

Banaras Hindu University

Notations :

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

Question Paper Name :	882 11th April 2021 Shift 2
Subject Name :	882
Creation Date :	2021-04-11 19:03:33
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Total Marks :	300
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Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	No
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

RET_Chemistry

Group Number :	1
Group Id :	509398155
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
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Show Progress Bar? :	No

Research_Methodology

Section Id :	509398248
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40
Number of Questions to be attempted :	40
Section Marks :	120
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	509398275
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 50939817723 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Generalised conclusion on the basis of a sample is technically known as :

एक नमूने के आधार पर सामान्यीकृत निष्कर्ष तकनीकी रूप से जाना जाता है :

Options :

- 1. ☒ Statistical inference
सांख्यिकीय निष्कर्ष
- 2. ☐ Descriptive statistic
वर्णनात्मक आँकड़ा
- 3. ☐ Data analysis and interpretation
डेटा विश्लेषण और व्याख्या
- 4. ☐ All of the three
तीनों में सभी

Question Number : 2 Question Id : 50939817724 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The protocol of asking pre-meditated questions in instruments of data collection is :

समक संग्रह के उपकरणों में पूर्व-मध्यस्थता प्रश्न पूछने का प्रोटोकॉल है :

Options :

- 1. ☒ Structured
संरचनात्मक
- 2. ☐ Unstructured
असंरचित
- 3. ☐ Free-rein
फ्री-रेन
- 4. ☐ Systematic
व्यवस्थित

Question Number : 3 Question Id : 50939817725 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Survey research is cross-sectional and therefore :

सर्वेक्षण अनुसंधान पार-अनुभागीय है और इसलिए :

Options :

- 1. ☒ High in replicability but low in internal validity
प्रतिकृति में उच्च लेकिन आंतरिक वैधता में कम
- 2. ☐ High in internal validity but low in reliability
आंतरिक वैधता में उच्च लेकिन विश्वसनीयता में कम
- 3. ☐ High in ecological validity but low in external validity
पारिस्थितिक वैधता में उच्च लेकिन बाहरी वैधता में कम
- 4. ☐ None of the three
तीनों में से कोई नहीं

Question Number : 4 Question Id : 50939817726 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Testing hypothesis is a
परिकल्पना परीक्षण है

Options :

- 1. ☒ Inferential statistics
आनुमानिक सांख्यिकी
- 2. ☐ Descriptive statistics
वर्णनात्मक सांख्यिकी
- 3. ☐ Data preparation
समंक का अयोजन
- 4. ☐ Data analysis
समंक का विश्लेषण

Question Number : 5 Question Id : 50939817727 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Inductive logic proceeds from :
आगमनात्मक तर्क अग्रसर होता है :

Options :

- 1. ☐ General to General
सामान्य से सामान्य
- 2. ☒ Particular to General
विशेष से सामान्य
- 3. ☐ General to Particular
सामान्य से विशेष
- 4. ☐ Particular to Particular
विशेष से विशेष

Question Number : 6 Question Id : 50939817728 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The sampling technique based on referral system of respondents is known as :
उत्तरदाताओं की रेफरल प्रणाली पर आधारित प्रतिचयन तकनीक को जाना जाता है :

Options :

- 1. ☐ Convenience Sampling
सुविधा प्रतिचयन
- 2. ☒ Snowball Sampling
स्नोबॉल प्रतिचयन
- 3. ☐ Cluster Sampling
समूह प्रतिचयन
- 4. ☐ Stratified Sampling
स्तरीकृत प्रतिचयन

Question Number : 7 Question Id : 50939817729 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Analysing the impact of demonetization on economic growth falls under which category of research ?

आर्थिक विकास पर नोटबंदी के प्रभाव का विश्लेषण किस शोध या अनुसंधान श्रेणी के अन्तर्गत आता है ?

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

- Descriptive Research
1. वर्णनात्मक शोध
- Fundamental Research
2. मौलिक शोध
- Pure Research
3. शुद्ध शोध
- Casual Research
4. कारणात्मक शोध

Question Number : 8 Question Id : 50939817730 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Likert scaling is based on :

लिकर्ट पैमाना आधारित है :

Options :

- Item-wise scale
1. ✓ मद-क्रम पैमाने पर
- Summative scale
2. ✗ योगात्मक पैमाने पर
- Reflective scale
3. ✗ परावर्तक पैमाने पर
- Formative scale
4. ✗ प्रारंभिक पैमाने पर

Question Number : 9 Question Id : 50939817731 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A research design appropriate for a particular research problem, usually involves the consideration of the following factors :

एक शोध रूपरेखा एक विशेष शोध समस्या के लिए उपयुक्त होती है, जिसमें सामान्यतया निम्नलिखित कारकों पर विचार किया जाता है :

- (a) The means of obtaining information
सूचना प्राप्त करने का साधन
- (b) The availability and skills of the researcher
शोधकर्ता की उपलब्धता और कौशल
- (c) The nature of the problem to be studied
अध्ययन की जाने वाली समस्या की प्रकृति
- (d) The availability of time and money for the research work
शोध कार्य के लिए समय और धन की उपलब्धता

Options :

- (a), (b) and (d)
- 1. ✖ (a), (b) और (d)
- (a), (b) and (c)
- 2. ✖ (a), (b) और (c)
- (a), (b), (c) and (d)
- 3. ✔ (a), (b), (c) और (d)
- (b), (c) and (d)
- 4. ✖ (b), (c) और (d)

Question Number : 10 Question Id : 50939817732 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

SHODHGANGOTRI is :

SHODHGANGOTRI है :

Options :

- Database of articles
लेखों का डेटाबेस
- 1. ✖
- Database of thesis & dissertation
थीसिस और शोध प्रबंध का डेटाबेस
- 2. ✖
- Database of research synopsis
रिसर्च सिनोप्सिस का डेटाबेस
- 3. ✔
- Database of experts
विशेषज्ञों का डेटाबेस
- 4. ✖

Question Number : 11 Question Id : 50939817733 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following statements about random sampling method is *not* true ?

यादृच्छिक न्यादर्श पद्धति के बारे में निम्नलिखित में से क्या सत्य *नहीं* है ?

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

In this methods, each unit has equal chance to be selected.

इस पद्धति में प्रत्येक इकाई के चयनित होने का समान अवसर होता है।

1.

Each sample has equal chance of selection.

2. प्रत्येक प्रतिदर्श के चयन की सम्भावना समान होती है।

It is free from personal prejudices and bias

3. यह व्यक्तिगत पूर्वधारणाओं और पक्षपातों से रहित होता है।

This method is very simple to use

4. यह पद्धति प्रयोग करने में बेहद आसान है।

Question Number : 12 Question Id : 50939817734 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The English word 'Research' derives its origin from :

अंग्रेजी शब्द 'रिसर्च' (शोध) की व्युत्पत्ति है :

Options :

Latin

1. ✖ लैटिन

French

2. ✔ फ्रेंच

German

3. ✖ जर्मन

Italian

4. ✖ इटालियन

Question Number : 13 Question Id : 50939817735 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following approach uses the study of groups to identify general laws that apply to a large group of people ?

इनमें से को-सा दृष्टिकोण लोगों के बड़े समूह पर लागू होने वाले सामान्य नियमों की पहचान करने के लिए 'समूहों के अध्ययन' का उपयोग करता है ?

Options :

Idiographic Approach

1. ✖ इडियोग्राफिक (वस्तुपरक) दृष्टिकोण

Nomothetic Approach

2. ✔ नोमोथेटिक (सिद्धान्तपरक) दृष्टिकोण

Empirical Approach

3. ✖ अनुभवजन्य दृष्टिकोण

Pragmatic Approach

4. ✖ यथार्थवादी दृष्टिकोण

Question Number : 14 Question Id : 50939817736 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the context of Research Process, the following operational steps are taken in certain order :

अनुसंधान प्रक्रिया के संदर्भ में, निम्नलिखित परिचालन चरण एक निश्चित क्रम में उठाए जाते हैं :

- (A) Conceptualising the research design
अनुसंधान अभिकल्प की अवधारणा।
- (B) Formulating a research problem
शोध समस्या का गठन।
- (C) Selecting a sample
प्रतिदर्श का चयन।
- (D) Constructing an instrument for data collection
डेटा संग्रह के लिए अनुसंधान साधन का निर्माण।

Which of the following options represents the correct order ?

निम्नलिखित में से कौन-सा विकल्प सही क्रम का प्रतिनिधित्व करता है ?

Options :

- 1. ✓ B, A, D, C
- 2. ✗ B, D, A, C
- 3. ✗ B, C, A, D
- 4. ✗ B, C, D, A

Question Number : 15 Question Id : 50939817737 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Impact factor of a journal is defined as :

किसी जर्नल के प्रभाव कारक (Impact factor) को इस प्रकार परिभाषित किया गया है :

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

- It is the monthly average number of citations that articles published in the last twelve months in a given journal received
यह किसी दिए गए जर्नल में पिछले बारह महीनों में प्रकाशित लेखों की मासिक औसत उद्धरण संख्या है
- 1.
- It is the yearly average number of citations that articles published in the last four years in a given journal received
यह दी गई पत्रिका में पिछले चार वर्षों में प्रकाशित लेखों की वार्षिक औसत उद्धरण संख्या है
- 2.
- It is the yearly average number of citations that articles published in the last two years in a given journal received
यह किसी दिए गए जर्नल में पिछले दो वर्षों में प्रकाशित लेखों की वार्षिक औसत उद्धरण संख्या है
- 3.
- It is the yearly average number of citations that articles published in the last five years in a given journal received
यह दी गई पत्रिका में पिछले पाँच वर्षों में प्रकाशित लेखों की वार्षिक औसत उद्धरण संख्या है
- 4.

Question Number : 16 Question Id : 50939817738 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The three basic principles of experimental design are :
प्रयोगात्मक योजना के तीन मूलभूत सिद्धान्त हैं :

Options :

- 1. ✖ Replication, randomization and Substitution
रेप्लीकेशन, रैन्डमाइजेशन एवं सब्स्टीट्यूशन
- 2. ✔ Replication, randomization, and local control
रेप्लीकेशन, रैन्डमाइजेशन एवं लोकल कन्ट्रोल
- 3. ✖ Substitution, replication and local control
सब्स्टीट्यूशन, रेप्लीकेशन एवं लोकल कन्ट्रोल
- 4. ✖ Substitution, randomization and local control
सब्स्टीट्यूशन, रैन्डमाइजेशन एवं लोकल कन्ट्रोल

Question Number : 17 Question Id : 50939817739 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Differences in the means of more than two treatments are analysed by :
दो से अधिक उपचारों के माध्य में विभेद का विश्लेषण किया जाता है :

Options :

- 1. ✖ Simple t-test
साधारण टी-परीक्षण
- 2. ✖ Chi square test
काई स्क्वायर परीक्षण
- 3. ✔ F-test
एफ-परीक्षण
- 4. ✖ Paired sample t-test
युग्मित सैम्पल टी-टेस्ट

Question Number : 18 Question Id : 50939817740 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* a method of research ?
निम्नलिखित में से कौन शोध की एक विधि *नहीं* है ?

Options :

- 1. ✖ Survey
सर्वेक्षण
- 2. ✖ Historical
ऐतिहासिकता
- 3. ✔ Observation
अवलोकन
- 4. ✖ Philosophical
दार्शनिकता

Question Number : 19 Question Id : 50939817741 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following graphical presentation is two dimensional ?
निम्न में से कौन आरेखीय प्रस्तुतीकरण दो अक्षीय है ?

Options :

- 1. ✖ Pie chart
पाई चार्ट
- 2. ✖ Bar chart
दण्ड आरेख
- 3. ✔ Histogram
आयत चित्र
- 4. ✖ Box plot
बॉक्स प्लॉट

Question Number : 20 Question Id : 50939817742 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Correlational Research can be classified from the perspectives of :
सह-संबंध अनुसंधान को किस दृष्टिकोण के आधार पर वर्गीकृत किया जा सकता है ?

Options :

- 1. ✖ Applications of the findings of the research study.
शोध अध्ययन के निष्कर्षों के अनुप्रयोग के आधार पर।
- 2. ✔ Objectives of the research study.
शोध अध्ययन के उद्देश्य के आधार पर।
- 3. ✖ Mode of enquiry used in conducting the study.
अध्ययन के संचालन में उपयोग की जाने वाली जांच के तरीके के आधार पर।
- 4. ✖ Outcome of the research.
शोध के परिणाम के आधार पर।

Question Number : 21 Question Id : 50939817743 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A researcher might want to examine the reactions of the general population towards people in wheelchairs. He/She can study their reactions by sitting in a wheelchair himself/herself. Such method of collecting data is known as :
एक शोधकर्ता कुर्चीचेयर में बैठे लोगों के प्रति सामान्य आबादी की प्रतिक्रियाओं की जांच करना चाहता है। वह स्वयं कुर्चीचेयर में बैठकर उनकी प्रतिक्रियाओं का अध्ययन कर सकता है। डेटा एकत्र करने की इस विधि को किस रूप में जाना जाता है ?

Options :

- 1. ✖ Disguised Observation
प्रच्छन्न अवलोकन
- 2. ✔ Participant Observation
प्रतिभागी अवलोकन

Non-Participant Observation

3. ✖ गैर-प्रतिभागी अवलोकन

Self Recording Observation

4. ✖ स्वयं रिकॉर्डिंग अवलोकन

Question Number : 22 Question Id : 50939817744 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is are citation/reference style(s) ?

निम्नलिखित में से कौन उद्धरण/संदर्भ विधि (विधियाँ) है/हैं ?

(A) American Physical Association

अमेरिकन फिजिकल एसोसिएशन

(B) Modern Linguistic Association

मॉडर्न लिंग्विस्टिक एसोसिएशन

(C) Oxford Standard for the Citation of Language Association

ऑक्सफोर्ड स्टैण्डर्ड फॉर द साइटेशन ऑफ लैंग्वेज एसोसिएशन

(D) Vancouver

वैंकूवर

Choose the correct answer from the codes given below :

निम्नलिखित में से कौन-सा सही कूट है :

Options :

(a), (b), (c) and (d)

1. ✖ (a), (b), (c) और (d)

(a), (b) and (c)

2. ✖ (a), (b) और (c)

(a) and (d)

3. ✖ (a) और (d)

(d) only

4. ✔ केवल (d)

Question Number : 23 Question Id : 50939817745 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

One-way ANOVA is used to :

एक-तरफा एनोवा का उपयोग किया जाता है :

Options :

Determine whether there is any statistically significant difference between the means of single independent group before and after intervention

यह निर्धारित करता है कि क्या एक स्वतंत्र समूह में हस्तक्षेप के पहले और बाद

1. ✖ के माध्य (mean) के बीच कोई सांख्यिकीय महत्वपूर्ण अंतर है

Determine whether there are any statistically significant differences between the medians of two or more independent groups

यह निर्धारित करता है कि क्या दो या अधिक स्वतंत्र समूहों के मध्यस्थों के बीच

2. ✖ कोई सांख्यिकीय महत्वपूर्ण अंतर है

Determine whether there are any statistically significant differences between the means of two or more independent/unrelated groups

यह निर्धारित करता है कि क्या दो या अधिक स्वतंत्र/असंबंधित समूहों के माध्य

3. ✔ (mean) के बीच कोई सांख्यिकीय महत्वपूर्ण अंतर है या नहीं

Determine whether there are any statistically significant differences between the squared means of two or more independent group

निर्धारित करता है कि क्या दो या अधिक स्वतंत्र समूहों के वर्ग माध्य (squared

4. ✖ mean) के बीच कोई सांख्यिकीय महत्वपूर्ण अन्तर है या नहीं

Question Number : 24 Question Id : 50939817746 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following principles of experimental design have been enumerated by Professor R. A. Fisher ?

प्रायोगिक डिजाइन के निम्नलिखित सिद्धान्तों में से कौन-कौन से सिद्धान्त प्रोफेसर आर० ए० फिशर द्वारा गिनाए गए हैं ?

- (a) Principle of Revision
संशोधन का सिद्धान्त
- (b) Principle of Replication
प्रतिकृति का सिद्धान्त
- (c) Principle of Randomization
यादृच्छिकीकरण का सिद्धान्त
- (d) Principle of Local Control
स्थानीय नियंत्रण का सिद्धान्त

Choose the correct answer from the codes given below :

नीचे दिए गए कोड में से सही उत्तर चुनें :

Options :

- (a), (b) and (c)
- (a), (b) और (c)

1. ✖

- (a), (b) and (d)
- (a), (b) और (d)

2. ✖

- (b) (c) and (d)
- (b) (c) और (d)

3. ✔

- (a), (c) and (d)
- (a), (c) और (d)

4. ✖

Question Number : 25 Question Id : 50939817747 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Read the statements A and B and choose the correct option :

कथन A और B पढ़ें और सही विकल्प चनें :

Statement A : Exploratory research studies are also termed as formulative research studies.

कथन A : अन्वेषणात्मक शोध अध्ययनों को प्रारंभिक शोध अध्ययन भी कहा जाता है।

Statement B : Exploratory research study is undertaken with the objective either to explore an area where little is known or to investigate the possibilities of undertaking a particular research study.

कथन B : अन्वेषणात्मक शोध अध्ययन का उद्देश्य किसी ऐसे विषय में शोध करना जिसके बारे में बेहद कम जानकारी उपलब्ध हो या किसी खास विषय के बारे में शोध अध्ययन करने की संभावनाओं का पता लगाना होता है।

Options :

- Both the statements are true.
- 1. ✔ दोनों कथन सत्य हैं।

- Both the statements are false.
- 2. ✖ दोनों कथन असत्य हैं।

Statement A is true but B is false.

3. ✖ कथन A सत्य है लेकिन B गलत है।

Statement B is true but A is false.

4. ✖ कथन B सत्य है लेकिन A गलत है।

Question Number : 26 Question Id : 50939817748 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following are the online anti-plagiarism software ?

निम्नलिखित में से कौन-से ऑनलाइन एंटी-प्लेजियरिज्म सॉफ्टवेयर हैं :

- (a) Urkund
उरकुंड
- (b) Overleaf
ओवरलीफ
- (c) Turnitin
टर्नटिन
- (d) Viper
वाईपर

Choose the correct answer from the codes given below :

नीचे दिए गए कोड में से सही उत्तर चुनें :

Options :

- (a), (b) and (c)
- 1. ✖ (a), (b) और (c)
- (a), (b) and (d)
- 2. ✖ (a), (b) और (d)
- (a), (c) and (d)
- 3. ✔ (a), (c) और (d)
- (a) and (c)
- 4. ✖ (a) और (c)

Question Number : 27 Question Id : 50939817749 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Whether a test is one-sided or two-sided depends on :

क्या एक परीक्षण एकतरफा है या दो तरफा है :

Options :

- alternative hypothesis
- 1. ✔ वैकल्पिक परिकल्पना
- null and alternate both
- 2. ✖ शून्य और वैकल्पिक दोनों
- null hypothesis
- 3. ✖ अशक्त परिकल्पना
- either by null or by alternate
- 4. ✖ या तो शून्य या वैकल्पिक द्वारा

Question Number : 28 Question Id : 50939817750 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which measure of dispersion do not depends on all observations ?

फैलाव का कौन सा माप सभी अवलोकनों पर निर्भर नहीं करता है ?

Options :

Root mean & square deviation

1. ✖ मूल माध्य और वर्ग विचलन

Mean deviation

2. ✖ माध्य विचलन

Quartile deviation

3. ✔ चतुर्थक विचलन

Standard deviation

4. ✖ मानक विचलन

Question Number : 29 Question Id : 50939817751 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If r is the simple correlation coefficient, the quantity r^2 is termed as :

यदि r सरल सहसंबंध गुणांक है, तो मात्र r^2 को निम्न के रूप में कहा जाता है :

Options :

Coefficient of alienation

1. ✖ परकीयकरण का गुणांक

Coefficient of variation

2. ✖ भिन्नता का गुणांक

Coefficient of determination

3. ✔ दृढ़ संकल्प का गुणांक

Coefficient of non-determination

4. ✖ गैर-निर्धारण का गुणांक

Question Number : 30 Question Id : 50939817752 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A Scattergram is extremely effective :

एक स्कैटरग्राम अत्यंत प्रभावी है :

Options :

to show visually how two variables are covering

1. ✔ नेत्रहीन दिखाने के लिए कि दो चर कैसे ढकते हैं

in organising the scattered footnotes of the research.

2. ✖ शोध के बिखरे पांवों को व्यवस्थित करने में।

in organising the scattered bibliography of the research.

3. ✖ शोध की बिखरी हुई ग्रंथ सूची के आयोजन में।

in organising the scattered results drawn after the rigorous literature review.

4. ✖ कठोर साहित्य समीक्षा के बाद निकाले गए बिखरे परिणामों को व्यवस्थित करने में।

Question Number : 31 Question Id : 50939817753 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The conclusions/findings of which type of research can *not* be generalized to other situations ?

किस प्रकार के शोध के निष्कर्ष को दूसरी परिस्थितियों में सामान्यीकृत *नहीं* किया जा सकता है ?

Options :

Casual Comparative Research

1. ✖ कारणात्मक तुलनात्मक शोध

Historical Research

2. ✖ ऐतिहासिक शोध

Descriptive Research

3. ✔ विवरणात्मक शोध

Experimental Research

4. ✖ प्रायोगिक शोध

Question Number : 32 Question Id : 50939817754 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which one is called non-probability sampling ?

निम्नलिखित में से कोन गैर-प्रायिकता प्रतिचयन कहा जाता है ?

Options :

Quota sampling

1. ✔ कोटा प्रतिचयन

Cluster sampling

2. ✖ गुच्छ प्रतिचयन

Systematic sampling

3. ✖ सुनियोजित/व्यवस्थित प्रतिचयन

Stratified random sampling

4. ✖ स्तरित यादृच्छिक प्रतिचयन

Question Number : 33 Question Id : 50939817755 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In an experimental design, the dependent variable is :

एक प्रयोगात्मक प्रारूप में निर्भर चर वो होता है जिसे/जिसमें :

Options :

The one that is not manipulated and in which any changes are observed

1. ✔ कोई परिवर्तन/छेड़छाड़ नहीं की जाती और जिसमें होने वाले परिवर्तन की समीक्षा की जाती है।

The one that is manipulated in order to observe any effects on the other

2. ✖ परिवर्तन किया जाता है जिससे दूसरों में होने वाले परिवर्तन की समीक्षा की जाए।

A measure of the extent to which personal values affect research

3. ✖ किस प्रकार व्यक्तिगत मूल्य शोध को प्रभावित करते हैं उसके मापक के रूप में प्रयोग किया जाता है।

An ambiguous concept whose meaning depends on how it is defined
एक अस्पष्ट अवधारणा माना जा सकता है जिसका अर्थ इस पर निर्भर करता है
कि उसे कैसे परिभाषित किया जाए।

4. ✖

Question Number : 34 Question Id : 50939817756 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

When a group of people with defined characteristics are followed up to determine incidence is known as :

घटना को निर्धारित करने के लिए परिभाषित विशेषताओं वाले लोगों के समूह को निम्न प्रकार से जाना जाता है :

Options :

Case series
केस सीरीज

1. ✖

Cohort
कोहोर्ट

2. ✔

Case control
केस नियंत्रण

3. ✖

Experimental
प्रायोगिक

4. ✖

Question Number : 35 Question Id : 50939817757 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the process of conducting research, formulation of hypothesis is followed by :
अनुसंधान संचालन की प्रक्रिया में, उपकल्पना निर्माण का अनुसरण करता है :

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

Statement of objectives
उद्देश्यों का कथन

1.

Collection or data
तथ्यों का संकलन

2.

Analysis of data
तथ्यों का विश्लेषण

3.

Selection of research tools
अनुसंधान यंत्रों का चयन

4.

Question Number : 36 Question Id : 50939817758 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following features are considered as critical in qualitative research ?
निम्नलिखित में से कौन-सी विशेषताएँ गुणात्मक शोध के लिए महत्वपूर्ण मानी जाती हैं ?

Options :

Collecting data with the help of standardized research tools.

1. ✖ मानकित शोध साधनों के के सहयोग से आंकड़ों का संग्रहण

Design sampling with probability sample techniques.

2. ✖ प्रायिकता प्रतिचयन तकनीकों के प्रयोग द्वारा प्रतिचयन प्रारूप का निर्धारण

Collecting data with bottom-up empirical evidence.

3. ✔ ऊर्ध्वगामी आनुभविक साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण

Gathering data with top-down schematic evidence.

4. ✖ शीर्ष-पाद योजनाबद्ध साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण

Question Number : 37 Question Id : 50939817759 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Among 25000 individual in a city, 105 were indentified with Covid-19 positive. Calculate the prevalence of Covid-19 per 1000 population.

एक शहर में 25000 व्यक्तियों में, 105 कोविड-19 सकारात्मक के साथ इडेंट किए गए थे। प्रति 1000 जनसंख्या पर कोविड-19 की व्यापकता की गणना करें।

Options :

1. ✖ 5.2

2. ✔ 4.2

3. ✖ 3.2

4. ✖ 2.2

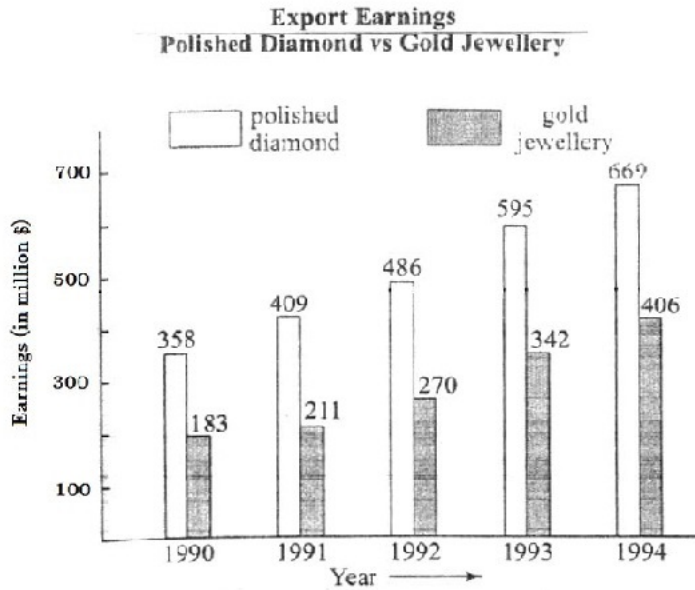
Question Number : 38 Question Id : 50939817760 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The following multiple bar chart shows the export earnings from polished diamonds and gold jewellery. Study the chart and answer the question :

निम्नलिखित बहु बार चार्ट पालिशड हीरे और सोने के आभूषणों से निर्यात आय को दर्शाता है। चार्ट का अध्ययन करें और दिए गए प्रश्न का उत्तर दें :



What was average earning from gold jewellery over 1990 to 1994 ?
1990 से 1994 तक स्वर्ण आभूषण से औसत प्राप्ति क्या थी ?

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. 503.4 Million
503.4 मिलियन
2. 501.6 Million
501.6 मिलियन
3. 500 Million
500 मिलियन
4. 510 Million
510 मिलियन

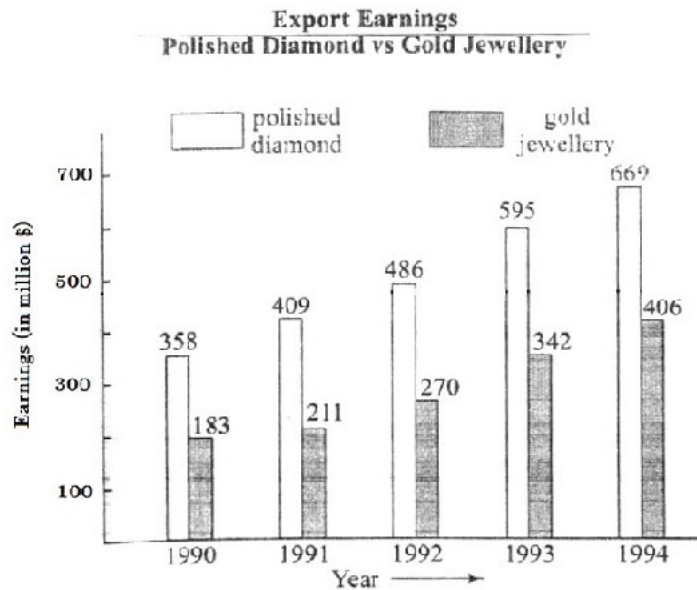
Question Number : 39 Question Id : 50939817761 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The following multiple bar chart shows the export earnings from polished diamonds and gold jewellery. Study the chart and answer the question :

निम्नलिखित बहु बार चार्ट पालिशड हीरे और सोने के आभूषणों से निर्यात आय को दर्शाता है। चार्ट का अध्ययन करें और दिए गए प्रश्न का उत्तर दें :



In which year the difference of export earning of two types of jewellery is maximum ?
किस वर्ष में दो आभूषणों के निर्यात प्राप्ति का अन्तर अधिकतम था ?

Options :

1. ✓ 1994
2. ✗ 1993
3. ✗ 1991
4. ✗ 1992

Question Number : 40 Question Id : 50939817762 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Directions : Study the following table and answer the question given :
Production of different types of scooters in a company

निर्देश : निम्नलिखित तालिका का अध्ययन करें और दिए गए प्रश्न का उत्तर दें :
एक कंपनी में विभिन्न प्रकार के स्कूटर का उत्पादन

Figures in '000

Year	Type of scooters				
	A	B	C	D	E
1992	180	60	84	100	76
1993	210	90	32	80	48
1994	135	30	44	95	85
1995	190	85	69	125	115
1996	260	95	120	80	120
1997	240	140	161	90	185

What was the approximate percentage of production of A-type scooters in 1995 to its total production over the years ?

1995 में A-टाइप के स्कूटरों के उत्पादन का अनुमानित प्रतिशत इसके कुल उत्पादन से कितना था ?

Options :

1. ✗ 20

2. ✓ 15

3. ✗ 23

4. ✗ 40

Subject_&_Area Concerned

Section Id :	509398249
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	60
Number of Questions to be attempted :	60
Section Marks :	180
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	509398276
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 50939817763 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Allene belongs to the point group

Options :

1. ✓ D_{2d}

2. ✗ C_{2v}

3. ✗ C_{2h}

4. ✗ S_{2v}

Question Number : 42 Question Id : 50939817764 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Unique characteristics of nanoparticles are not related to

Options :

1. ✗ Large surface to volume ratio

2. ✓

Bulk forces are very important, while surface forces are not as impo

Plasmon resonance

3. ✖

Quantum confinement

4. ✖

Question Number : 43 Question Id : 50939817765 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which statement related to the cmc of surfactant is not correct?

Options :

cmc of neutral surfactants are lower than ionic

1. ✖

2. ✖

for the same head group, cmc decreases with increasing alkyl chain length

3. ✖

cmc of ionic surfactants decreases with increasing salt concentration

4. ✔

for mixed anionic-cationic surfactants, cmc is much higher compared to pure components

Question Number : 44 Question Id : 50939817766 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The vapor pressures of benzene are 5333 and 53330 Pa at 7.6 and 29.1°C respectively. The heat of vaporization of benzene (kJ/mol) is close to [R = 8.3145 J/mol.K]

Options :

1. ✖ 11.285

2. ✖ 22.528

3. ✔ 33.825

4. ✖ 44.528

Question Number : 45 Question Id : 50939817767 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The potential energy of interaction between two ions in an ionic compound by $U = 1389.4 [z_1 \cdot z_2 / r (\text{\AA})]$ kJ/mol. Assuming that CaCl_2 is a linear molecule with bond length $5.6 \text{\AA}$, the potential energy (kJ/mol) for CaCl_2 is close to

Options :

1. ✓ -1736.7
2. ✗ 1736.7
3. ✗ -3473.4
4. ✗ 3473.4

Question Number : 46 Question Id : 50939817768 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A photochemical reaction was carried out using a monochromatic light (wavelength 400 nm) of intensity 100 W . When the sample was irradiated for 30 min , 0.01 mol of reactant was decomposed. The quantum efficiency (assuming 50% of the light is absorbed) of this reaction was close to

Options :

1. ✗ 0.617
2. ✗ 0.718
3. ✓ 0.817
4. ✗ 0.918

Question Number : 47 Question Id : 50939817769 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A hypothetical element (atomic weight = 300 g/mol) crystallizes in a face-centered cubic (FCC) lattice. The first order X-ray diffraction with wavelength of $5 \text{\AA}$ appears at an angle of 30° . The density of the crystal (in g/cm^3) is close to

Options :

1. ✖ 2

2. ✖ 3

3. ✔ 4

4. ✖ 5

Question Number : 48 Question Id : 50939817770 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The microwave spectrum of H^{35}Cl consists of a series of equally separated by 6.26×10^{11} Hz. The bond length of H^{35}Cl is

Options :

1. ✖ 626 pm

2. ✖ 313 pm

3. ✖ 256 pm

4. ✔ 128 pm

Question Number : 49 Question Id : 50939817771 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The free energy (cal) change when 2 moles of an ideal gas expand pressure of 700 mm Hg to a final pressure of 70 mm Hg at 27°C (g deg.mol) is close to

Options :

1. ✖ -1564 pm

2. ✖ -1964 pm

3. ✖ -2364 pm

4. ✔ -2764 pm

Question Number : 50 Question Id : 50939817772 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The Schrödinger wave equation for H atom is $\Psi_{2s} = \{1/4(2\pi)^{1/2}\} (1 - r/a_0) e^{-r/a_0}$ where a_0 is the Bohr's radius. Let the radial node in 2s be a relation for r in terms of a_0 is

Options :

- 1. ✖ $r = a_0$
- 2. ✔ $r = 2a_0$
- 3. ✖ $r = 4a_0$
- 4. ✖ $r = 8a_0$

Question Number : 51 Question Id : 50939817773 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The K_{sp}° at 298 K and 1 bar for AgCl obtained from a cell, whose is $\text{AgCl(s)} \rightarrow \text{Ag}^+(\text{aq}) + \text{Cl}^-(\text{aq})$ is [given, $E^\circ_{\text{Ag}^+/\text{Ag}} = 0.7992 \text{ V}$ and 0.2222 V , $F = 96485 \text{ C/mol}$, $R = 8.314 \text{ J/mol.K}$] is close to

Options :

- 1. ✖ 1.76×10^{-6}
- 2. ✖ 1.76×10^{-8}
- 3. ✔ 1.76×10^{-10}
- 4. ✖ 1.76×10^{-12}

Question Number : 52 Question Id : 50939817774 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If two reactions 1 and 2 have $A_1 = 5A_2$ and $k_1 = 100 k_2$ at 298 K, the ratio of E_a (in kCal/mol) is close to

Options :

1. ✖ 1.25
2. ✔ 1.77
3. ✖ 2.50
4. ✖ 2.80

Question Number : 53 Question Id : 50939817775 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Xe-F bond length in XeF_4 is 1.94 Å and mass of F = 19.0 amu. The moment of inertia (in amu. Å²) of XeF_4 are

Options :

1. ✖ 143, 185, 286
2. ✖ 185, 185, 370
3. ✔ 143, 143, 286
4. ✖ 143, 286, 429

Question Number : 54 Question Id : 50939817776 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Universal calibration for GPC can be obtained by plotting ($[\eta] = \text{intrinsic viscosity}$, $M = \text{molecular weight}$ and $V_r = \text{retention volume}$)

Options :

1. ✖ $M \text{ vs. } V_r$
2. ✖ $[\eta] \text{ vs. } V_r$

3. ✓ $\text{Log} ([\eta] \cdot M) \text{ vs. } V_r$

4. ✖ $\text{Log} ([\eta] \cdot V_r) \text{ vs. } M$

Question Number : 55 Question Id : 50939817777 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The gas phase rearrangement reaction: vinyl allyl ether $\rightarrow$ allyl acetone
rate constants of 6.015×10^{-5} and $2.971 \times 10^{-3} \text{ s}^{-1}$ at 420 and 470 K, respectively
 ΔH (in kJ/mol) at 420K of this reaction is about

Options :

1. ✓ 124.5

2. ✖ 142.5

3. ✖ 152.4

4. ✖ 154.2

Question Number : 56 Question Id : 50939817778 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify the parent closo-borane for B_6H_{12} from the following borane anions

Options :

1. ✓ $[\text{B}_7\text{H}_7]^{2-}$

2. ✖ $[\text{B}_8\text{H}_8]^{2-}$

3. ✖ $[\text{B}_5\text{H}_5]^{2-}$

4. ✖ $[\text{B}_{10}\text{H}_{14}]$

Question Number : 57 Question Id : 50939817779 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

To make the electron transfer from ligand to metal (LMCT) in $\pi \rightarrow \pi^*$ transition favourable, the metal should have relatively

Options :

1. ☒ high ionization energy
2. ☐ low ionization energy
3. ☐ low density
4. ☐ low melting point

Question Number : 58 Question Id : 50939817780 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The optical rotatory dispersion technique measures the variation of optical rotation of a substance with a change in the

Options :

1. ☒ wavelength of light
2. ☐ intensity of light
3. ☐ concentration of the substance
4. ☐ temperature of the substance

Question Number : 59 Question Id : 50939817781 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many B-B bonds are expected in a borane having styx set 462

Options :

1. ☐ 4
2. ☐ 6
3. ☒ 2

4. ✖ 0

Question Number : 60 Question Id : 50939817782 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The polymerization of Vanadate, Molybdate and Tungstate forming isopoly anions involve

Options :

1. ✖ no change in the co-ordination no. of the concerned metal

2. ✔

change in co-ordination no. of the concerned metal from 4 to 6

3. ✖

change in co-ordination no. of the concerned metal from 6 to 8

4. ✖

change in co-ordination no. of the concerned metal from 4 to 8

Question Number : 61 Question Id : 50939817783 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which among the following represents the correct ground state term for high spin complex exhibiting Jahn-Teller distortion?

Options :

1. ✔ ${}^5T_{2g}$

2. ✖ ${}^1A_{1g}$

3. ✖ ${}^4T_{1g}$

4. ✖ ${}^3A_{2g}$

Question Number : 62 Question Id : 50939817784 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which among the following ligands is expected to exhibit minimum

Options :

1. ✖ CO

2. ✖ CN⁻

3. ✖ CCH⁻

4. ✔ F⁻

Question Number : 63 Question Id : 50939817785 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The Re-Re bond order in the $[\text{Re}_2\text{Cl}_4(\text{PMe}_2\text{Ph})_4]^+$ cluster will be

Options :

1. ✖ 4.0

2. ✔ 3.5

3. ✖ 3.0

4. ✖ 2.5

Question Number : 64 Question Id : 50939817786 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What will be the metal core geometry for the $[\text{Re}_4(\text{CO})_{16}]^{2-}$ cluster?

Options :

1. ✖ Tetrahedron

2. ✔ Butterfly

3. ✖ Square planar

4. ✖ Square pyramid

Question Number : 65 Question Id : 50939817787 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which among the following doesn't serve as a ligand at the active site c

Options :

1. ✖ Histidine
2. ✖ Aspartate
3. ✖ Glutamate
4. ✔ Glycinate

Question Number : 66 Question Id : 50939817788 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which statement among the following is correct regarding inner sph of transition metal complexes?

Options :

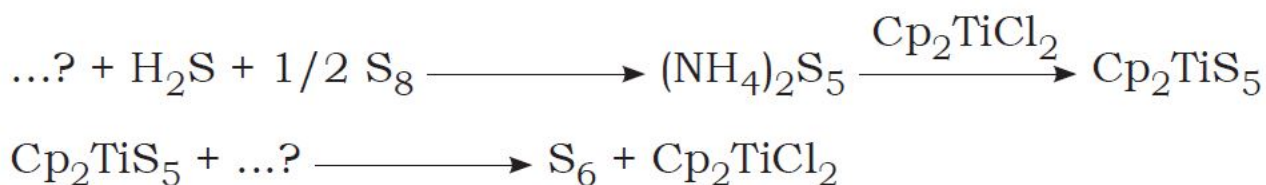
1. ✖ Only bond breaking and making take place
2. ✖ Only electron transfer takes place
3. ✔ Electron transfer as well as bond breaking and making take place
4. ✖ Neither electron transfer nor bond making/bond breaking takes place

Question Number : 67 Question Id : 50939817789 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Predict the missing reactants in the following two step reaction showing the conversion of S_8 into S_6



Options :

1. ✓ NH_3, SCl_2
2. ✗ NH_2OH, S_8
3. ✗ Na_2S_5, NH_3
4. ✗ NH_4Cl, PH_3

Question Number : 68 Question Id : 50939817790 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Mark the correct electron configuration for $[Co(NH_3)_6]^{3+}$ as per the crystal field theory of transition metal complexes

Options :

1. ✓ $a_{1g}^2 t_{1u}^6 e_g^4 t_{2g}^6$
2. ✗ $a_{2g}^2 t_{1u}^4 e_g^4 t_{2g}^6$
3. ✗ $a_{1g}^3 t_{1u}^5 e_g^4 t_{2g}^6$
4. ✗ $a_{1g}^2 t_{1u}^6 e_g^3 t_{2g}^7$

Question Number : 69 Question Id : 50939817791 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which among the following fragments is not the isolobal with BH^- ?

Options :

- 1. ✖ CH
- 2. ✖ Co(CO)_3
- 3. ✖ $\text{Ni}(\eta^5\text{-Cp})$
- 4. ✔ NH

Question Number : 70 Question Id : 50939817792 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify the substance among the following which behaves as an acid:

Options :

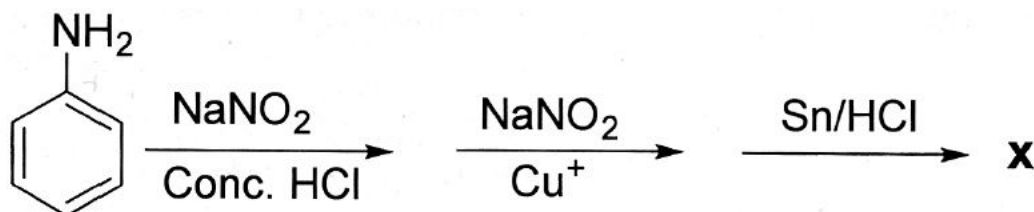
- 1. ✖ HNO_3
- 2. ✖ CH_3COOH
- 3. ✖ NH_2CONH_2
- 4. ✔ $\text{H}_2\text{S}_2\text{O}_7$

Question Number : 71 Question Id : 50939817793 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

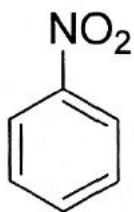
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

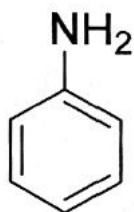
What will be the **x** in the below mentioned reaction sequence?



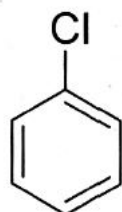
Options :



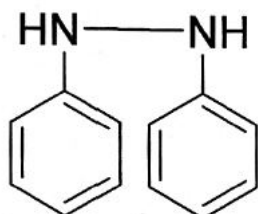
1. ✖



2. ✔



3. ✖



4. ✖

Question Number : 72 Question Id : 50939817794 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following reagents will give effective reduction of 3-hex hexene?

Options :

H₂/Lindlar's catalyst

1. ✖

Na/liq. NH₃

2. ✔

Fe/NaCl

3. ✖

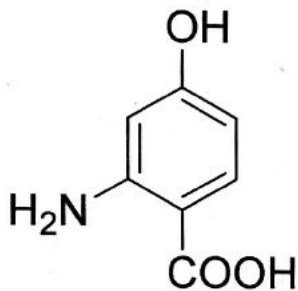
DIBAL-H

4. ✖

Question Number : 73 Question Id : 50939817795 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response

Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes
Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes
Correct Marks : 3 Wrong Marks : 1
Question Label : Multiple Choice Question

What is the IUPAC name of the following compound?

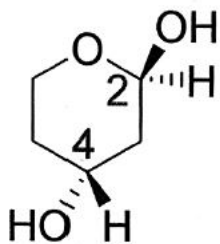


Options :

1. ✓ 2-Amino-4-hydroxybenzoic acid
2. ✖ 6-Amino-4-hydroxybenzoic acid
3. ✖ 3-Amino-4-carboxyphenol
4. ✖ 2-Carboxy-5-hydroxyaniline

Question Number : 74 Question Id : 50939817796 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response
Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes
Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes
Correct Marks : 3 Wrong Marks : 1
Question Label : Multiple Choice Question

Which is the correct assignment of chirality at C2 and C4 of the follo



Options :

1. ✖ 2S, 4S
2. ✓ 2R, 4R
3. ✖ 2S, 4R
4. ✖ 2R, 4S

Question Number : 75 Question Id : 50939817797 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The number of substitution products formed when meta-bromo aniline reacts with KNH_2/NH_3

Options :

1. ✖ 1
2. ✖ 2
3. ✔ 3
4. ✖ 4

Question Number : 76 Question Id : 50939817798 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following statements best describe a synthon?

Options :

1. ✖ A synthetic reagent used in a reaction
2. ✖ A key intermediate in a reaction sequence
3. ✖ A transition state involved in a reaction mechanism
4. ✔ A hypothetical structure that would result in a given reaction if it existed

Question Number : 77 Question Id : 50939817799 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is meant by a reaction going in 94% enantiomeric excess?

Options :

1. ✖ The product contains 94% of one enantiomer and 6% of the other enantiomer
2. ✖ The product contains 94% of one enantiomer and 6% of the other product

3. ✖ The product contains an enantiomer which is 94% pure

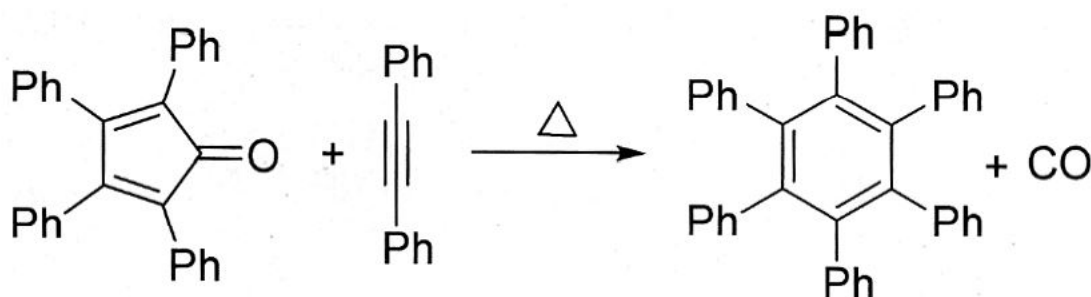
4. ✔ The product contains 97% of one enantiomer and 3% of the other enantiomer

Question Number : 78 Question Id : 50939817800 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The following involves two sequence pericyclic reactions. Which option indicates correctly the type of reaction involved?



Options :

1. ✖ [4+2] cycloaddition + [2+2] cycloreversion

2. ✖ cheletropic reaction + [4+2] cycloaddition

3. ✔ [4+2] cycloaddition + cheletropic reaction

4. ✖ [4+2] cycloaddition + [4+1] cycloreversion

Question Number : 79 Question Id : 50939817801 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many signals does the aldehyde $(\text{CH}_3)_3\text{CCH}_2\text{CHO}$ have in ^1H NMR spectra?

Options :

1. ✖ five ^1H signals and six ^{13}C signals

2. ✔ three ^1H signals and four ^{13}C signals

3. ✖ five ^1H signals and four ^{13}C signals

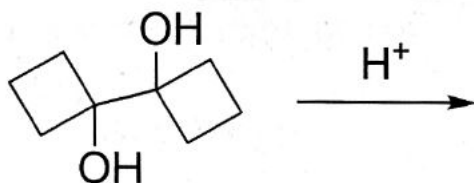
4. ✖ three ^1H signals and six ^{13}C signals

Question Number : 80 Question Id : 50939817802 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

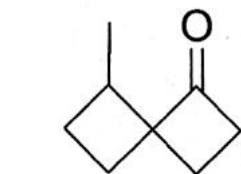
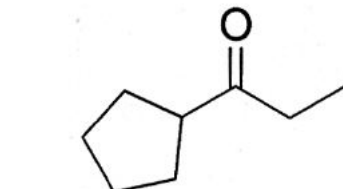
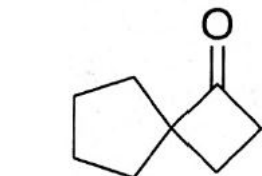
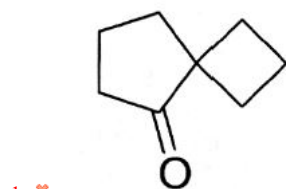
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which is the main product of the following rearrangement of a bicyclic



Options :



Question Number : 81 Question Id : 50939817803 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Robinson annulation is

Options :

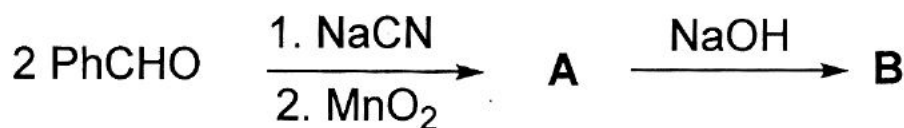
1. ✓ Michael followed by Aldol
2. ✗ Aldol followed by Michael
3. ✗ Mannich followed by Aldol
4. ✗ Aldol followed by Mannich

Question Number : 82 Question Id : 50939817804 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

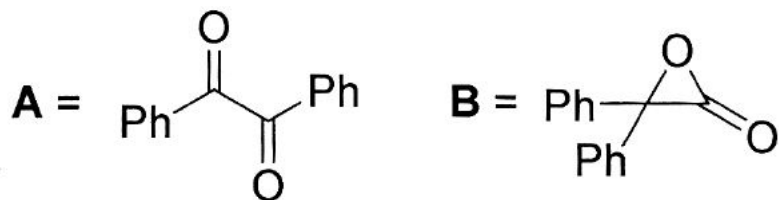
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The major products **A** and **B** in the following reaction sequences are



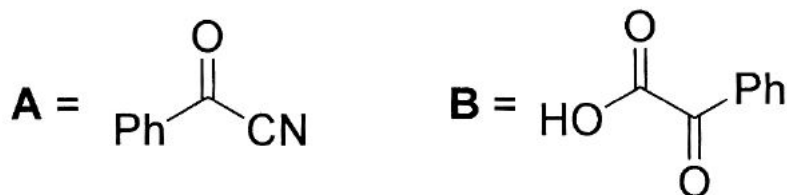
Options :



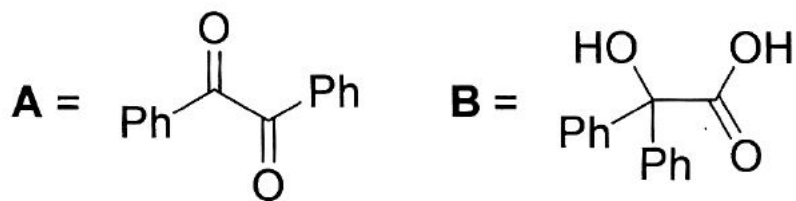
1. ✗



2. ✗



3. ✗



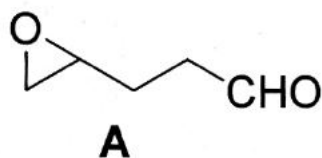
4. ✓

Question Number : 83 Question Id : 50939817805 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

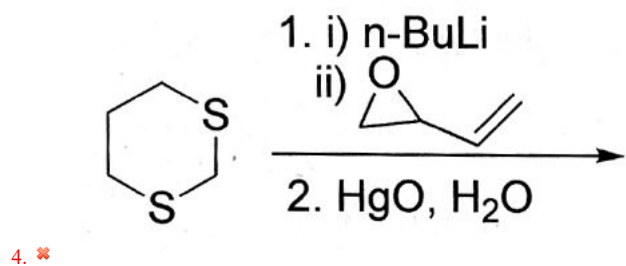
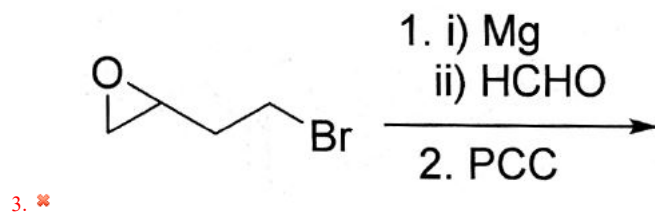
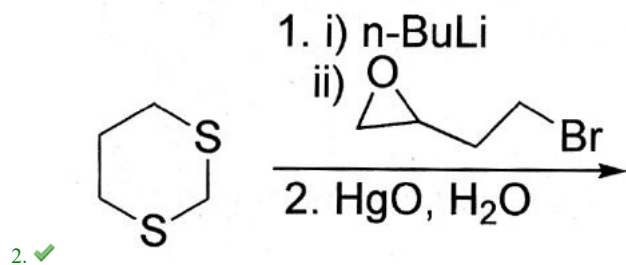
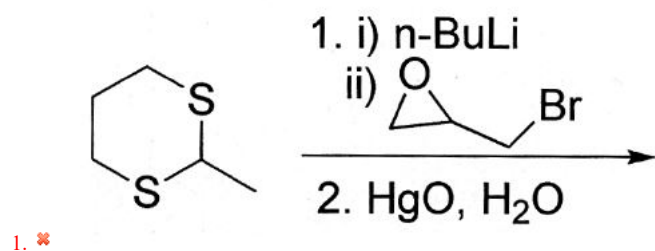
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The correct sequence of reactions for the preparation of **A** is



Options :

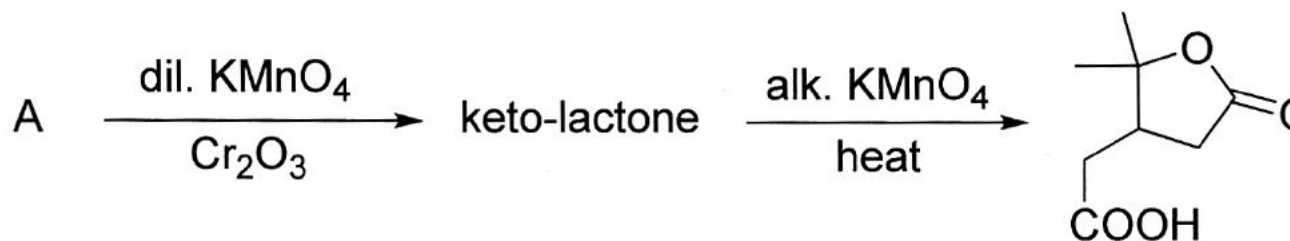


Question Number : 84 Question Id : 50939817806 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

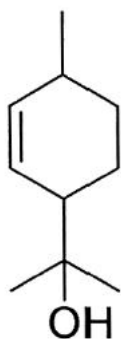
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

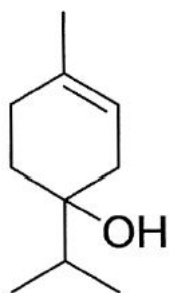
Structure of monoterpene A that undergoes following degradation i



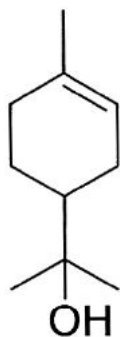
Options :



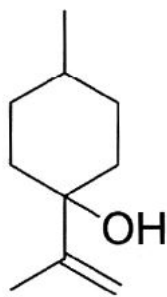
1. ✖



2. ✖



3. ✔



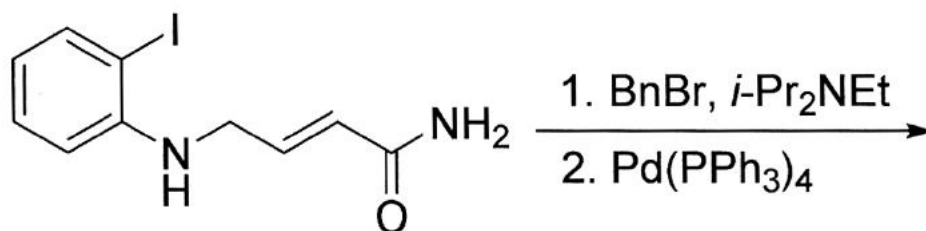
4. ✖

Question Number : 85 Question Id : 50939817807 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

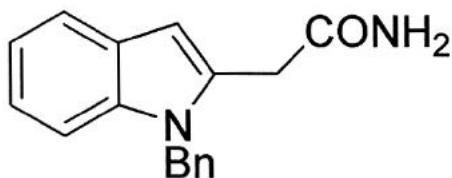
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

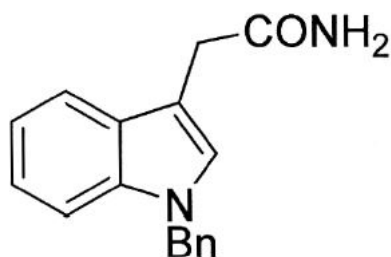
The major product of the following reaction is



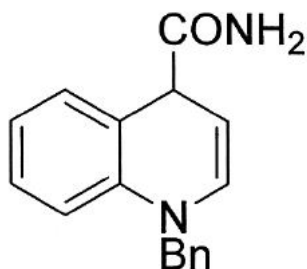
Options :



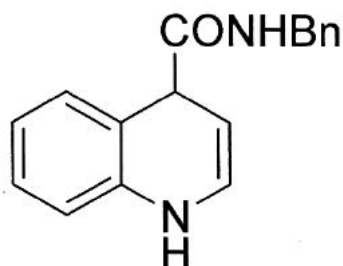
1. ✖



2. ✔



3. ✖



4. ✖

Question Number : 86 Question Id : 50939817808 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Predict the shape of the curve during the amperometric titration of dichromate with Pb^{2+} at an applied potential of 0.0 V (vs. SCE)

Options :

1. ✖ V shaped curve

2. ✖ Linear line

3. ✖ L shaped curve

4. ✔ Reverse L shaped curve

Question Number : 87 Question Id : 50939817809 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Find out y and S_y for the following addition/subtraction

$$y(\pm S_y) = 0.50(\pm 0.02) + 4.10(\pm 0.03) - 1.97(\pm 0.05)$$

Options :

1. ✔ $y(\pm S_y) = 2.63(\pm 0.06)$

2. ✖ $y(\pm S_y) = 0.263(\pm 0.006)$

3. ✖ $y(\pm S_y) = 2.630(\pm 0.060)$

4. ✖ $y(\pm S_y) = 0.2630(\pm 0.06)$

Question Number : 88 Question Id : 50939817810 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

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

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A series of background signals are made in a polarographic experiment with a blank solution. The readings are 0.002, 0.000, 0.008, 0.006 and 0.004. A standard 1.0 ppm analyte solution gives 0.051 μA . What is the limit of detection?

Options :

1. ✖ 2.0 μA
2. ✔ 0.2 ppm
3. ✖ 2.0 mg L^{-1}
4. ✖ 2.00 ppm

Question Number : 89 Question Id : 50939817811 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response

Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

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

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In normal pulse polarography (NPP), when the current is measured

Options :

1. ✔ Just before the detachment of the Hg drop
2. ✖ Immediately after the detachment of the Hg drop
3. ✖ Current is measured two times before and after the detachment of the Hg drop
4. ✖ Continuously measured during the whole life time of the Hg drop

Question Number : 90 Question Id : 50939817812 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response

Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

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

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

H^+ ion concentration in aqueous solutions can be conveniently measured with a glass electrode. Among the parameters given below, which one is measured with the glass electrode?

Options :

1. ✖ Conductance
2. ✖ Current
3. ✔ Potential
4. ✖ Solution resistance

Question Number : 91 Question Id : 50939817813 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The general purpose of using F-test is to

Options :

1. ✔ compare the precision of the two methods
2. ✖ check the accuracy of the method
3. ✖ analyze the proposed hypothesis
4. ✖ validate a new method

Question Number : 92 Question Id : 50939817814 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of Pearson's correlation coefficient, "r" equal to 0.99 indicates

Options :

1. ✖ there is no correlation between x and y
2. ✖ there is a perfect positive correlation between x and y
3. ✖ there is a correlation between x and y with large errors
4. ✔ there is a positive correlation between x and y with negligible error

Question Number : 93 Question Id : 50939817815 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

In the Ag_2S membrane-based S^{2-} ion potentiometric sensors, the m

Options :

The cation from the sample solution

1. ✖

The anion from the sample solution

2. ✖

3. ✔ Ag^+ ion

4. ✖ S^{2-} ion

Question Number : 94 Question Id : 50939817816 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Resolution may be defined as

Options :

The ability to distinguish the analyte among the interferences

1. ✖

The ability to distinguish two different concentrations of an analyte

2. ✖

The ability to distinguish the spectral features into different entities

3. ✔

The speed at which an analyte can be determined

4. ✖

Question Number : 95 Question Id : 50939817817 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Randles-Sevcik equation is

Options :

1. ✖ $i_p = (2.69 \times 10^5)n^{2/3} AD^{1/2} v^{1/2} C$

2. ✔ $i_p = (2.69 \times 10^5)n^{3/2} AD^{1/2} v^{1/2} C$

3. ✖ $i_p = (2.69 \times 10^5) n^{2/3} A D^{2/3} v^{1/2} C$

4. ✖ $i_p = (2.69 \times 10^5) n^{3/2} A D^{3/2} v^{1/2} C$

Question Number : 96 Question Id : 50939817818 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The role of plasticizers in the ion selective membranes is

Options :

1. ✔ to produce flexible and mechanically stable membranes
2. ✖ to increase conductivity of the membrane
3. ✖ to selectively bind with the target analyte
4. ✖ to avoid fouling of membrane by interferences

Question Number : 97 Question Id : 50939817819 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Two points calibration of pH meter is necessary

Options :

1. ✖ to measure very low pH values
2. ✔ to fix the slope as per the Nernst equation
3. ✖ to measure very high pH values
4. ✖ to remove the asymmetry potential

Question Number : 98 Question Id : 50939817820 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

It is necessary to use mono energetic photons in the X-ray spectroscopy, since

Options :

1. ✖ Photons of different energy cannot be produced by the X-ray tubes
2. ✖ Photons of different energy may produce strong Auger process.
3. ✖ to increase the sensitivity of the measurement.
4. ✔ the kinetic energy of the ejected electron depends on the energy of the photons

Question Number : 99 Question Id : 50939817821 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Predict the equilibrium (among the following) which is not generally chromatography

Options :

1. ✖ Partition between gas and liquid
2. ✖ Partition between liquid and bonded surface
3. ✖ Adsorption
4. ✔ Partition between immiscible liquids

Question Number : 100 Question Id : 50939817822 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Among the following mixture of solutions, which one possesses maximum capacity?

Options :

1. ✖ 0.25 M acetic acid and 0.20 M sodium acetate
2. ✖ 0.10 M acetic acid and 0.20 M sodium acetate

3. ✓ 0.20 M acetic acid and 0.20 M sodium acetate

4. ✗ 0.15 M acetic acid and 0.20 M sodium acetate