

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 16th Mar 2022 Shift 1
Subject Name :	882
Creation Date :	2022-03-16 14:21:30
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Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
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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
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RET_Chemistry

Group Number :	1
Group Id :	87408184
Group Maximum Duration :	0
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Show Progress Bar? :	No

Research_Methodology

Section Id :	874081176
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 :	874081218
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 8740819718 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following data collection methods is not normally used in qualitative research ?

निम्नलिखित में से कौन-सी आंकड़ा संग्रहण विधियों का प्रयोग सामान्यतः गुणात्मक शोध में नहीं किया जाता है ?

Options :

- Participant observation
1. ✘ सहभागी अवलोकन
- Focus groups
2. ✘ केंद्रित समूह
- Questionnaire
3. ✔ प्रश्नावली
- Semi-structured interview
4. ✘ अर्द्ध संरचनात्मक साक्षात्कार

Question Number : 2 Question Id : 8740819719 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

When a hypothesis states that there is no difference between two situations, groups, outcomes or the prevalence of a condition, it is called :

एक परिकल्पना जिसमें दो स्थितियों, समूहों, परिणामों या किसी स्थिति की व्यापकता में कोई अंतर नहीं है, तो इसे कहा जाता है :

Options :

- 1. ✘ Alternative hypothesis
वैकल्पिक परिकल्पना
- 2. ✔ Null hypothesis
शून्य परिकल्पना
- 3. ✘ Descriptive hypothesis
वर्णनात्मक परिकल्पना
- 4. ✘ Numerical hypothesis
संख्यात्मक परिकल्पना

Question Number : 3 Question Id : 8740819720 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In which kind of research, analysis of data is an ongoing process during data collection ?

किस प्रकार के शोध में आंकड़ों के संग्रहण के दौरान आंकड़ों का विश्लेषण एक सतत प्रक्रिया होती है ?

Options :

- 1. ✔ Qualitative
गुणात्मक
- 2. ✘ Quantitative
मात्रात्मक
- 3. ✘ Survey
सर्वेक्षण
- 4. ✘ Experimental
प्रयोगात्मक

Question Number : 4 Question Id : 8740819721 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is the main aim of interdisciplinary research ?

अन्तर विषयी शोध का मुख्य उद्देश्य क्या है ?

Options :

1. ✘ To over simplify the problem of research
अनुसंधान समस्या को सरल बनाने के लिए
2. ✔ To bring out the holistic approach to research
अनुसंधान के लिए समग्र दृष्टिकोण लाने के लिए
3. ✘ To create a new trend in research methodology
अनुसंधान पद्धति में नए प्रवृत्ति के निर्माण के लिए
4. ✘ To reduce the emphasis on a single subject in the research domain
अनुसंधान क्षेत्र में किसी एक विषय पर प्रभाव (जोर) को कम करने के लिए

Question Number : 5 Question Id : 8740819722 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following feature is considered as critical in qualitative research ?

गुणात्मक शोध के प्रतिमान में, निम्नलिखित में से कौन-सी योजना को महत्वपूर्ण माना जा सकता है ?

Options :

1. ✘ Collecting data with the help of standardized research tools
मानकीकृत शोध उपकरणों की सहायता से आंकड़ों का संकलन
2. ✘ Design sampling with probability sample techniques
संभाव्यता प्रतिदर्श तकनीक से प्रतिदर्श चयन का अभिकल्प
3. ✔ Collecting data with bottom-up empirical evidence
प्रदत्तों के संकलन में अनुभवजन्य साक्ष्यों का निम्न से उच्च स्तरीयता की ओर उन्मुखता
4. ✘ Gathering data with top-down schematic evidence
उच्च से निम्न व्यवस्थित साक्ष्यों सहित प्रदत्त संग्रहण

Question Number : 6 Question Id : 8740819723 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

'Parameter' indicates the characteristics of which of the following ?

‘प्राचल’ निम्नलिखित में से किसकी विशेषताओं को दर्शाता है ?

Options :

1. ✓ Population
जनसंख्या
2. ✗ Sample
प्रतिदर्श
3. ✗ Statistics
प्रतिदर्शज
4. ✗ Statistical measurements
सांख्यिकीय माप

Question Number : 7 Question Id : 8740819724 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which one of the following is an indication of the quality of a research Journal ?

निम्नलिखित में से कौन-सा एक शोध पत्रिका की गुणवत्ता का सूचक है ?

Options :

1. ✗ h-index
एच-सूचकांक
2. ✗ g-index
जी-सूचकांक
3. ✗ i 10-index
आई 10-सूचकांक
4. ✓ Impact factor
प्रभाव कारक

Question Number : 8 Question Id : 8740819725 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The sampling technique based on referral system of respondents is known as :

उत्तरदाताओं के सन्दर्भ प्रणाली पर आधारित प्रतिचयन तकनीक को के रूप में जाना जाता है :

Options :

1. ✘ Convenience Sampling
सुविधा प्रतिचयन
2. ✔ Snowball Sampling
स्नोबॉल प्रतिचयन
3. ✘ Cluster Sampling
गुच्छ प्रतिचयन
4. ✘ Stratified Sampling
स्तरीकृत प्रतिचयन

Question Number : 9 Question Id : 8740819726 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is the first stage of a systematic review of literature ?

व्यवस्थित साहित्य समीक्षा का पहला चरण क्या है ?

Options :

1. ✘ Assess the relevance of each study to the research question(s)
अनुसंधान प्रश्न (प्रश्नों) के लिए प्रत्येक अध्ययन की प्रासंगिकता का आँकलन
2. ✔ Define the purpose and scope of the review
समीक्षा के उद्देश्य और दायरे की परिभाषा
3. ✘ Appraise the quality of studies from the previous step
पिछले चरण के लेखों (अध्ययन) से गुणवत्ता का मूल्यांकन

Survey all of the literature contained within a single library

4. ✘ एक ही पुस्तकालय में निहित सभी साहित्य का सर्वेक्षण

Question Number : 10 Question Id : 8740819727 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What does it mean to operationalize a variable for empirical research ?

अनुभवजन्य अनुसंधान के लिए एक चर को परिचालित करने का क्या अर्थ है ?

Options :

Defining variables into measurable factors

1. ✔ चरों को मापने योग्य कारकों में परिभाषित करना

Describing which variable will be operational

2. ✘ वर्णित करना कि कौन-से चर परिचालित होंगे

Describing the tools of research

3. ✘ अनुसंधान के साधनों का वर्णन करना

Describing the criteria of selection of elements in sample

4. ✘ प्रतिदर्श में इकाइयों के चयन के मानदंड का वर्णन करना

Question Number : 11 Question Id : 8740819728 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

ANOVA is used to calculate :

एनोवा (ANOVA) का उपयोग किया जाता है :

Options :

The difference between two treatments effect

1. ✘ दो उपचार प्रभावों के बीच के अंतर के लिए

The difference among more than two treatments effect

2. ✔ दो से अधिक उपचार प्रभावों के बीच के अंतर के लिए

The association between two variables

3. ✘ दो चरों के बीच संबंध के लिए

The correlation between two variables

4. ✖ दो चरों के बीच सहसम्बन्ध के लिए

Question Number : 12 Question Id : 8740819729 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

..... are errors that can be attributed to sources other than sampling, and they can be random or non-random.

..... ऐसी त्रुटियाँ हैं जिन्हें प्रतिचयन के अलावा अन्य स्रोतों के लिए जिम्मेदार ठहराया जा सकता है, और वे यादृच्छिक या गैर-यादृच्छिक हो सकते हैं।

Options :

1. ✖ Random sampling error
यादृच्छिक प्रतिचयन त्रुटि

2. ✖ Non-response error
गैर-प्रतिक्रिया त्रुटि

3. ✔ Non-sampling error
गैर-प्रतिचयन त्रुटि

4. ✖ Response error
प्रतिक्रिया त्रुटि

Question Number : 13 Question Id : 8740819730 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is *not* a type of non-probability sampling ?

निम्न में से कौन-सा गैर-संभाव्यता प्रतिचयन का एक प्रकार *नहीं* है ?

Options :

1. ✖ Quota sampling
कोटा प्रतिचयन

2. ✖ Snowball sampling
स्नो-बॉल प्रतिचयन

Cluster sampling
3. ✓ गुच्छ प्रतिचयन

Convenience sampling
4. ✗ सुविधा प्रतिचयन

Question Number : 14 Question Id : 8740819731 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Idea generation by two or more people thinking as freely as possible is formally known as :

दो या दो से अधिक लोगों द्वारा यथासंभव स्वतंत्र रूप से विचार की उत्पत्ति औपचारिक रूप से किस प्रकार जाना जाता है ?

Options :

Gap analysis
1. ✗ अंतराल विश्लेषण

Forced relationship
2. ✗ बलकृत संबंध

Brainstorming
3. ✓ विचारावेश (ब्रेन-स्टॉर्मिंग)

The learning curve
4. ✗ सीखने की अवस्था

Question Number : 15 Question Id : 8740819732 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In research terminology the extraneous variable can be described as

शोध शब्दावली में बाहरी चर को इस प्रकार वर्णित किया जा सकता है :

Options :

Linking the independent and dependent variables
1. ✗ स्वतंत्र और आश्रित चरों को जोड़ना

Several factors operating in a real-life situation that is not measured in the study may affect changes in the dependent variable

वास्तविक जीवन की स्थिति में काम करने वाले कई कारक जिन्हें अध्ययन में मापा नहीं जाता है, वे आश्रित चर में परिवर्तन को प्रभावित कर सकते हैं

2. ✓

The outcome or change(s) brought about by the introduction of an independent variable

परिणाम या परिवर्तन (परिवर्तनों) को एक स्वतंत्र चर की शुरुआत के द्वारा लाए जाते हैं

3. ✘

The cause responsible for bringing about change(s) in a situation

4. ✘ किसी स्थिति में परिवर्तन (परिवर्तनों) को लाने के लिए जिम्मेदार कारण

Question Number : 16 Question Id : 8740819733 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is meant by a "spurious" relationship between two variables ?

दो चरों के बीच "मिथ्या संबंध" का क्या तात्पर्य है ?

Options :

One that is so ridiculously illogical it cannot possibly be true

1. ✘ यह इतना हास्यास्पद रूप से अतार्किक है कि यह सच नहीं हो सकता

An apparent relationship that is so curious it demands further attention

2. ✘ एक स्पष्ट संबंध जो इतना निराला है कि वह और ध्यान देने की मांग करता है

A relationship that appears to be true because each variable is related to a third one

3. ✓ एक संबंध जो सत्य प्रतीत होता है क्योंकि प्रत्येक चर एक तीसरे चर से संबंधित है

One that produces a perfect negative correlation on a scatter diagram

4. ✘ एक जो प्रकीर्ण आरेख (विक्षेप चित्र) पर एक पूर्ण ऋणात्मक सहसंबंध उत्पन्न करता है

Question Number : 17 Question Id : 8740819734 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

First step of research is :
शोध का प्रथम चरण है :

Options :

1. ✖ Designing the research
शोध की रूपरेखा तैयार करना
2. ✖ Data Collection
आँकड़ा एकत्रीकरण
3. ✔ Identification of the research problem
शोध समस्या की पहचान
4. ✖ Analysis of data
आँकड़ों का विश्लेषण

Question Number : 18 Question Id : 8740819735 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which one of the following is *not correct* about hypothesis ?

परिकल्पना के बारे में निम्नलिखित में से कौन सत्य *नहीं* है ?

Options :

1. ✖ A good hypothesis is generally simple
एक अच्छी परिकल्पना सामान्यतया सरल होती है
2. ✔ It is necessary that a hypothesis must never be capable of 'being proved' or 'disproved'
यह आवश्यक है कि एक परिकल्पना कभी भी 'साबित हो सकने' या 'साबित न हो सकने' योग्य नहीं हो
3. ✖ Hypothesis provides a right direction to a research
परिकल्पना एक शोध को सही दिशा प्रदान करती है
4. ✖ In empirical research, formulation of hypothesis is an essential component of the research design
अनुभवजन्य शोध में, परिकल्पना का निर्माण शोध की रूपरेखा का एक आवश्यक अवयव है

Question Number : 19 Question Id : 8740819736 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A researcher has obtained a set of data having values 1, 4, 5, 4, 6, 4, 8, 4, 9, 3, 2 find out the mode :

एक शोधकर्ता ने 1, 4, 5, 4, 6, 4, 8, 4, 9, 3, 2 के मान वाले आंकड़ों का एक समुच्चय प्राप्त किया है, बहुलक का पता लगाएँ :

Options :

1. ✖ 6

2. ✖ 5

3. ✔ 4

4. ✖ 3

Question Number : 20 Question Id : 8740819737 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How to judge the depth of any research ?

किसी भी शोध की गहराई को कैसे आंका जाता है ?

Options :

By research title
1. ✖ शोध शीर्षक के अनुसार

By research duration
2. ✖ शोध अवधि के अनुसार

By research objectives
3. ✔ शोध उद्देश्यों के अनुसार

By total expenditure on research
4. ✖ शोध पर कुल व्यय द्वारा

Question Number : 21 Question Id : 8740819738 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which among the following is *not* related to qualitative research ?

निम्नलिखित में से कौन गुणात्मक अनुसंधान से संबंधित नहीं है ?

Options :

1. ✖ Thematic analysis
विषयगत विश्लेषण
2. ✖ Case Study
वृत्त अध्ययन (केस स्टडी)
3. ✖ Discourse analysis
प्रेक्षित विश्लेषण
4. ✔ Survey method
सर्वेक्षण विधि

Question Number : 22 Question Id : 8740819739 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Willingness of study participants to participate in the study is obtained by :

शोध अध्ययन में भाग लेने के लिए अध्ययन प्रतिभागियों की इच्छा किसके द्वारा प्राप्त की जाती है :

Options :

1. ✖ Willingness is not necessary
इच्छा जरूरी नहीं है
2. ✔ Informed consent
बोधित सहमति (इन्फोर्मड कन्सेंट)
3. ✖ Oral commitment is sufficient
मौखिक प्रतिबद्धता पर्याप्त है
4. ✖ Copyright
कॉपीराइट

Question Number : 23 Question Id : 8740819740 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is not a referencing style ?

निम्नलिखित में से कौन एक संदर्भ शैली नहीं है ?

Options :

1. ✘ Vancouver
वैंकूवर
2. ✘ APA
एपीए
3. ✘ Chicago
शिकागो
4. ✔ Index Medicus
इंडेक्स मेडिकस

Question Number : 24 Question Id : 8740819741 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Sensitivity of a test measures :

परीक्षण उपायों की संवेदनशीलता मापता है :

Options :

1. ✔ True positives
सत्य सकारात्मक
2. ✘ True negatives
सत्य नकारात्मक
3. ✘ False positives
मिथ्या सकारात्मक
4. ✘ False negatives
मिथ्या नकारात्मक

Question Number : 25 Question Id : 8740819742 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Type-II Error occurs if :

टाइप-II त्रुटि तब होती है यदि :

Options :

1. ✘ The null hypothesis is rejected when it is true
शून्य परिकल्पना सत्य होने पर भी अस्वीकृत की जाती है
2. ✔ The null hypothesis is accepted even though it is false
शून्य परिकल्पना को असत्य होने पर भी स्वीकार किया जाता है
3. ✘ Both the null hypothesis as well as alternate hypothesis are rejected
शून्य परिकल्पना और वैकल्पिक परिकल्पना दोनों अस्वीकृत कर दी जाती हैं
4. ✘ The null hypothesis is not rejected when it is true
शून्य परिकल्पना सत्य होने पर भी अस्वीकृत नहीं होती है

Question Number : 26 Question Id : 8740819743 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

When the data set contains too many extreme values, the most representative average value is ?

जब आंकड़े के समुच्चय (डेटा सेट) में बहुत अधिक चरम मान होते हैं, तो सबसे अधिक प्रतिनिधि औसत मान होता है :

Options :

1. ✘ Mean
माध्य
2. ✔ Median
माध्यिका
3. ✘ Mode
बहुलक
4. ✘ Variance
विचरण

Question Number : 27 Question Id : 8740819744 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A researcher wishing to draw a sample from sequentially numbered houses uses a random starting point and then selects every 6th houses, she/he has thus drawn a sample.

एक शोधकर्ता जो अनुक्रमिक रूप से गिने घरों से एक नमूना लेना चाहता है, एक यादृच्छिक प्रारंभिक बिंदु का उपयोग करता है और फिर प्रत्येक 6 वें घर का चयन करता है, इस प्रकार उसने एक नमूना लिया।

Options :

- 1. ✘ Sequential
अनुक्रमिक
- 2. ✔ Systematic
व्यवस्थित
- 3. ✘ Simple random
सरल यादृच्छिक
- 4. ✘ Cluster
समूह (गुच्छ)

Question Number : 28 Question Id : 8740819745 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Randomized clinical trials can be best described as :

यादृच्छिक नैदानिक परीक्षणों को सर्वोत्तम रूप में वर्णित किया जा सकता है :

Options :

- 1. ✔ Experimental studies
प्रायोगिक अध्ययन
- 2. ✘ Analytical studies
विश्लेषणात्मक अध्ययन
- 3. ✘ Observational studies
अवलोकन संबंधी अध्ययन

Descriptive studies

4. ✖ वर्णनात्मक अध्ययन

Question Number : 29 Question Id : 8740819746 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Weight is to the scale of measurement as political affiliation is to the scale of measurement.

वजन पैमाने पर है तो राजनीतिक संबद्धता पैमाने पर है।

Options :

1. ✖ ratio; ordinal
अनुपात; क्रमसूचक
2. ✔ ratio; nominal
अनुपात; नामित
3. ✖ interval; nominal
अंतराल; नामित
4. ✖ ordinal; ratio
क्रमसूचक; अनुपात

Question Number : 30 Question Id : 8740819747 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

When alpha is 0.05, this means that :

जब अल्फा 0.05 है, तो इसका मतलब है कि :

Options :

1. ✖ the probability of a Type II error is 0.95
टाइप II त्रुटि की संभावना 0.95 है
2. ✖ the probability of a Type II error is 0.05
टाइप II त्रुटि की संभावना 0.05 है

the probability of a Type I error is 0.95

3. ✘ टाइप I त्रुटि की संभावना 0.95 है

the probability of a Type I error is 0.05

4. ✔ टाइप I त्रुटि की संभावना 0.05 है

Question Number : 31 Question Id : 8740819748 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Reliability of measurement means :

माप की विश्वसनीयता का अर्थ है :

Options :

The method of measurement produce the same results when repeated

1. ✔ माप की विधि दोहराए जाने पर वही परिणाम उत्पन्न करती है

The different methods of measurement on different materials produce the same results

2. ✘ विभिन्न सामग्रियों पर माप के विभिन्न तरीके एक ही परिणाम उत्पन्न करते हैं

The methods of measurement produce different results when repeated

3. ✘ माप की विधि दोहराए जाने पर अलग-अलग परिणाम देती है

The same methods of measurement on different materials produce the same result

4. ✘ विभिन्न सामग्रियों पर माप के समान तरीके समान परिणाम उत्पन्न करते हैं

Question Number : 32 Question Id : 8740819749 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If you had a z-score of 2.33 this would tell you that :

यदि आपके पास 2.33 का z-स्कोर था, तो यह आपके बताएगा कि :

Options :

Your score was 2.33 standard deviations above the mean

1. ✔ आपका स्कोर माध्य से 2.33 मानक विचलन ज्यादा था

Your score was 2.33 standard deviations below the mean

2. ✘ आपका स्कोर माध्य से 2.33 मानक विचलन कम था

3. ✖ There was a probability of 2.33 of obtaining a score greater than your score
आपका स्कोर से अधिक z-स्कोर प्राप्त करने की 2.33 संभावना थी

4. ✖ There was a probability of 2.33 of obtaining a score less than your score
आपका स्कोर से कम z-स्कोर प्राप्त करने की 2.33 संभावना थी

Question Number : 33 Question Id : 8740819750 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Sample means are :

प्रतिदर्श माध्य हैं :

Options :

1. ✖ Point estimates of sample means
प्रतिदर्श माध्य का बिन्दु आंकलन
2. ✖ Interval estimates of population means
जनसंख्या माध्य का अंतराल आंकलन
3. ✖ Interval estimates of sample means
प्रतिदर्श माध्य का अंतराल आंकलन
4. ✔ Point estimates of population means
जनसंख्या माध्य का बिन्दु आंकलन

Question Number : 34 Question Id : 8740819751 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Field Study is related to :

क्षेत्र अध्ययन का संबंध किससे है ?

Options :

1. ✔ Real life situation
वास्तविक जीवन की स्थिति

Experimental situation

2. ✖ प्रायोगिक स्थिति

Laboratory situation

3. ✖ प्रयोगशाला की स्थिति

Simulation situation

4. ✖ सिमुलेशन स्थिति

Question Number : 35 Question Id : 8740819752 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following software is a reference manager ?

निम्नलिखित में से कौन-सा सॉफ्टवेयर एक संदर्भ प्रबंधक है ?

Options :

ADMB

1. ✖ एडीएमबी

Chronux

2. ✖ क्रोनक्स

DAP

3. ✖ डीएपी

Endnote

4. ✔ एंडनोट

Question Number : 36 Question Id : 8740819753 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is a plagiarism checking tool ?

निम्नलिखित में से कौन-सा साहित्यिक चोरी जाँच उपकरण है ?

Options :

ORCID

1. ✖ ऑर्किड

iThenticate
2. ✓ आईथेंटिकेट

Publon
3. ✘ पब्लोन

Scopus
4. ✘ स्कोपस

Question Number : 37 Question Id : 8740819754 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The most common structure of a research article in scientific journals is :

वैज्ञानिक पत्रिकाओं में एक शोध लेख की सबसे आम संरचना है :

Options :

1. ✘ Introduction, Summary, Results & Discussion, Methodology, Conclusion, References
परिचय; सारांश; परिणाम और चर्चा; शोध प्राविधि; निष्कर्ष; संदर्भ
2. ✘ Summary, Introduction, Results & Discussion, Conclusion, Methodology, References
सारांश; परिचय; परिणाम और चर्चा; निष्कर्ष; शोध प्राविधि; संदर्भ
3. ✓ Introduction, Methodology, Results & Discussion, Conclusion, References
परिचय; शोध प्राविधि; परिणाम और चर्चा; निष्कर्ष; संदर्भ
4. ✘ Introduction, Summary, Methodology, Results & Discussion, Conclusion
परिचय; सारांश; शोध प्राविधि; परिणाम और चर्चा; निष्कर्ष

Question Number : 38 Question Id : 8740819755 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A measure of symmetry or asymmetry of data distribution is called :

आंकड़ा (समंक्र) वितरण की समरूपता या विषमता के माप को कहा जाता है :

Options :

1. ✓ Skewness
तिरछापन (विषमता)

2. ✘ Kurtosis
कुटोसिस (कुक्कुद्रता)

3. ✘ Mean
माध्य

4. ✘ Median
माध्यिका

Question Number : 39 Question Id : 8740819756 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 : No

Correct Marks : 3 Wrong Marks : 1

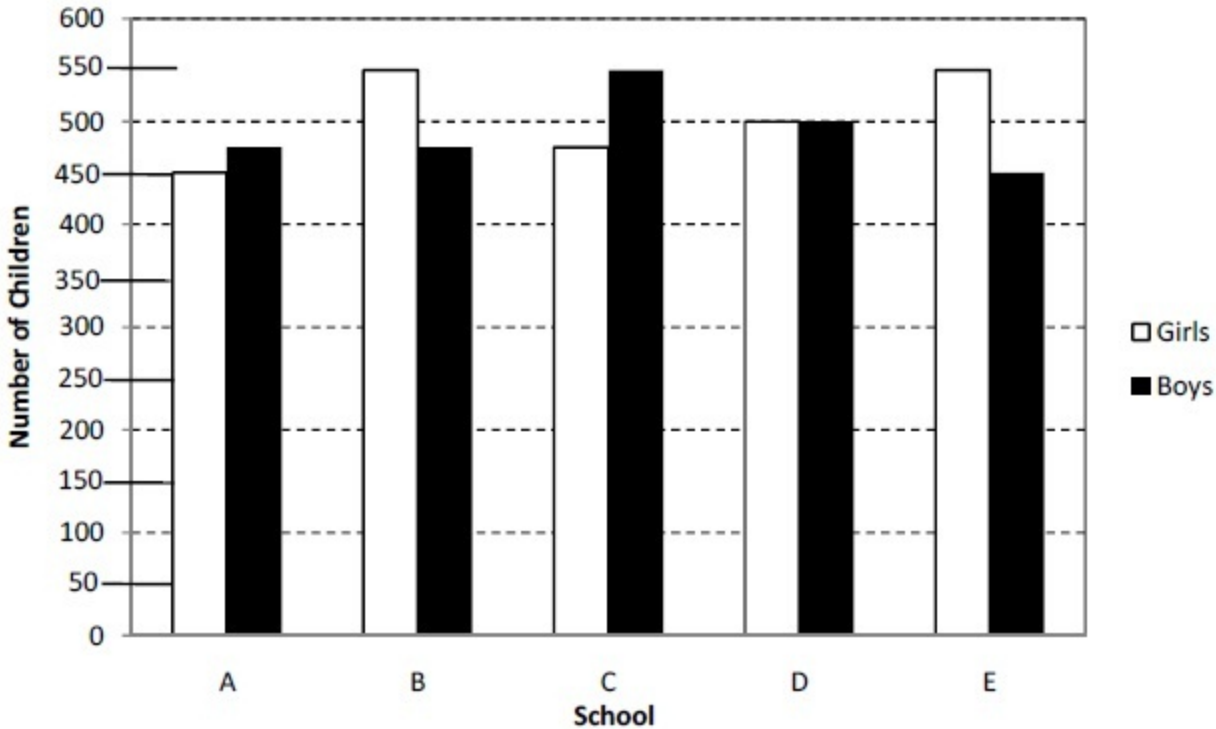
Question Label : Multiple Choice Question

Study the given graph and answer the question.

नीचे दिये गये रेखाचित्र का अध्ययन करें और प्रश्न का उत्तर दीजिये।

Number of Girls and Boys participating in a Rally from Five Different Schools :

पाँच अलग-अलग स्कूलों से रैली में भाग लेने वाली लड़कियाँ और लड़कों की संख्या :



What is the total number of girls participating in the rally from schools A and C together ?

स्कूल A और स्कूल C से रैली में भाग लेने वाली लड़कियों की कुल संख्या कितनी है ?

Options :

1. ✖ 825
2. ✖ 875
3. ✖ 950
4. ✔ 925

Question Number : 40 Question Id : 8740819757 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 : No

Correct Marks : 3 Wrong Marks : 1

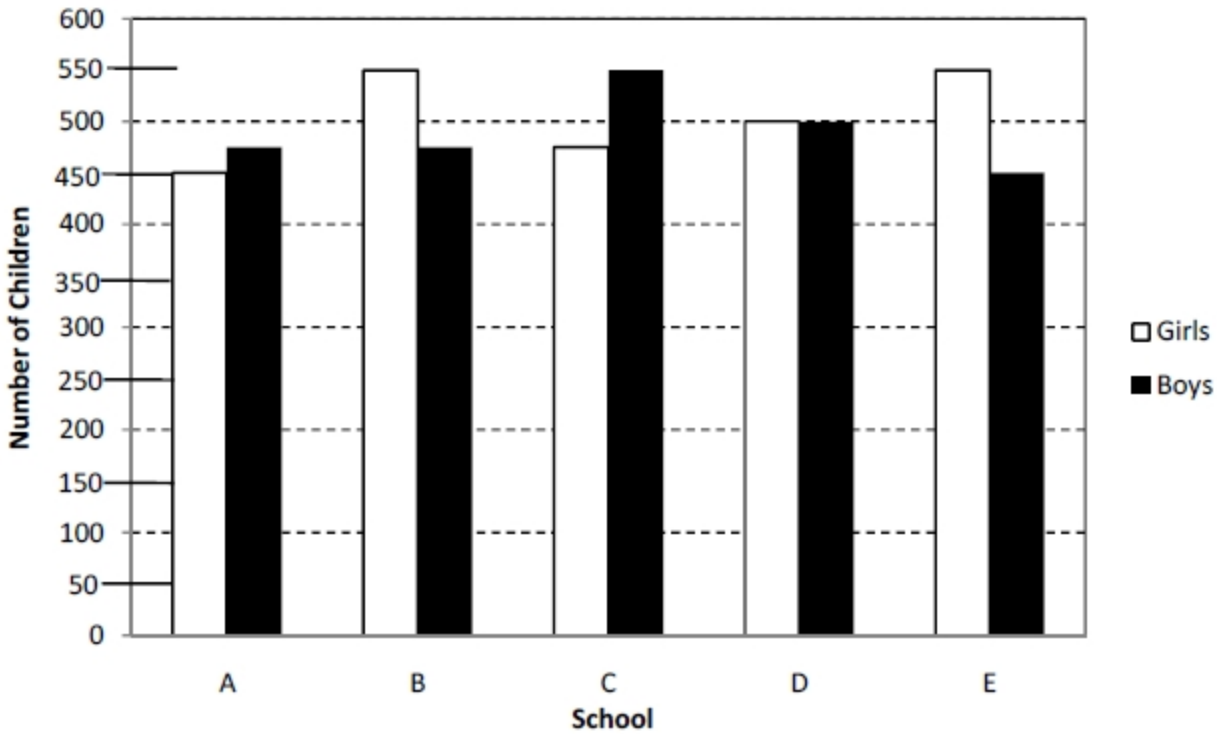
Question Label : Multiple Choice Question

Study the following given graph and answer the question.

नीचे दिये गये रेखाचित्र का अध्ययन करें और प्रश्न का उत्तर दीजिये।

Number of Girls and Boys participating in a Rally from Five Different Schools :

पाँच अलग-अलग स्कूलों से रैली में भाग लेने वाली लड़कियाँ और लड़कों की संख्या :



What is the average number of boys participating in the rally from all the schools together ?

सभी स्कूलों से मिलाकर रैली में भाग लेने वाले लड़कों की औसत संख्या कितनी है ?

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

Options :

1. 500
2. 480
3. 525
4. 520

Subject_&_Area Concerned

Section Id :	874081177
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 :	874081219
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 8740819758 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Two points calibration procedure is required in the calibration of a pH meter to

Options :

1. Fix the value of the slope as per the Nernst equation
2. Optimize the asymmetry potential
3. Avoid the alkali error and acidic error
4. Measure very low or high pH values

Question Number : 42 Question Id : 8740819759 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What is the generally used inner filling solution in glass membrane electrodes while measuring the pH of a solution ?

Options :

- ✘ 0.1 M NaOH
- ✘ 0.1 M KCl
- ✔ 0.1 M HCl
- ✘ 0.1 M pH 7.0 buffer solution

Question Number : 43 Question Id : 8740819760 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The correct order of acceptor ability of given tertiary phosphine ligands is :

Options :

- ✘ $\text{PMe}_3 > \text{P(OMe)}_3 > \text{P(OPh)}_3 > \text{PPh}_3 > \text{PF}_3$
- ✘ $\text{PF}_3 > \text{PMe}_3 > \text{P(OPh)}_3 > \text{PPh}_3 > \text{P(OMe)}_3$
- ✘ $\text{PF}_3 > \text{P(OPh)}_3 > \text{PMe}_3 > \text{PPh}_3 > \text{P(OMe)}_3$
- ✔ $\text{PF}_3 > \text{P(OPh)}_3 > \text{P(OMe)}_3 > \text{PPh}_3 > \text{PMe}_3$

Question Number : 44 Question Id : 8740819761 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify the correct statement about myoglobin :

Options :

- ✘ It is a protein with molecular weight of about 50 kDa.

2. ✓ It contains Fe(II) in high spin state.

3. ✗ It is an electron carrier.

4. ✗ It contains four polypeptide chains.

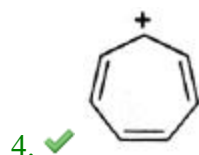
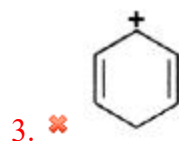
Question Number : 45 Question Id : 8740819762 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following carbocations would be the most stable :

Options :

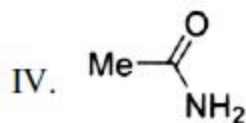
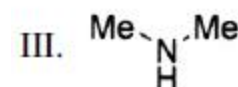
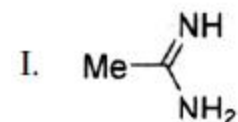


Question Number : 46 Question Id : 8740819763 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The correct order of basicity of the following compounds is :



Options :

1. ✘ II > I > III > IV
2. ✔ I > III > II > IV
3. ✘ III > I > II > IV
4. ✘ I > II > III > IV

Question Number : 47 Question Id : 8740819764 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

At infinite dilution the conductance of NH_4Br , KOH and KBr at 298 K is 151, 271 and $151 \text{ ohm}^{-1} \text{ cm}^2 \text{ g eqvt}^{-1}$ respectively. If the equivalent conductance of NH_4OH at 0.01 N concentrations at 298 K is $27.1 \text{ ohm}^{-1} \text{ cm}^2 \text{ g eqvt}^{-1}$, the degree of dissociation of NH_4OH would be :

Options :

1. ✔ 0.10
2. ✘ 0.01
3. ✘ 0.001
4. ✘ 1.00

Question Number : 48 Question Id : 8740819765 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If Raman shift is negative then spectrum will produce :

Options :

1. ✘ Stoke's line
2. ✔ Antistoke's line

3. ✖ Rayleigh line

4. ✖ Both Stoke's and Antistoke's line

Question Number : 49 Question Id : 8740819766 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The value of Pearson's correlation coefficient "r" equal to 1 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 correlation between x and y with negligible error

Question Number : 50 Question Id : 8740819767 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Plasticizers are added during the preparation of membranes for ion selective electrodes ...

Options :

1. ✔ to produce flexible and mechanically strong membranes

2. ✖ to decrease the resistance of the membrane

3. ✖ to selectively bind with the target analyte

4. ✖ to avoid interferences due to the sample matrix

Question Number : 51 Question Id : 8740819768 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Paired t-test is used for

Options :

1. ✘ compare the precision of two methods.
2. ✘ evaluate the indeterminate error present in a method.
3. ✔ validate a new method.
4. ✘ analysing the two different hypothesis.

Question Number : 52 Question Id : 8740819769 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In fast polarography, how many time(s) the current is measured during the life time of the Hg drop ?

Options :

1. ✔ one time only
2. ✘ two times
3. ✘ four times
4. ✘ continuously measured during the whole life time of the Hg drop

Question Number : 53 Question Id : 8740819770 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Predict the equilibrium (among the following) which is generally not possible in gas chromatography :

Options :

1. ✘ partition between gas and liquid
2. ✘ partition between liquid and bonded surface
3. ✘ adsorption
4. ✔ partition between immiscible liquids

Question Number : 54 Question Id : 8740819771 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The ability to distinguish the spectral features into different entities is known as

Options :

1. ✘ sensitivity
2. ✔ resolution
3. ✘ selectivity
4. ✘ spectral bandwidth

Question Number : 55 Question Id : 8740819772 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Match the colors given in column A with the lanthanide ions given in column B :

Column A	Column B
(i) yellow	(a) Pr (III)
(ii) red	(b) Dy (III)
(iii) pale pink	(c) Er (III)
(iv) green	(d) Eu (III)

Options :

1. ✘ (i)- (a); (ii)- (b); (iii)- (c); (iv)- (d)

2. ✓ (i)- (b); (ii)- (c); (iii)- (d); (iv)- (a)

3. ✗ (i)- (d); (ii)- (a); (iii)- (b); (iv)- (c)

4. ✗ (i)- (c); (ii)- (b); (iii)- (a); (iv)- (d)

Question Number : 56 Question Id : 8740819773 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The point group of H_2O and BF_3 , respectively are :

Options :

1. ✗ T_d and D_{3h}

2. ✗ T_d and C_{2v}

3. ✓ C_{2v} and D_{3h}

4. ✗ C_{3v} and T_d

Question Number : 57 Question Id : 8740819774 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The product of the reaction between decaborane and acetylene in the presence of diethyl sulfide is :

Options :

1. ✗ $\text{C}_2\text{B}_{12}\text{H}_{12}$

2. ✗ $\text{C}_2\text{B}_9\text{H}_{13}$

3. ✓ $\text{C}_2\text{B}_{10}\text{H}_{12}$

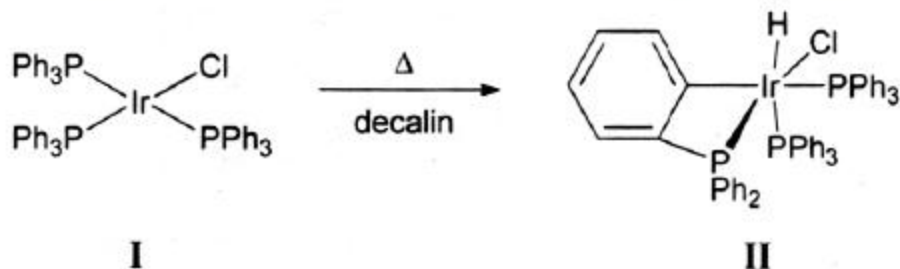
4. ✗ $\text{C}_4\text{B}_{10}\text{H}_{10}$

Question Number : 58 Question Id : 8740819775 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify the correct statement(s) for the following reaction :



- A. It is a migratory insertion reaction
- B. I and II are diamagnetic
- C. Oxidation state of iridium changes from +1 to +3
- D. It involves β -hydride elimination

The correct statements are :

Options :

- 1. ✘ A and B
- 2. ✔ B and C
- 3. ✘ A and D
- 4. ✘ A, B and D

Question Number : 59 Question Id : 8740819776 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify the correct statement(s) about Wacker process :

- A. Pd(II) is reduced to Pd(0) by Cu(I)
- B. Pd(0) is oxidized to Pd(II) by Cu(II)
- C. Cu(II) promotes reductive elimination

The correct statements are :

Options :

1. ✘ A only
2. ✔ B only
3. ✘ A and C
4. ✘ B and C

Question Number : 60 Question Id : 8740819777 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The species isolobal to $[\text{Fe}(\text{CO})_2(\text{PPh}_3)]^-$ is :

Options :

1. ✘ CH_2^+
2. ✘ CH_3
3. ✔ CH
4. ✘ CH_4

Question Number : 61 Question Id : 8740819778 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following reaction does not proceed via a six membered transition state ?

Options :

1. ✘ Claisen rearrangement
2. ✘ MPV reduction
3. ✔ Hofmann rearrangement

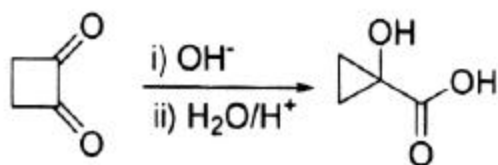
4. ✖ Oppenauer oxidation

Question Number : 62 Question Id : 8740819779 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The following reaction is an example of



Options :

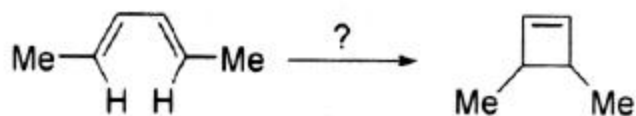
1. ✖ Wolff rearrangement
2. ✔ Benzylic acid rearrangement
3. ✖ Steven's rearrangement
4. ✖ Wagner-Meerwein rearrangement

Question Number : 63 Question Id : 8740819780 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The transformation of following reaction is feasible by :



Options :

1. ✖ Thermal disrotatory process
2. ✖ Photochemical disrotatory process
3. ✔ Thermal conrotatory process
4. ✖ Photochemical conrotatory process

Question Number : 64 Question Id : 8740819781 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which type of electronic transition can be seen in saturated aldehydes and ketones ?

Options :

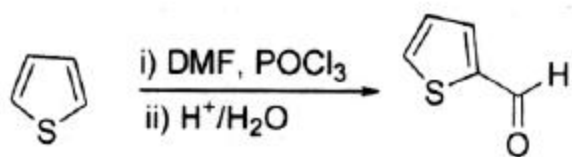
- ✘ $\sigma \rightarrow \sigma^*$
- ✘ $\pi \rightarrow \sigma^*$
- ✔ $n \rightarrow \pi^*$ and $\pi \rightarrow \pi^*$
- ✘ $\pi \rightarrow \pi^*$

Question Number : 65 Question Id : 8740819782 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The following reaction is known as



Options :

- ✔ Vilsmeier-Haack reaction
- ✘ Friedlander reaction
- ✘ Pfitzinger reaction
- ✘ Dobereiner's-Miller reaction

Question Number : 66 Question Id : 8740819783 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which reagent is used in the Edman degradation for analysis of N-terminal group of peptides ?

Options :

1. ✓ phenyl isothiocyanate
2. ✗ di-t-butyl dicarbonate
3. ✗ dicyclohexyl carbodiimide
4. ✗ benzyl chloroformate

Question Number : 67 Question Id : 8740819784 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

For a reaction, $A \rightleftharpoons B$, enthalpy change is 20 KJ/mole, if the activation energy of the forward reaction is 35 KJ/mole, what will be the activation energy for reverse reaction ?

Options :

1. ✗ 20 KJ/mole
2. ✗ 35 KJ/mole
3. ✓ 55 KJ/mole
4. ✗ 15 KJ/mole

Question Number : 68 Question Id : 8740819785 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Equal volumes of two gases that do not react together are enclosed in separate vessels. Their pressures are at 200 mm and 400 mm, respectively. If the two vessels are joined together, then what will be the pressure of the resulting mixture if temperature is kept constant ?

Options :

- ✘ 125 mm
- ✘ 500 mm
- ✘ 1000 mm
- ✔ 300 mm

Question Number : 69 Question Id : 8740819786 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

For which of the following equation, will ΔH be equal to ΔU ?

Options :

- ✘ $\text{H}_2(\text{g}) + \frac{1}{2}\text{O}_2(\text{g}) \rightarrow \text{H}_2\text{O}(\text{l})$
- ✔ $\text{H}_2(\text{g}) + \text{I}_2(\text{g}) \rightarrow 2\text{HI}(\text{g})$
- ✘ $2\text{NO}(\text{g}) \rightarrow \text{N}_2\text{O}_4(\text{g})$
- ✘ $4\text{NO}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{N}_2\text{O}_5(\text{g})$

Question Number : 70 Question Id : 8740819787 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The adsorption of a metal on a catalyst surface follows Langmuir adsorption isotherm. The surface of the catalyst is 20% occupied by a monolayer of metal when its pressure is 200 Pascals. For 50% coverage, the pressure needed will be :

Options :

- ✔ 800 Pascals
- ✘ 700 Pascals
- ✘ 600 Pascals
- ✘ 500 Pascals

Question Number : 71 Question Id : 8740819788 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which one among the following nuclei would require highest magnetic field to come into resonance at 250 MHz ?

Options :

1. ✘ ^1H ($I = 1/2$, $g = 5.586$)
2. ✘ ^2H ($I = 1$, $g = 0.857$)
3. ✘ ^{13}C ($I = 1/2$, $g = 1.405$)
4. ✔ ^{14}N ($I = 1$, $g = 0.404$)

Question Number : 72 Question Id : 8740819789 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How much change in overpotential will be required if the anodic current is to be enhanced a million fold in the case of an one-electron transfer electrodic reaction ?

Options :

1. ✘ 0.355 V
2. ✔ 0.710 V
3. ✘ 3.550 V
4. ✘ 7.100 V

Question Number : 73 Question Id : 8740819790 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Ag₂S-based membranes used in the ion-selective electrodes are

Options :

1. ✘ non-crystalline in nature
2. ✘ single crystals
3. ✔ polycrystalline in nature
4. ✘ polymeric in nature

Question Number : 74 Question Id : 8740819791 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Among the following, the correct statement about π -molecular orbitals (π -MOs) of benzene is :

Options :

1. ✘ only the lowest MO is doubly degenerate
2. ✘ only LUMO is doubly degenerate
3. ✘ only HOMO is doubly degenerate
4. ✔ both the HOMO and LUMO are doubly degenerate

Question Number : 75 Question Id : 8740819792 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In the amperometric titration of potassium dichromate (titrant) with Pb²⁺ (titrand) at an applied potential of 0.0 V (vs. SCE), what is the shape of the titration curve ?

Options :

1. ✔ Reverse L shaped curve
2. ✘ L shaped curve

3. ✘ A linear line
4. ✘ V shaped curve

Question Number : 76 Question Id : 8740819793 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Piezoelectric sensors operate based on the changes in

Options :

1. ✔ Mass
2. ✘ Heat
3. ✘ Optical property
4. ✘ Force

Question Number : 77 Question Id : 8740819794 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 : No

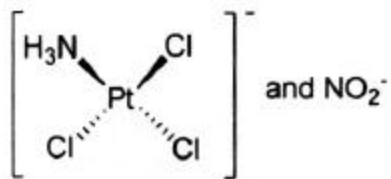
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Identify product(s) in the following reaction :

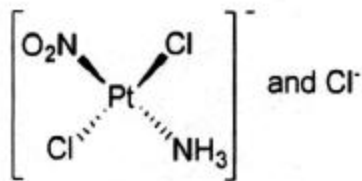


Options :

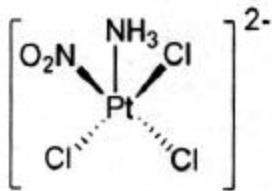


1. ✘

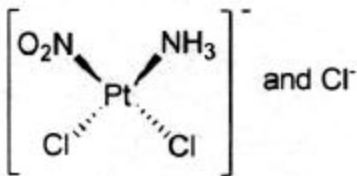
2. ✓



3. ✗



4. ✗

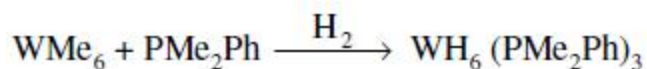


Question Number : 78 Question Id : 8740819795 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What type of reaction is given below :



Options :

1. ✗ ligand addition reaction
2. ✓ sigma bond metathesis reaction
3. ✗ outer sphere electron transfer reaction
4. ✗ oxidative addition reaction

Question Number : 79 Question Id : 8740819796 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The ground state terms for weak field octahedral complexes with d^1 and d^4 configuration are :

Options :

1. ✓ ${}^2T_{2(g)}$ and ${}^5E_{2(g)}$

2. ✗ ${}^2T_{2(g)}$ and ${}^5T_{2(g)}$

3. ✗ ${}^2E_{2(g)}$ and ${}^5T_{2(g)}$

4. ✗ ${}^2E_{2(g)}$ and ${}^5E_{2(g)}$

Question Number : 80 Question Id : 8740819797 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The cluster type and geometry of the species $[(p\text{-cymene})_3 Ru_3 S_2]$ are :

Options :

1. ✗ *nido*, capped square antiprism

2. ✗ *arachno*, trigonal prism

3. ✓ *nido*, square pyramidal

4. ✗ *closo*, capped square antiprism

Question Number : 81 Question Id : 8740819798 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Consider the following statements :

- I. α -pinene contains an exocyclic double bond
- II. Dipentene is racemic limonene
- III. Camphor is a bicyclic compound
- IV. Stigmasterol is commercially obtained from soyabean oil

Select the correct statements :

Options :

1. ✘ I, II, IV

2. ✘ II, III

3. ✔ II, III, IV

4. ✘ I, III

Question Number : 82 Question Id : 8740819799 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

An organic compound shows following spectral data :

IR (cm^{-1}) : 1680

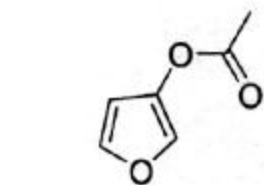
^1H NMR (CDCl_3) : δ 7.66 (m, 1H), 7.60 (m, 1H), 7.10 (m, 1H), 2.50 (s, 3H)

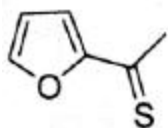
^{13}C NMR (CDCl_3) : δ 190, 144, 134, 132, 128, 28.

m/z (EI) : 126 (M^+ , 100%), 128 ($\text{M}+2$, 4.9%)

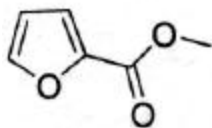
The structure of compound is :

Options :

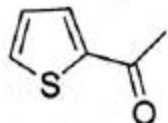




2. ✖



3. ✖



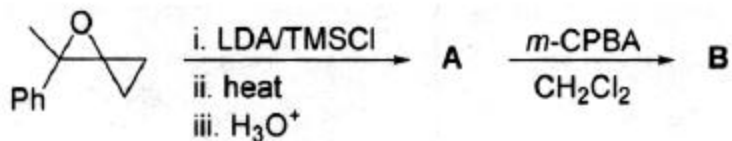
4. ✖

Question Number : 83 Question Id : 8740819800 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

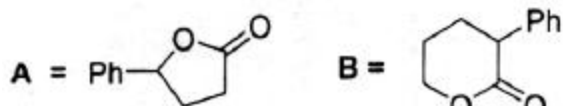
The major products A and B formed in the following reaction sequence are :



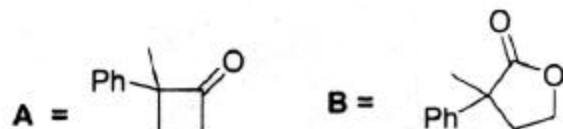
Options :



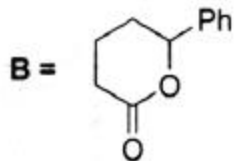
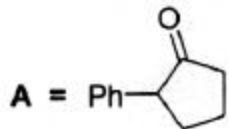
1. ✖



2. ✖



3. ✖



4. ✓

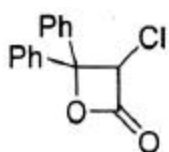
Question Number : 84 Question Id : 8740819801 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

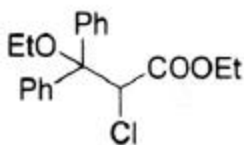
Question Label : Multiple Choice Question

The major product formed in the sodium ethoxide mediated reaction between benzophenone and ethyl chloroacetate is :

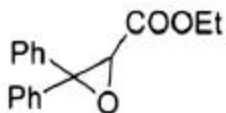
Options :



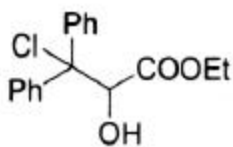
1. ✗



2. ✗



3. ✓



4. ✗

Question Number : 85 Question Id : 8740819802 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The symmetry elements that are present in PCl_5 are :

Options :

1. ✓ $C_3, \sigma_v, \sigma_h, 3C_2$

2. ✘ $C_3, 3C_2, S_2, \sigma_v$

3. ✘ $C_3, 3C_2, \sigma_h, S_z$

4. ✘ $C_3, \sigma_h, \sigma_v, i$

Question Number : 86 Question Id : 8740819803 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

If powder diffraction pattern shows lines which are indexed as (110), (200), (211), (220), (310), (222), (321). The symmetry of the unit cell is :

Options :

1. ✘ primitive

2. ✔ body-centered

3. ✘ face-centred

4. ✘ side-centred

Question Number : 87 Question Id : 8740819804 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The partition function for a 2-level system, the lower level (at energy zero being non-degenerate and the upper level (at energy kT) doubly degenerate, is :

Options :

1. ✘ 2

2. ✘ $2e^{-1}$

3. ✔ $1 + 2e^{-1}$

4. ✖ $1 - 2e^{-1}$

Question Number : 88 Question Id : 8740819805 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A compound $AB_2(g)$ decomposes according to the following reaction :



If at equilibrium the degree of dissociation of $AB_2(g)$ is x and total pressure is P , the equilibrium constant would be :

Options :

1. ✔
$$K_p = \frac{x^3 P}{(2+x)(1-x)^2}$$

2. ✖
$$K_p = \frac{x^3 P}{(2-x)(1-x)^2}$$

3. ✖
$$K_p = \frac{x^3 P}{(2-x)(1+x)^2}$$

4. ✖
$$K_p = \frac{x^2 P}{(2+x)(1-x)}$$

Question Number : 89 Question Id : 8740819806 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A series of sequential baseline absorbance measurements are made in a spectrophotometric method, using a blank solution. The absorbance readings are 0.002, 0.000, 0.008, 0.006 and 0.003. A standard 1.0 ppm analyte solution gives an absorbance reading of 0.051. What is the limit of detection ?

Options :

1. ✖ 0.02 ppm

2. ✓ 0.2 ppm

3. ✘ 2.0 mg mL⁻¹

4. ✘ 2.0 ppm

Question Number : 90 Question Id : 8740819807 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Find out the value of S_y in the following expression :

$$0.50 (\pm 0.02) + 4.10 (\pm 0.03) - 1.97 (\pm 0.05) = 2.63 (\pm S_y)$$

Options :

1. ✓ $S_y = 0.06$

2. ✘ $S_y = 0.00$

3. ✘ $S_y = 0.10$

4. ✘ $S_y = 0.11$

Question Number : 91 Question Id : 8740819808 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A substance was known to contain 49.10% of compound "M". The results obtained by two analysts using the same substance and the same analytical method were as follows :

Analyst X : % of M = 49.42, 49.44, 49.42, and 49.40

Analyst Y : % of M = 49.01, 49.14, 49.08, and 49.25

Accordingly, find out the correct statement(s) from the following statements :

- A. analyst X is accurate but not precise
- B. analyst Y is precise but not accurate
- C. analyst X is precise but not accurate
- D. analyst Y is accurate but not precise
- E. analyst X is accurate and precise
- F. analyst Y is accurate and precise

Options are given below :

Options :

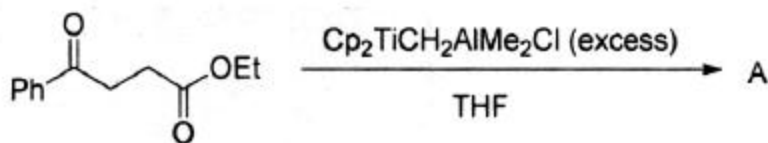
- 1. ✘ statements A and B are correct
- 2. ✔ statements C and D are correct
- 3. ✘ statement E alone correct
- 4. ✘ statement F alone correct

Question Number : 92 Question Id : 8740819809 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 : No

Correct Marks : 3 Wrong Marks : 1

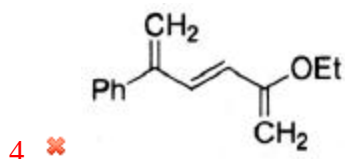
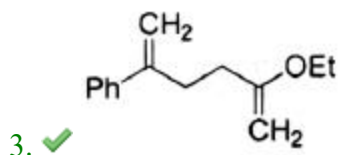
Question Label : Multiple Choice Question

Identify A in the following reaction :



Options :

- 1. ✘
- 2. ✘



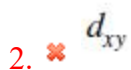
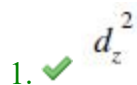
Question Number : 93 Question Id : 8740819810 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

In trigonal prismatic ligand field, the most stabilized d orbital is :

Options :



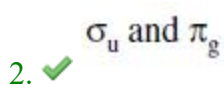
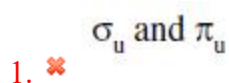
Question Number : 94 Question Id : 8740819811 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The characters of LUMO of O_2 and CN^- respectively are :

Options :



3. ✘ π_g and σ_g

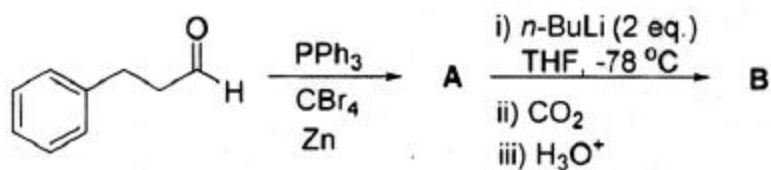
4. ✘ π_g and σ_u

Question Number : 95 Question Id : 8740819812 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 : No

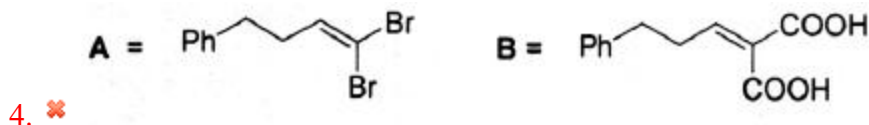
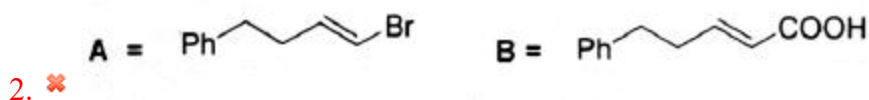
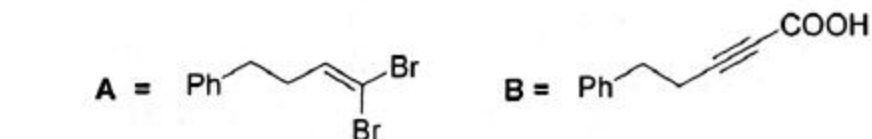
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The major products A and B formed in the following reaction sequence are :



Options :

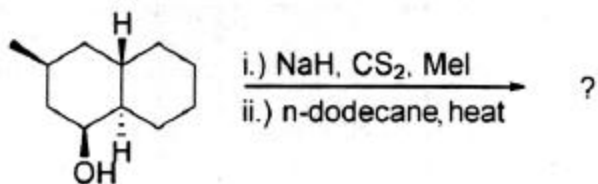


Question Number : 96 Question Id : 8740819813 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

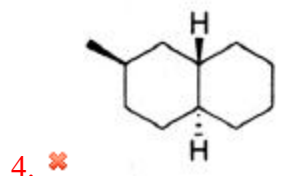
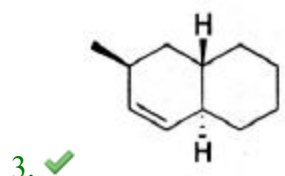
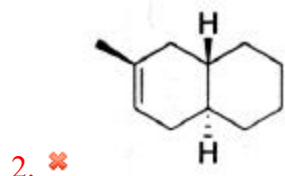
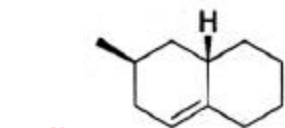
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The major product formed in the following reaction is



Options :

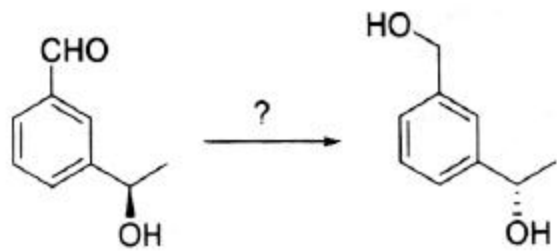


Question Number : 97 Question Id : 8740819814 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : No

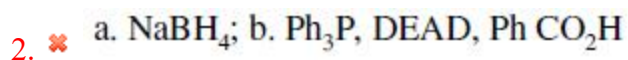
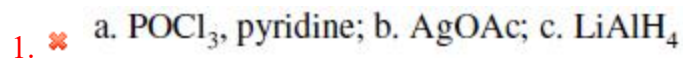
Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The correct combination of reagents to effect the following reaction is :



Options :



3. ✓ a. Ph_3P , DEAD, PhCO_2H ; b. LiAlH_4

4. ✖ a. PCC; b. L-selectride

Question Number : 98 Question Id : 8740819815 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Which of the following is true regarding the dependence of molar conductivity and surface tension on surfactant concentration for an ionic micelle-forming surfactant near its critical micelle concentration (CMC) ?

Options :

1. ✖ molar conductivity and surface tension both remain unchanged
2. ✖ molar conductivity decreases; surface tension remains unchanged
3. ✓ molar conductivity decreases; surface tension increases
4. ✖ molar conductivity remains unchanged; surface tension increases

Question Number : 99 Question Id : 8740819816 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The total number of coordinates needed to specify the locations of N atoms is given by $3N$. The number of variables needed to specify vibrational motion of a molecule is obtained by taking into account rotational displacements. Suppose $3N - 3$ non-translational 'internal' modes of the molecule are available for vibration of a molecule. The orientation of a linear molecule requires the specification of two angles whereas the orientation of a non-linear molecule requires the specification of three angles in space.

Answer the following :

The number of vibrational modes, N_{vib} for a nonlinear molecule is :

Options :

1. ✖ $3N$
2. ✖ $3N - 3$

3. ✘ $3N - 5$

4. ✔ $3N - 6$

Question Number : 100 Question Id : 8740819817 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 : No

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

The total number of coordinates needed to specify the locations of N atoms is given by $3N$. The number of variables needed to specify vibrational motion of a molecule is obtained by taking into account rotational displacements. Suppose $3N - 3$ non-translational 'internal' modes of the molecule are available for vibration of a molecule. The orientation of a linear molecule requires the specification of two angles whereas the orientation of a non-linear molecule requires the specification of three angles in space.

Answer the following :

For CO_2 molecule the number of modes of vibration and rotation respectively are :

Options :

1. ✘ four modes of vibration and three modes of rotation

2. ✔ four modes of vibration and two modes of rotation

3. ✘ three modes of vibration and four modes of rotation

4. ✘ four modes of vibration and four modes of rotation