

Banaras Hindu University

Notations :

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

Question Paper Name :	661 11th April 2021 Shift 2
Subject Name :	661
Creation Date :	2021-04-11 19:03:29
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Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass 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
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

RET_Radiotherapy & Radiation Medicine

Group Number :	1
Group Id :	509398121
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300

Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Research_Methodology

Section Id :	509398180
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 :	509398207
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 50939814323 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 : 50939814324 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 : 50939814325 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

None of the three

4. ✘ तीनों में से कोई नहीं

Question Number : 4 Question Id : 50939814326 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 : 50939814327 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

General to Particular

3. ✖ सामान्य से विशेष

Particular to Particular

4. ✖ विशेष से विशेष

Question Number : 6 Question Id : 50939814328 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 :

Convenience Sampling

1. ✖ सुविधा प्रतिचयन

Snowball Sampling

2. ✔ स्नोबॉल प्रतिचयन

Cluster Sampling

3. ✖ समूह प्रतिचयन

Stratified Sampling

4. ✖ स्तरीकृत प्रतिचयन

Question Number : 7 Question Id : 50939814329 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 :

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

Question Number : 8 Question Id : 50939814330 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 :

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

Question Number : 9 Question Id : 50939814331 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 : 50939814332 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 :

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

Question Number : 11 Question Id : 50939814333 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 :

1. In this methods, each unit has equal chance to be selected.
इस पद्धति में प्रत्येक इकाई के चयनित होने का समान अवसर होता है।
2. Each sample has equal chance of selection.
प्रत्येक प्रतिदर्श के चयन की सम्भावना समान होती है।
3. It is free from personal prejudices and bias
यह व्यक्तिगत पूर्वधारणाओं और पक्षपातों से रहित होता है।
4. This method is very simple to use
यह पद्धति प्रयोग करने में बेहद आसान है।

Question Number : 12 Question Id : 50939814334 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 :

1. ✘ Latin
लैटिन
2. ✔ French
फ्रेंच
3. ✘ German
जर्मन
4. ✘ Italian
इटालियन

Question Number : 13 Question Id : 50939814335 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 कौ-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 :

1. ✘ Idiographic Approach
इडियोग्राफिक (वस्तुपरक) दृष्टिकोण
2. ✔ Nomothetic Approach
नोमोथेटिक (सिद्धान्तपरक) दृष्टिकोण
3. ✘ Empirical Approach
अनुभवजन्य दृष्टिकोण

Question Number : 14 Question Id : 50939814336 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 : 50939814337 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 : 50939814338 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 :

Replication, randomization and Substitution

1. ✘ रेप्लीकेशन, रैन्डोमाइजेशन एवं सब्स्टीट्यूशन

Replication, randomization, and local control

2. ✔ रेप्लीकेशन, रैन्डोमाइजेशन एवं लोकल कंट्रोल

3. ✘ Substitution, replication and local control
सबस्टीट्यूशन, रेप्लीकेशन एवं लोकल कन्ट्रोल

4. ✘ Substitution, randomization and local control
सबस्टीट्यूशन, रैन्डोमाइजेशन एवं लोकल कन्ट्रोल

Question Number : 17 Question Id : 50939814339 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 : 50939814340 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 : 50939814341 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 : 50939814342 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 :

Applications of the findings of the research study.

1. ✘ शोध अध्ययन के निष्कर्षों के अनुप्रयोग के आधार पर।

Objectives of the research study.

2. ✔ शोध अध्ययन के उद्देश्य के आधार पर।

Mode of enquiry used in conducting the study.

3. ✘ अध्ययन के संचालन में उपयोग की जाने वाली जांच के तरीके के आधार पर।

Outcome of the research.

4. ✘ शोध के परिणाम के आधार पर।

Question Number : 21 Question Id : 50939814343 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 व्हीलचेयर में बैठे लोगों के प्रति सामान्य आबादी की प्रतिक्रियाओं की जांच करना चाहता है। वह स्वयं व्हीलचेयर में बैठकर उनकी प्रतिक्रियाओं का अध्ययन कर सकता है। डेटा एकत्र करने की इस विधि को किस रूप में जाना जाता है ?

Options :

Disguised Observation

1. ✘ प्रच्छन्न अवलोकन

Participant Observation

2. ✔ प्रतिभागी अवलोकन

Non-Participant Observation

3. ✘ गैर-प्रतिभागी अवलोकन

Self Recording Observation

4. ✘ स्वयं रिकॉर्डिंग अवलोकन

Question Number : 22 Question Id : 50939814344 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 स्टेण्डर्ड 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 : 50939814345 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 के माध्य (mean) के बीच कोई सांख्यिकीय महत्वपूर्ण अंतर है

1. ✖

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 कोई सांख्यिकीय महत्वपूर्ण अंतर है

2. ✖

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

3. ✔

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 mean) के बीच कोई सांख्यिकीय महत्वपूर्ण अंतर है या नहीं

4. ✖

Question Number : 24 Question Id : 50939814346 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 : 50939814347 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 चुनें :

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 : 50939814348 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-प्लेजिअरिज्म सॉफ्टवेयर हैं :

- (a) Urkund
उरकुंड
- (b) Overleaf
ओवरलीफ
- (c) Turnitin
टर्नितिन
- (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 : 50939814349 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 :

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

Question Number : 28 Question Id : 50939814350 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 ?
फेलाव का कौन सा माप सभी अवलोकनों पर निर्भर नहीं करता है ?

Options :

1. ✘ Root mean & square deviation
मूल माध्य और वर्ग विचलन
2. ✘ Mean deviation
माध्य विचलन
3. ✓ Quartile deviation
चतुर्थक विचलन
4. ✘ Standard deviation
मानक विचलन

Question Number : 29 Question Id : 50939814351 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 :

1. ✘ Coefficient of alienation
परकीयकरण का गुणांक
2. ✘ Coefficient of variation
भिन्नता का गुणांक
3. ✔ Coefficient of determination
दृढ़ संकल्प का गुणांक
4. ✘ Coefficient of non-determination
गैर-निर्धारण का गुणांक

Question Number : 30 Question Id : 50939814352 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 :

1. ✔ to show visually how two variables are covering
नेत्रहीन दिखाने के लिए कि दो चर कैसे ढकते हैं
2. ✘ in organising the scattered footnotes of the research.
शोध के बिखरे पांवों को व्यवस्थित करने में।
3. ✘ in organising the scattered bibliography of the research.
शोध की बिखरी हुई ग्रंथ सूची के आयोजन में।
4. ✘ in organising the scattered results drawn after the rigorous literature review.
कठोर साहित्य समीक्षा के बाद निकाले गए बिखरे परिणामों को व्यवस्थित करने में।

Question Number : 31 Question Id : 50939814353 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 :

1. ✘ Casual Comparative Research
कारणात्मक तुलनात्मक शोध

2. ✘ Historical Research
ऐतिहासिक शोध

3. ✔ Descriptive Research
विवरणात्मक शोध

4. ✘ Experimental Research
प्रायोगिक शोध

Question Number : 32 Question Id : 50939814354 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 कौन गैर-प्रायिकता प्रतिचयन कहा जाता है ?

Options :

1. ✔ Quota sampling
कोटा प्रतिचयन

2. ✘ Cluster sampling
गुच्छ प्रतिचयन

3. ✘ Systematic sampling
सुनियोजित/व्यवस्थित प्रतिचयन

4. ✘ Stratified random sampling
स्तरित यादृच्छिक प्रतिचयन

Question Number : 33 Question Id : 50939814355 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
कोई परिवर्तन/छेड़छाड़ नहीं की जाती और जिसमें होने वाले परिवर्तन की समीक्षा की जाती है।
1. ✓

The one that is manipulated in order to observe any effects on the other
परिवर्तन किया जाता है जिससे दूसरों में होने वाले परिवर्तन की समीक्षा की जाए।
2. ✖

A measure of the extent to which personal values affect research
किस प्रकार व्यक्तिगत मूल्य शोध को प्रभावित करते हैं उसके मापक के रूप में प्रयोग किया जाता है।
3. ✖

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 : 50939814356 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. ✖

2. ✓ Cohort
कोहोर्ट

3. ✘ Case control
केस नियंत्रण

4. ✘ Experimental
प्रायोगिक

Question Number : 35 Question Id : 50939814357 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 of 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 : 50939814358 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 विशेषताये गुणात्मक शोध के लिए महत्त्वपूर्ण मानी जाती हैं ?

Options :

1. ✘ Collecting data with the help of standardized research tools.
मानकित शोध साधनों के के सहयोग से आंकड़ों का संग्रहण
2. ✘ Design sampling with probability sample techniques.
प्रायिकता प्रतिचयन तकनीकों के प्रयोग द्वारा प्रतिचयन प्रारूप का निर्धारण
3. ✔ Collecting data with bottom-up empirical evidence.
ऊर्ध्वगामी आनुभविक साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण
4. ✘ Gathering data with top-down schematic evidence.
शीर्ष-पाद योजनाबद्ध साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण

Question Number : 37 Question Id : 50939814359 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

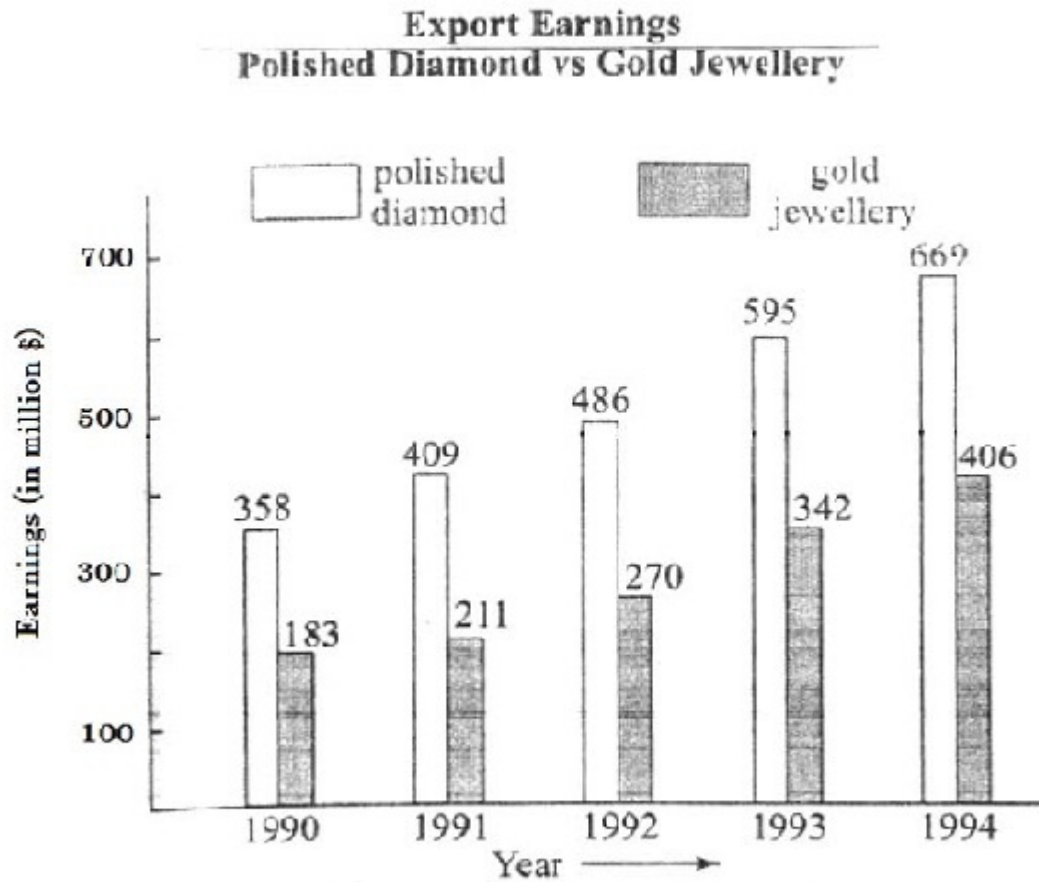
Question Number : 38 Question Id : 50939814360 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval 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 डीरे 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 :

- 503.4 Million
- 503.4 मिलियन

- 501.6 Million
2. 501.6 मिलियन
- 500 Million
3. 500 मिलियन
- 510 Million
4. 510 मिलियन

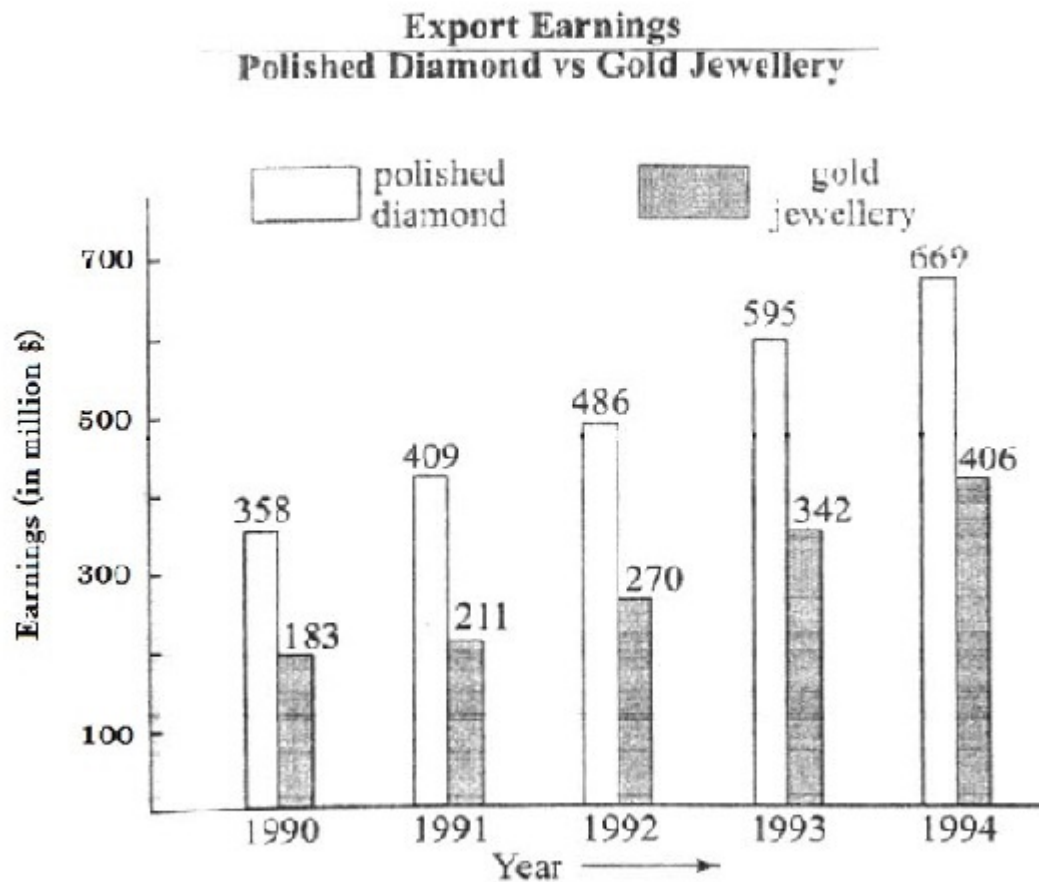
Question Number : 39 Question Id : 50939814361 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval 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 : 50939814362 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

Subject_&_Area Concerned

Section Id :	509398181
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 :	509398208
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 50939814363 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 of the following statements concerning the interaction of photons with matter is *correct* ?

Options :

The probability of the photoelectric effect decreases with the increase in atomic

1. ✖ number of the absorber

The predominant interaction of 10 keV photons with soft tissue is the Compton

2. ✖ process

In the Compton process, the energy of the scattered photon is less than that of the

3. ✔ incident photon

There is only partial absorption of the energy of the incident photon in the

4. ✖ photoelectric effect

Question Number : 42 Question Id : 50939814364 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 of the following is a radiolysis product of water responsible for 65-75% of the molecular damage caused by the indirect action of ionizing radiation ?

Options :

1. ✘ e_{aq}

2. ✘ O_2^-

3. ✘ OH^-

4. ✔ OH^\bullet

Question Number : 43 Question Id : 50939814365 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 approximate minimum photon energy required to cause ionization in water is :

Options :

1. ✔ 10-25 eV

2. ✘ 100-250 eV

3. ✘ 1-2.5 keV

4. ✘ 10-25 keV

Question Number : 44 Question Id : 50939814366 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 lifetime of an OH^\bullet radical is approximately Seconds.

Options :

1. ✘ 10^{-15}

2. ✔ 10^{-9}

3. ✘ 10^{-1}

4. ✘ 1.0

Question Number : 45 Question Id : 50939814367 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

Regarding OER, RBE and LET :

Options :

1. ✔ OER decreases with increasing the value of LET

2. ✘ OER Increases with increasing the value of LET

3. ✘ OER does not change with change in LET

4. ✘ OER and RBE increases with decrease in LET

Question Number : 46 Question Id : 50939814368 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 *false* regarding interaction of neutron with matter ?

Options :

1. ✘ Neutron do not interact with atomic electrons of biological medium
2. ✔ Neutrons interact primarily with oxygen in water
3. ✘ Neutron may cause the ejection of an alpha particle
4. ✘ Neutron may activate the target nucleus

Question Number : 47 Question Id : 50939814369 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 live human cell is irradiated by gamma-rays, which one of the following events may eventually cause the most of the damage to DNA ?

Options :

1. ✘ Absorption of radiation energies by the chemical bonds in the DNA molecules
2. ✘ Ionization and excitation on atoms within the DNA structure
3. ✘ Ionization and excitation on atoms within the histones that bound to DNA
4. ✔ Ionization and excitation of the water molecules that surround DNA

Question Number : 48 Question Id : 50939814370 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

Using the LQ survival curve model, what would be the cell surviving fraction when dose of 2 Gy delivered acutely ($\alpha=0.3 \text{ Gy}^{-1}$ and $\beta = 0.1 \text{ Gy}^{-2}$) ?

Options :

1. ✖ 3.7

2. ✖ 37

3. ✔ 0.37

4. ✖ 370

Question Number : 49 Question Id : 50939814371 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 α/β ratio is equal to the :

Options :

Surviving fraction at which the amount of cell killing caused by the induction of irreparable damage equals the amount of cell killing caused by the accumulation of

1. ✖ sublethal damage

Dose below which a further decrease in fraction size will not affect the surviving fraction for a particular total dose

2. ✖

3. ✖ D_q

Dose at which the αD component of cell kill is equal to the βD^2 contribution to cell

4. ✔ killing

Question Number : 50 Question Id : 50939814372 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 is *true* ?

Options :

Maximum cell killing per dose delivered occurs at an LET corresponding to approximately 1000 keV/ μ m

1. ✘
2. ✘
3. ✘
4. ✔

Question Number : 51 Question Id : 50939814373 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 statement is *false* for OER ?

Options :

1. ✘
2. ✘
3. ✘
4. ✔

Question Number : 52 Question Id : 50939814374 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 person dies after whole body exposure close to the LD_{50/60}, the death may be due to damage to the :

Options :

1. ✘

2. ✓ Bone marrow
3. ✘ Central nervous system
4. ✘ Gastrointestinal system

Question Number : 53 Question Id : 50939814375 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

Most appropriate instrument used to trace the missing Cs-137 source is :

Options :

1. ✘ Ionisation type detector
2. ✘ Neutron detector
3. ✓ G. M. counter type detector
4. ✘ All of the three

Question Number : 54 Question Id : 50939814376 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 *correct* about acute irradiation of the skin :

Options :

1. ✓ the first visible evidence of damage is a transient erythema

The first visible reaction is moist desquamation, typically observed within 24 hours

2. ✘ of irradiation

Epilation is only observed at doses much greater than those that cause the main wave

3. ✘ of erythema observed at about one week

It is usually possible to predict the extent of late reactions based on the severity of

4. ✘ early reactions

Question Number : 55 Question Id : 50939814377 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 total doses, given as daily 1.5 Gy fractions, is approximately equivalent to a conventional schedule of 30 fractions of 2 Gy for late normal tissue reactions ? (α/β ratio - 3 Gy)

Options :

1. ✘ 53 Gy

2. ✘ 60 Gy

3. ✔ 67 Gy

4. ✘ 75 Gy

Question Number : 56 Question Id : 50939814378 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

Best choice for disposal of 27.0 mCi of Tc-99m in 2 ml of liquid :

Options :

1. ✘ Incinerate

2. ✘ Bury

3. ✔ Delay and decayed

4. ✘ Dispose off directly through wash basin

Question Number : 57 Question Id : 50939814379 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

CHART involved all of the above except :

Options :

1. ✘ Three fractions of radiation per day
2. ✘ Short overall treatment time of 12 consecutive days
3. ✘ Total dose of 50 - 54 Gy
4. ✔ Concurrent chemotherapy

Question Number : 58 Question Id : 50939814380 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

Iridium-192 is characterized by the following except :

Options :

1. ✘ The lower photon energy makes radiation protection easier than Co-60
2. ✔ It is used for permanent implants
3. ✘ It has a small source size
4. ✘ It is the most widely used radionuclide for brachytherapy

Question Number : 59 Question Id : 50939814381 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 are the AERB annual dose limits for the eye and to localized skin areas for radiation workers ?

Options :

1. ✘ 500 mSv to the eye and 150 mSv to the skin
2. ✔ 150 mSv to the eye and 500 mSv to the skin
3. ✘ 150 mSv to the eye and 50 mSv to the skin
4. ✘ 15 mSv to the eye and 500 mSv to the skin

Question Number : 60 Question Id : 50939814382 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 does *not* create artifacts in the tomographic images with SPECT ?

Options :

1. ✘ Defects in the collimator
2. ✔ Scattered radiation
3. ✘ Misalignment of the center of rotation with the detector axis
4. ✘ Patient motion during imaging

Question Number : 61 Question Id : 50939814383 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 most desirable energy for radionuclide imaging ?

Options :

1. ✘ 150 MeV gamma

2. ✓ 150 keV gamma

3. ✗ 150 keV beta

4. ✗ 150 eV gamma

Question Number : 62 Question Id : 50939814384 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 of the following is *not* characteristic of PET ?

Options :

1. ✗ Annihilation Radiation

2. ✗ 511 keV photons

3. ✓ Lead collimators

4. ✗ Absolute attenuation correction

Question Number : 63 Question Id : 50939814385 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 heel effect :

Options :

1. ✗ Is due to attenuation of electrons in the target material

2. ✓ Is more pronounced at small anode angles

3. ✗ Is greater on the cathode side of the X-ray field

4. ✗ Related to energy of the x-ray beam produced in X-ray tube

Question Number : 64 Question Id : 50939814386 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 requirement of a digital radiography system is :

Options :

1. ✓ Good X-ray sensitivity
2. ✗ A small field size
3. ✗ A digital-to-analogue converter
4. ✗ A narrow dynamic range

Question Number : 65 Question Id : 50939814387 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

Concerning PACS which is *false* ?

Options :

1. ✗ PACS eliminate the need for film storage
2. ✗ Their correct use is guided by the Data Protection Act
3. ✗ Data compression can help reduce the storage requirements associated with PACS
4. ✓ Images cannot be accessed simultaneously from different locations

Question Number : 66 Question Id : 50939814388 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

Concerning radionuclide production, which of the following is *true* ?

Options :

1. ✘ Radionuclides used in medicine are generally found naturally

2. ✔ In a cyclotron, protons are forced into the nucleus

In a nuclear reactor, the addition of a neutron into the nucleus results in an increase

3. ✘ in atomic number

Radionuclides produced in a nuclear reactor by neutron capture alone can be

4. ✘ separated from the stable (carrier) element

Question Number : 67 Question Id : 50939814389 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 *false* statement with respect to Single-photon emission tomography ?

Options :

1. ✘ It results in improved target-to-background ratio

2. ✔ It results in improved spatial resolution

3. ✘ It uses a rotating gamma camera

4. ✘ It results in images that can be reconstructed to form 3D images

Question Number : 68 Question Id : 50939814390 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

Regarding artefacts in CT, which is *true* ?

Options :

1. ✔ Bands of black and white through a cross-section are secondary to motion artefacts

2. ✘ To overcome streak artefacts, a bow tie filter should be used

In beam hardening, the attenuation coefficient decreases at the periphery of the

3. ✘ image

4. ✘ The cupping effect is a result of photon starvation

Question Number : 69 Question Id : 50939814391 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

Regarding CT dosimetry, which is *not* true ?

Options :

1. ✘ The CT dose index (CTDI) is dependent on filtering

An increase in kV does not affect the CTDI but increases the dose at a specific point,

2. ✔ Z (Dz)

3. ✘ At a constant mA, the dose is inversely proportional to pitch

If the true profile width is equal to a nominal width, CTDI is independent of the slice

4. ✘ width

Question Number : 70 Question Id : 50939814392 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

Beyond the depth of maximum dose, which statement best describes the relative behavior of dose and kerma ?

Options :

1. ✔ Dose and kerma fall off equally

2. ✘ Kerma falls off faster than dose

3. ✘ Dose falls off faster than kerma

4. ✘ Dose rises while kerma falls

Question Number : 71 Question Id : 50939814393 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

4 R's of radiobiology does *not* include :

Options :

1. ✘ Repair

2. ✘ Redistribution

3. ✘ Repopulation

4. ✔ Radiosensitivity

Question Number : 72 Question Id : 50939814394 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 use of X-ray grid is to :

Options :

1. ✘ decrease scatter radiation to the patient

2. ✔ improve contrast

3. ✘ remove artefacts

4. ✘ decrease exposure

Question Number : 73 Question Id : 50939814395 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

Full form of DICOM is :

Options :

1. ✓ Digital Imaging and Communications in Medicine
2. ✗ Digital Image Communications in Medicine
3. ✗ Digital Imaging and Computer in Medicine
4. ✗ Digital Imaging Computer for Medicine

Question Number : 74 Question Id : 50939814396 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 statement is *false* ?

Options :

- Orthovoltage or deep therapy is the treatment with X rays ranging from 150 to 500
1. ✗ kV.
 2. ✗ X ray beams of energy 1 MV or greater can be classified as megavoltage beam.
 3. ✓ A contact therapy machine usually operates at a potential of 450-660 kV.
 4. ✗ Superficial therapy applies to the treatment with X rays from 50-150 kV.

Question Number : 75 Question Id : 50939814397 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 half-life of ¹²⁵I is :

Options :

1. ✘ 60 hours
2. ✔ 60 days
3. ✘ 8 months
4. ✘ 8 days

Question Number : 76 Question Id : 50939814398 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

Examples of non-stochastic effects are all, except :

Options :

1. ✘ Cataracts
2. ✔ Leukemia
3. ✘ Diarrhea
4. ✘ Bone marrow depression

Question Number : 77 Question Id : 50939814399 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

True about ^{99m}Tc are all, except :

Options :

1. ✘ Produced in a nuclear reactor
2. ✔ It has a very long effective half-life
3. ✘ Involved in isomeric transition

4. ✖ Most commonly used isotope for imaging in nuclear medicine

Question Number : 78 Question Id : 50939814400 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 statement is *wrong* ?

Options :

1. ✔ Absorbed dose is measured in Rem
2. ✖ Equivalent dose is measured in Sieverts
3. ✖ KERMA is measured in rad
4. ✖ $1\text{rad} = 100\text{ ergs/gm}$

Question Number : 79 Question Id : 50939814401 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

All are true about filters used in radiography, except :

Options :

1. ✔ They reduce the mean energy of the beam
2. ✖ Removes low energy photons
3. ✖ Glass of the tube also acts like a filter
4. ✖ K edge can be sometimes used in mammography

Question Number : 80 Question Id : 50939814402 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

Low contrast in a therapy verification image compared with a simulator radiographic image is primarily a result of :

Options :

1. ✘ more photoelectric interactions
2. ✘ pair production
3. ✘ less compton interactions
4. ✔ less photoelectric interactions

Question Number : 81 Question Id : 50939814403 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

1 amu =

Options :

1. ✘ 1000 MeV
2. ✘ 831 MeV
3. ✘ 100 MeV
4. ✔ 931 MeV

Question Number : 82 Question Id : 50939814404 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

For an atom symbolized as A_ZX . Where :

Options :

1. ✘ A = Atomic Number and Z = Mass Number

2. ✓ A = Mass Number and Z = Atomic Number

3. ✘ A = Neutron Number and Z = Proton Number

4. ✘ A = Electron Number and Z = Proton Number

Question Number : 83 Question Id : 50939814405 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

1 Bq = Ci

Options :

1. ✘ 3.7×10^8

2. ✓ 2.7×10^{-11}

3. ✘ 3.7×10^{10}

4. ✘ 2.7×10^{-10}

Question Number : 84 Question Id : 50939814406 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 threshold energy of pair production process is :

Options :

1. ✘ 1.05 MeV

2. ✘ 10.02 MeV

3. ✓ 1.02 MeV

4. ✘ 10.05 MeV

Question Number : 85 Question Id : 50939814407 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

Bragg's Peak is the characteristics features of :

Options :

1. ✘ Electro-magnetic wave

2. ✘ Uncharged particle

3. ✘ Light charged particle

4. ✓ Heavy charged particle

Question Number : 86 Question Id : 50939814408 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 efficient absorber of Neutron is :

Options :

1. ✘ Lead

2. ✘ Tungsten

3. ✘ Mercury

4. ✓ Wax

Question Number : 87 Question Id : 50939814409 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 Curie is the activity of :

Options :

1. ✓ 1 gm of radium-226

2. ✗ 1 mg of radium-228

3. ✗ 1 gm of cobalt-60

4. ✗ 1 mg of cobalt - 57

Question Number : 88 Question Id : 50939814410 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 SI unit of absorbed dose is :

Options :

1. ✗ Sievert

2. ✓ Gray

3. ✗ Joule

4. ✗ Roentgen

Question Number : 89 Question Id : 50939814411 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

AERB prescribed annual dose limits for radiation worker is :

Options :

1. ✘ 200 mSv
2. ✔ 20 mSv
3. ✘ 2 mSv
4. ✘ 20 mGy

Question Number : 90 Question Id : 50939814412 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

Wedge filter is a :

Options :

1. ✘ Beam shaping device
2. ✘ Beam directional device
3. ✔ Beam modifying device
4. ✘ Beam trimming device

Question Number : 91 Question Id : 50939814413 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

Thermoluminescent dosimeter (TLD) is a :

Options :

1. ✘ Chemical dosimeter
2. ✔ Solid State dosimeter
3. ✘ Biological dosimeter
4. ✘ Thermal dosimeter

Question Number : 92 Question Id : 50939814414 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

Photoelectric effect, Compton effect and pair production are the interactions of :

Options :

1. ✔ Photons
2. ✘ Phonons
3. ✘ Gluons
4. ✘ Mesons

Question Number : 93 Question Id : 50939814415 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 Klystron is a :

Options :

1. ✘ Wave guide
2. ✘ Micro-wave power generator
3. ✔ Micro-wave power amplifier
4. ✘ Electron gun

Question Number : 94 Question Id : 50939814416 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

Percentage depth dose (PDD) of a photon beam :

Options :

1. ✘ Increases with the decrease of Source to surface distance.
2. ✔ Increases with the increase of Source to surface distance.
3. ✘ Independent of Source to surface distance.
4. ✘ Increases with the increase of Source to diaphragm distance.

Question Number : 95 Question Id : 50939814417 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

Electron beam therapy is most suited for :

Options :

1. ✘ Deep-seated target

2. ✓ Superficial target
3. ✘ Medium depth target
4. ✘ Any target

Question Number : 96 Question Id : 50939814418 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* true for Brachytherapy ?

Options :

1. ✘ Very high localized dose
2. ✘ Sharp dose fall-off outside target
3. ✘ Radiobiological advantages
4. ✓ Easy target accessibilities

Question Number : 97 Question Id : 50939814419 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

Most common radioisotope used in HDR Brachytherapy is :

Options :

1. ✘ Cs -137
2. ✘ Ra - 226

3. ✖ Au -198

4. ✔ Ir -192

Question Number : 98 Question Id : 50939814420 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

SI unit of effective Dose is :

Options :

1. ✔ Sievert

2. ✖ Grey

3. ✖ Joule

4. ✖ Roentgen

Question Number : 99 Question Id : 50939814421 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 *not* a true statement for Dose -Volume Histogram ?

Options :

1. ✖ Summary of entire dose distribution

2. ✖ Two types : cumulative and differential

3. ✖ Provides quantitative information

4. ✓ Anatomic location and extent

Question Number : 100 Question Id : 50939814422 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

Image Guided Radiotherapy mainly reduces volume of the :

Options :

1. ✓ PTV

2. ✗ CTV

3. ✗ GTV

4. ✗ OAR