. ✖ Always positive

3. ✔ Can be positive or negative

4. ✖ None of the three

Question Number : 82 Question Id : 7622113282 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

As temperature $T \rightarrow 0$, the electronic specific heat of a solid is proportional to :

Options :

1. ✖ T^2

2. ✖ T^3

3. ✖ $T^{1/2}$

4. ✔ T

Question Number : 83 Question Id : 7622113283 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

At long wavelength region of acoustic branch of phonons, relation between angular frequency ω and wave vector k is :

Options :

1. ✖ $\omega \propto k^{1/2}$

2. ✔ $\omega \propto k$

3. ✖ $\omega \propto k^2$

4. ✖ $\omega \propto k^3$

Question Number : 84 Question Id : 7622113284 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

Bloch function is applicable for :

Options :

1. ✔ Crystalline materials only

2. ✖ Amorphous materials only

3. ✖ Quasi crystals only

4. ✖ All of the three

Question Number : 85 Question Id : 7622113285 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 conductor is placed in a variable electric field $E = E_0 \cos \omega t$. If electrical conductivity is $10^8 \text{ ohm}^{-1} \text{ m}^{-1}$, the ratio of the magnitudes of displacement and conduction current densities at frequency $2 \times 10^5 \text{ Hz}$ is nearly :

(given $\epsilon_0 = 8.85 \times 10^{-12} \text{ Fm}^{-1}$)

Options :

1. ✖ 10^{-10}

2. ✔ 10^{-13}

3. ✖ 10^{10}

4. ✖ 10^{13}

Question Number : 86 Question Id : 7622113286 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

When the phase velocity of an e.m. wave depends on frequency in any medium, the phenomenon is called :

Options :

1. ✗ Scattering
2. ✗ Polarization
3. ✓ Dispersion
4. ✗ Propagation

Question Number : 87 Question Id : 7622113287 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 electric field of an equipotential surface is :

Options :

1. ✗ Always parallel to the surface
2. ✗ zero
3. ✓ Always perpendicular to the surface
4. ✗ None of the three

Question Number : 88 Question Id : 7622113288 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

Electromagnetic wave is obliquely incident at an angle θ_i at the surface of a dielectric medium 2 (permeability μ_0 , permittivity ϵ_2) from a dielectric medium 1 (permeability μ_0 , permittivity ϵ_1). The total reflection occurs, when :

where θ_c is critical angle.

Options :

1. ✗ $\epsilon_1 > \epsilon_2$ and $\theta_i < \theta_c$

2. ✓ $\epsilon_2 > \epsilon_1$ and $\theta_i > \theta_c$

3. ✗ $\epsilon_1 > \epsilon_2$ and $\theta_i < \theta_c$

4. ✗ $\epsilon_2 > \epsilon_1$ and $\theta_i < \theta_c$

Question Number : 89 Question Id : 7622113289 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 conducting rod of length l is rotating with a constant angular velocity ω in a uniform magnetic field B . The emf developed across the length of the rod is :

Options :

1. ✗ ωBL

2. ✗ $\frac{1}{2} \omega BL$

3. ✗ ωBL

4. ✓ $\frac{1}{2} \omega BL^2$

Question Number : 90 Question Id : 7622113290 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 conduction electrons per unit volume in three-dimension varies with the Fermi energy E_F as :

Options :

1. ✗ $E_F^{1/2}$

2. ✗ $E_F^{2/3}$

3. ✓ $E_F^{3/2}$

4. ✗ E_F^2

Question Number : 91 Question Id : 7622113291 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 the mass of a proton is converted completely into energy, the energy equivalent will be :

Options :

1. ✖ 3.1 MeV
2. ✔ 931 MeV
3. ✖ 9010 MeV
4. ✖ 1078 MeV

Question Number : 92 Question Id : 7622113292 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 radioactive transition from a nucleus, the width of the level from which transition occurs :

Options :

1. ✖ Is directly proportional to the life-time of the level
2. ✔ Is inversely proportional to the life-time of the level
3. ✖ Is independent of the life-time of the level
4. ✖ Is inversely proportional to the energy uncertainty of the level

Question Number : 93 Question Id : 7622113293 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 decay constant (λ) of a radioactive sample :

Options :

1. ✔ Is independent of the age of the atom
2. ✖ Depends on the nature of the activity

3. ✖ Increases as the age of the atoms increases

4. ✖ Decreases as the age of atoms increases

Question Number : 94 Question Id : 7622113294 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 be the atomic mass of an undeformed spherical nuclear droplet, the surface energy is proportional to :

Options :

1. ✖ $A^{1/3}$

2. ✖ A

3. ✔ $A^{2/3}$

4. ✖ $A^{5/3}$

Question Number : 95 Question Id : 7622113295 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 substance reduces to $\frac{1}{16}$ th of its original mass in 2 hours. The half life period of the substance is :

Options :

1. ✖ 15 min

2. ✔ 30 min

3. ✖ 60 min

4. ✖ 120 min

Question Number : 96 Question Id : 7622113296 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 would be radius of the sun to behave it as a black hole ?

Options :

1. ✖ 20 km
2. ✖ 25 km
3. ✔ 3 km
4. ✖ 100 km

Question Number : 97 Question Id : 7622113297 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

Stratospheric temperature increases due to presence of :

Options :

1. ✖ CO₂
2. ✖ Water vapour
3. ✔ O₃ (ozone)
4. ✖ O₂ (Oxygen)

Question Number : 98 Question Id : 7622113298 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

Global Positioning System (GPS) operates in frequency band :

Options :

1. ✖ K-band
2. ✖ C-band
3. ✔ L-band
4. ✖ S-band

Question Number : 99 Question Id : 7622113299 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

Sunspot has temperature :

Options :

1. ☒ Less than photosphere
2. ☐ More than photosphere
3. ☐ Equal to photosphere
4. ☐ More than Corona

Question Number : 100 Question Id : 7622113300 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 layer of the ionosphere can reflect radio waves of frequency 20 MHz ?

Options :

1. ☐ D-layer
2. ☐ E-layer
3. ☐ E_S-layer
4. ☒ F₂-layer