

# 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 :	886 11th April 2021 Shift 2
Subject Name :	886
Creation Date :	2021-04-11 19:03:33
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Total Marks :	300
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	No
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

## RET\_Computer Science

Group Number :	1
Group Id :	509398157
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 :	509398252
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 :	509398279
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 50939817923 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817924 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817925 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

Survey research is cross-sectional and therefore :

सर्वेक्षण अनुसंधान पार-अनुभागीय है और इसलिए :

**Options :**

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

Question Number : 4 Question Id : 50939817926 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817927 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

Inductive logic proceeds from :  
आगमनात्मक तर्क अग्रसर होता है :

Options :

1.  General to General  
सामान्य से सामान्य
2.  Particular to General  
विशेष से सामान्य
3.  General to Particular  
सामान्य से विशेष
4.  Particular to Particular  
विशेष से विशेष

Question Number : 6 Question Id : 50939817928 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

Options :

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

Question Number : 7 Question Id : 50939817929 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817930 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817931 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 :

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

Question Number : 10 Question Id : 50939817932 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 सिनोपिस का डेटाबेस
- 4. ✘ Database of experts  
विशेषज्ञों का डेटाबेस

Question Number : 11 Question Id : 50939817933 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

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

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

Options :

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

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

Each sample has equal chance of selection.

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

It is free from personal prejudices and bias

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

This method is very simple to use

4. यह पद्धति प्रयोग करने में बेहद आसान है।

**Question Number : 12 Question Id : 50939817934 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817935 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

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

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

**Options :**

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

**Question Number : 14 Question Id : 50939817936 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817937 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817938 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

Options :

1. ✘ Replication, randomization and Substitution  
रेप्लीकेशन, रैन्डोमाइजेशन एवं सब्स्टीट्यूशन
2. ✔ Replication, randomization, and local control  
रेप्लीकेशन, रैन्डोमाइजेशन एवं लोकल कन्ट्रोल
3. ✘ Substitution, replication and local control  
सब्स्टीट्यूशन, रेप्लीकेशन एवं लोकल कन्ट्रोल
4. ✘ Substitution, randomization and local control  
सब्स्टीट्यूशन, रैन्डोमाइजेशन एवं लोकल कन्ट्रोल

Question Number : 17 Question Id : 50939817939 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817940 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817941 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817942 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

Options :

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

Question Number : 21 Question Id : 50939817943 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 :

1. ✘ Disguised Observation  
प्रच्छन्न अवलोकन
2. ✔ Participant Observation  
प्रतिभागी अवलोकन

Non-Participant Observation

3. ✘ गैर-प्रतिभागी अवलोकन

Self Recording Observation

4. ✘ स्वयं रिकॉर्डिंग अवलोकन

**Question Number : 22 Question Id : 50939817944 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 (विधियों) है/हैं ?

(A) American Physical Association

अमेरिकन फिजिकल एसोसिएशन

(B) Modern Linguistic Association

मॉडर्न लिंग्विस्टिक एसोसिएशन

(C) Oxford Standard for the Citation of Language Association

ऑक्सफोर्ड स्टैण्डर्ड फॉर द साइटेशन ऑफ लैंग्वेज एसोसिएशन

(D) Vancouver

वैंकूवर

Choose the correct answer from the codes given below :

निम्नलिखित में से कौन-सा सही कूट है :

**Options :**

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

1. ✘ (a), (b), (c) और (d)

(a), (b) and (c)

2. ✘ (a), (b) और (c)

(a) and (d)

3. ✘ (a) और (d)

(d) only

4. ✔ केवल (d)

**Question Number : 23 Question Id : 50939817945 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

One-way ANOVA is used to :

एक-तरफा एनोवा का उपयोग किया जाता है :

**Options :**

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

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

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

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

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

2. ✘ कोई सांख्यिकीय महत्वपूर्ण अंतर है

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

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

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

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

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

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

**Question Number : 24 Question Id : 50939817946 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817947 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817948 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

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

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

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

Choose the correct answer from the codes given below :

नीचे दिए गए कोड में से सही उत्तर चुनें :

**Options :**

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

**Question Number : 27 Question Id : 50939817949 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

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

क्या एक परीक्षण एकतरफा है या दो तरफा है :

**Options :**

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

**Question Number : 28 Question Id : 50939817950 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 :

Root mean & square deviation

1. ✖ मूल माध्य और वर्ग विचलन

Mean deviation

2. ✖ माध्य विचलन

Quartile deviation

3. ✔ चतुर्थक विचलन

Standard deviation

4. ✖ मानक विचलन

Question Number : 29 Question Id : 50939817951 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

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

Options :

Coefficient of alienation

1. ✖ परकीयकरण का गुणांक

Coefficient of variation

2. ✖ भिन्नता का गुणांक

Coefficient of determination

3. ✔ दृढ़ संकल्प का गुणांक

Coefficient of non-determination

4. ✖ गैर-निर्धारण का गुणांक

Question Number : 30 Question Id : 50939817952 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

A Scattergram is extremely effective :

एक स्कैटरग्राम अत्यंत प्रभावी है :

Options :

to show visually how two variables are covering

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

in organising the scattered footnotes of the research.

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

in organising the scattered bibliography of the research.

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

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

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

Question Number : 31 Question Id : 50939817953 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817954 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 : 50939817955 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 :

1. ✔ 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।

2. ✘ 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।

3. ✘ 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।

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 : 50939817956 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

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

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

**Options :**

Case series  
केस सीरीज

1. ✖

Cohort  
कोहोर्ट

2. ✔

Case control  
केस नियंत्रण

3. ✖

Experimental  
प्रायोगिक

4. ✖

**Question Number : 35 Question Id : 50939817957 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes**

**Correct Marks : 3 Wrong Marks : 1**

Question Label : Multiple Choice Question

In the process of conducting research, formulation of hypothesis is followed by :

अनुसंधान संचालन की प्रक्रिया में, उपकल्पना निर्माण का अनुसरण करता है :

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

**Options :**

Statement of objectives

उद्देश्यों का कथन

1.

Collection or data

तथ्यों का संकलन

2.

Analysis of data

तथ्यों का विश्लेषण

3.

Selection of research tools

अनुसंधान यंत्रों का चयन

4.

**Question Number : 36 Question Id : 50939817958 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 महत्वपूर्ण मानी जाती है ?

**Options :**

- Collecting data with the help of standardized research tools.
1. ✘ मानकित शोध साधनों के के सहयोग से आंकड़ों का संग्रहण
  2. ✘ प्रायिकता प्रतिचयन तकनीकों के प्रयोग द्वारा प्रतिचयन प्रारूप का निर्धारण
  3. ✔ ऊर्ध्वगामी आनुभविक साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण
  4. ✘ शीर्ष-पाद योजनाबद्ध साक्ष्यों के प्रयोग से आंकड़ों का संग्रहण

**Question Number : 37 Question Id : 50939817959 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

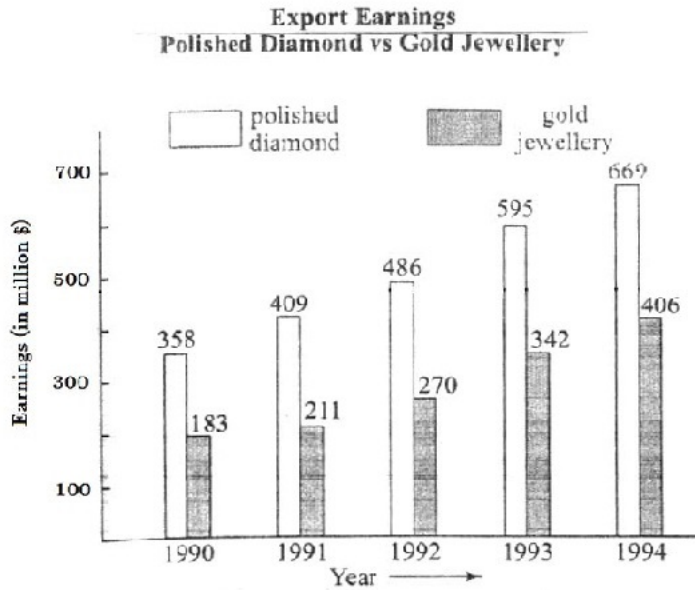
**Question Number : 38 Question Id : 50939817960 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval 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 :**

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

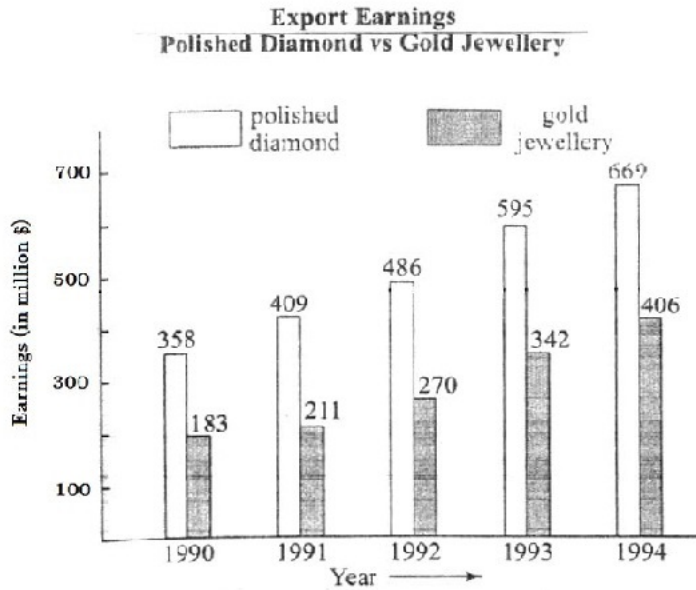
**Question Number : 39 Question Id : 50939817961 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval 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 पॉलिश डीरे 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 : 50939817962 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

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

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

Figures in '000

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

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

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

Options :

1. ✗ 20

2. ✓ 15

3. ✘ 23

4. ✘ 40

### Subject\_ & \_Area Concerned

Section Id :	509398253
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 :	509398280
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 50939817963 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 database of research articles in a journal uses the following schema (VOLUME, NUMBER, STARTPAGE, ENDPAGE, TITLE, YEAR, PRICE). The primary key is (VOLUME, NUMBER, STARTPAGE, ENDPAGE) and the following functional dependencies exist in the schema

(VOLUME, NUMBER, STARTPAGE, ENDPAGE) → TITLE

(VOLUME, NUMBER) → YEAR

(VOLUME, NUMBER, STARTPAGE, ENDPAGE) → PRICE

The database is redesigned to use the following schemas

(VOLUME, NUMBER, STARTPAGE, ENDPAGE, TITLE, PRICE)

(VOLUME, NUMBER, YEAR)

Which is the weakest normal form that the new database satisfies, does not?

Options :

1. ✘ 1NF

2. ✓ 2NF

3. ✘ 3NF

4. ✘ BCNF

Question Number : 42 Question Id : 50939817964 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 Entity-Relationship (ER) model, suppose R is a many-to-one relationship between entity set E1 to entity set E2. Assume that E1 and E2 participate in R and that the cardinality of E1 is greater than the cardinality of E2.

Which one of the following is true about R?

Options :

1. ✓ Every entity in E1 is associated with exactly one entity in E2
2. ✘ Some entity in E1 is associated with more than one entity in E2
3. ✘ Every entity in E2 is associated with exactly one entity in E1
4. ✘ Every entity in E2 is associated with at most one entity in E1

Question Number : 43 Question Id : 50939817965 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 relation  $R = \{ A, B, C, D, E, F, G \}$  is given with following set of functional dependencies:  $F = \{ AD \rightarrow E, BE \rightarrow F, B \rightarrow C, AF \rightarrow G \}$

Which of the following is a candidate key?

Options :

1. ✘ A
2. ✘ AB
3. ✘ ABC
4. ✓ ABD

Question Number : 44 Question Id : 50939817966 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following two tables and four queries in SQL  
Book (isbn, bname), Stock (isbn, copies)

Query 1

```
SELECT B.isbn, S.copies  
FROM Book B INNER JOIN Stock S  
ON B.isbn = S.isbn;
```

Query 2

```
SELECT B.isbn, S.copies  
FROM Book B LEFT OUTER JOIN Stock S  
ON B.isbn = S.isbn;
```

Query 3

```
SELECT B.isbn, S.copies  
FROM Book B RIGHT OUTER JOIN Stock S  
ON B.isbn = S.isbn;
```

Query 4

```
SELECT B.isbn, S.copies  
FROM Book B FULL OUTER JOIN Stock S  
ON B.isbn = S.isbn;
```

Which one of the queries above is certain to have an output that is a superset of the outputs of the other three queries?

Options :

1. ✖ Query 1
2. ✖ Query 2
3. ✖ Query 3
4. ✔ Query 4

Question Number : 45 Question Id : 50939817967 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following schedules involving two transactions

$S_1 : r_1(X); r_1(Y); r_2(X); r_2(Y); w_2(Y); w_1(X)$

$S_2 : r_1(X); r_2(X); r_2(Y); w_2(Y); r_1(Y); w_1(X)$

Which one of the following statements is TRUE?

Options :

1. ✖ Both  $S_1$  and  $S_2$  are conflict serializable.
2. ✖  $S_1$  is conflict serializable and  $S_2$  is not conflict serializable.
3. ✔  $S_1$  is not conflict serializable and  $S_2$  is conflict serializable.
4. ✖ Both  $S_1$  and  $S_2$  are not conflict serializable.

Question Number : 46 Question Id : 50939817968 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 employee salary should not be greater than Rs. 2000. This is

Options :

1. ✓ Integrity constraint
2. ✘ Over defined constraint
3. ✘ Referential constraint
4. ✘ Feasible constraint

Question Number : 47 Question Id : 50939817969 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 a database relation R(a, b, c, d) where the domains of a, b, c and d include only atomic values, only the following functional dependencies and those that can be inferred from them hold

$$a \rightarrow c$$

$$b \rightarrow d$$

the relation is in

Options :

1. ✓ First normal form but not in second normal form
2. ✘ Third normal form
3. ✘ Second normal form but not in third normal form
4. ✘ None of these

Question Number : 48 Question Id : 50939817970 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 current copy of the database is identified by a pointer, called \_ is stored on disk.

Options :

1. ✓ Db-pointer
2. ✘ Update log
3. ✘ Update log records
4. ✘ All of the mentioned

Question Number : 49 Question Id : 50939817971 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 file organization which allows us to read records that would satisfy the join condition by using one block read is

Options :

1. ✘ Heap file organization
2. ✘ Sequential file organization
3. ✔ Clustering file organization
4. ✘ Hash file organization

Question Number : 50 Question Id : 50939817972 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 FALSE?

Options :

1. ✘ There is unique minimal DFA for every regular language.
2. ✘ Every NFA can be converted to an equivalent PDA.
3. ✘ Complement of every context-free language is recursive.
4. ✔ Every nondeterministic PDA can be converted to an equivalent deterministic PDA.

Question Number : 51 Question Id : 50939817973 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 data structure in a compiler is used for managing information about variables and their attributes?

Options :

1. ✘ Abstract syntax tree
2. ✔ Symbol table
3. ✘ Semantic stack
4. ✘ Parse table

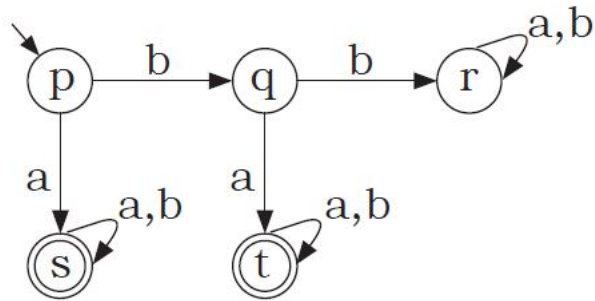
Question Number : 52 Question Id : 50939817974 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes

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

Correct Marks : 3 Wrong Marks : 1

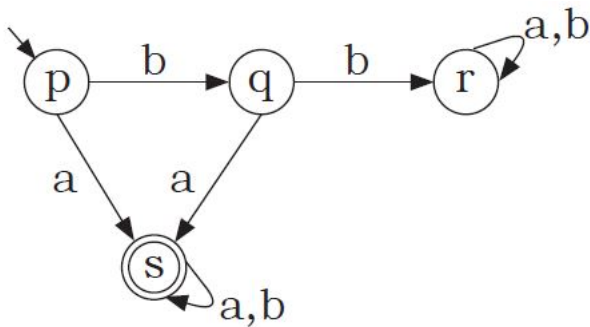
Question Label : Multiple Choice Question

A deterministic finite automaton (DFA) DD with alphabet  $\Sigma = \{a,b\}$

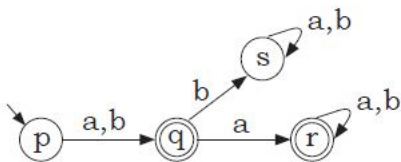


Which of the following finite state machines is a valid minimal DFA the same languages as DD?

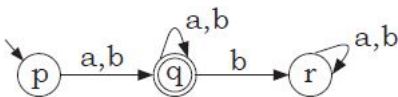
Options :



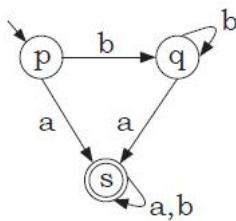
1. ✓



2. ✘



3. ✘



4. ✘

Question Number : 53 Question Id : 50939817975 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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



Let  $L_1$  be a recursive language. Let  $L_2$  and  $L_3$  be languages that are recursively enumerable but not recursive. Which of the following statements is not necessarily true?

Options :

1. ✓  $L_1 - L_3$  is recursively enumerable.
2. ✘  $L_2 - L_1$  is recursively enumerable.
3. ✘  $L_2 \cap L_1$  is recursively enumerable.
4. ✘  $L_2 \cup L_1$  is recursively enumerable.

Question Number : 54 Question Id : 50939817976 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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  $w$  is a string over  $(0+1)^*$ , then let  $n_0(w)$  denote the number of 0's in  $w$  and  $n_1(w)$  denote the number of 1's in  $w$ . Which one of the following languages is not regular?

Options :

1. ✘  $L = \{ w \in (0+1)^* \mid n_0(w) \text{ is a 3-digit prime} \}$
2. ✓  $L = \{ w \in (0+1)^* \mid n_0(w) - n_1(w) \leq 4 \}$
3. ✘  $L = \{ w \in (0+1)^* \mid n_0(w) \bmod 7 = n_1(w) \bmod 5 = 0 \}$
4. ✘  $L = \{ w \in (0+1)^* \mid \text{for every prefix } w' \text{ of } w, |n_0(w') - n_1(w')| \leq 2 \}$

Question Number : 55 Question Id : 50939817977 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the languages  $L_1 = \{ a^q b^q c^p \mid p, q > 0 \}$  and  $L_2 = \{ a^q b^p c^p \mid p, q > 0 \}$

Which one of the following statements is false?

Options :

1. ✓  $L_1 \cap L_2$  is a context free language.
2. ✘  $L_1 \cup L_2$  is a context free language.
3. ✘  $L_1$  and  $L_2$  are context free languages.
4. ✘  $L_1 \cap L_2$  is a context sensitive language.

Question Number : 56 Question Id : 50939817978 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 shift reduce parser carries out the actions specified within braces immediately after reducing with the corresponding rule of grammar

$P \rightarrow aaA$  {print "1"}

$P \rightarrow b$  {print "2"}

$A \rightarrow Pc$  {print "3"}

What is the translation of aaaabcc using the syntax directed translation scheme described by the above rules?

Options :

1. ✖ 11233

2. ✖ 11231

3. ✖ 33211

4. ✔ 23131

Question Number : 57 Question Id : 50939817979 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 problems is/are undecidable?

(i)  $G$  is CFG. Is  $L(G) = \Phi$ ?

(ii)  $G$  is CFG. Is  $L(G) = \Sigma^*$ ?

(iii)  $M$  is a Turing machine. Is  $L(M)$  regular?

(iv)  $A$  is a DFA and  $N$  is an NFA. Is  $L(A) = L(N)$ ?

Options :

1. ✖ (iii) only

2. ✖ (iii) and (iv) only

3. ✖ (i), (ii) and (iii) only

4. ✔ (ii) and (iii) only

Question Number : 58 Question Id : 50939817980 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 grammar  $A \rightarrow aAa \mid bA \mid c$  is

Options :

1. ✖ LL(1) but not LR(1)

2. ✖ LR(1) but not LL(1)

3. ✔ Both LL(1) and LR(1)

4. ✖ Neither LL(1) nor LR(1)

Question Number : 59 Question Id : 50939817981 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many 3-to-8 line decoders with an enable input are needed to construct a 6-to-64 line decoder without using any other logic gates?

Options :

1. ✖ 7
2. ✔ 9
3. ✖ 8
4. ✖ 10

Question Number : 60 Question Id : 50939817982 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

How many flip-flop circuits are needed to divide by 16?

Options :

1. ✖ 16
2. ✖ 8
3. ✔ 4
4. ✖ 2

Question Number : 61 Question Id : 50939817983 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

During opcode fetch, the state of S0 and S1 is

Options :

1. ✔ 11
2. ✖ 00
3. ✖ 01
4. ✖ 10

Question Number : 62 Question Id : 50939817984 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

$(1217)_8$  is equivalent to

Options :

1. ✖  $(1217)_{16}$
2. ✔  $(028F)_{16}$
3. ✖  $(0B17)_{16}$
4. ✖  $(2297)_{10}$

Question Number : 63 Question Id : 50939817985 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 \_\_\_\_\_ addressing mode, the operands are stored in the memory. The address of the corresponding memory location is given in a register which is specified in the instruction.

Options :

1. ✖ register direct
2. ✔ register indirect
3. ✖ base indexed
4. ✖ displacement

Question Number : 64 Question Id : 50939817986 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 in 8085 microprocessor performs  $HL = HL + HL$ ?

Options :

1. ✖ DAD D
2. ✔ DAD H
3. ✖ DAD B
4. ✖ DAD SP

Question Number : 65 Question Id : 50939817987 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 instruction → Add LOCA, R0 does \_\_\_\_\_.

Options :

1. ✖ Adds the value of LOCA to R0 and stores in the temp register

2. ✖ Adds the value of R0 to the address of LOCA
3. ✔ Adds the values of both LOCA and R0 and stores it in R0
4. ✖ Adds the value of LOCA with a value in accumulator and stores it in R0

Question Number : 66 Question Id : 50939817988 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Instructions which won't appear in the object program are called as \_\_\_\_\_.

Options :

1. ✖ Redundant instructions
2. ✖ Exceptions
3. ✖ Comments
4. ✔ Assembler Directives

Question Number : 67 Question Id : 50939817989 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 memory interleaving, the lower order bits of the address is used to

Options :

1. ✖ Get the data
2. ✔ Get the address of the module
3. ✖ Get the address of the data within the module
4. ✖ None of the mentioned

Question Number : 68 Question Id : 50939817990 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following C program

```
#include<stdio.h>
struct Ournode{
    char x, y, z;
};

int main( ){
    struct Ournode p = {'1', '0', 'a'+2 };
    struct Ournode *q = &p;
    printf ("%c, %c", *((char*)q+1), *((char*)q+2));
    return 0;
}
```

The output of this program is

Options :

1. ✓ 0, c
2. ✘ 0, a+2
3. ✘ '0', 'a+2'
4. ✘ '0', 'c'

Question Number : 69 Question Id : 50939817991 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following program

```
#include<stdio.h>
main( )
{
    int i, inp;
    float x, term=1, sum=0;
    scanf("%d %f", &inp, &x);
    for(i=1; i<=inp; i++)
    {
        term = term * x/i;
        sum = sum + term;
    }
    printf ("Result = %fn", sum);
}
```

The program computes the sum of which of the following series?

Options :

1. ✘  $x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \dots$

2. ✓  $x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots$

3. ✘  $1 + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \dots$

4. ✘  $1 + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots$

Question Number : 70 Question Id : 50939817992 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the C code fragment given below

```
typedef struct node {
    int data;
    node* next;
} node;

void join (node* m, node* n){
    node * p = n;
    while (p->next != NULL){
        p = p-> next;
    }
    p->next = m;
}
```

Assuming that m and n point to valid NULL terminated linked lists, invocation of join will

Options :

1. ✘ Append list m to the end of list n for all inputs

2. ✓

Either cause a null pointer dereference or append list m to the end

3. ✘ Cause a null pointer dereference for all inputs

4. ✘ Append list n to the end of list m for all inputs

Question Number : 71 Question Id : 50939817993 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 three dimensional array in 'C' is declared as  $\text{int A}[x][y][z]$ . Here, an item at the location  $\text{A}[p][q][r]$  can be computed as follows (where length of an integer)

Options :

1. ✘  $\&\text{A}[0][0][0] + w(y * z * q + z * p + r)$

2. ✔  $\&\text{A}[0][0][0] + w(y * z * p + z * q + r)$

3. ✘  $\&\text{A}[0][0][0] + w(x * y * p + z * q + r)$

4. ✘  $\&\text{A}[0][0][0] + w(x * y * q + z * p + r)$

Question Number : 72 Question Id : 50939817994 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following C program

```
void f(int, short);
void main()
{
    int i = 100;
    short s = 12;
    short *p = &s;
    _____ ; // call to f()
}
```

Which one of the following expressions, when placed in the blank above, will NOT result in a type checking error?

Options :

1. ✘  $f(s, *s)$

2. ✘  $i = f(i, s)$

3. ✘  $f(i, *s)$

4. ✔  $f(i, *p)$

Question Number : 73 Question Id : 50939817995 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 associativity of which of the following operators is Left to Right



Options :

1. ✖ Unary operator
2. ✖ Logical not
3. ✔ Array element access
4. ✖ Addressof

Question Number : 74 Question Id : 50939817996 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What will be output if you will compile and execute the following C language code?

```
struct marks{
int p:3;
int c:3;
int m:2;
};
void main( ){
struct marks s = {2,-6,5};
printf ("%d %d %d", s.p, s.c, s.m);
}
```

Options :

1. ✖ 2 -6 5
2. ✖ 2 -6 1
3. ✔ 2 2 1
4. ✖ Compiler error

Question Number : 75 Question Id : 50939817997 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What will be output if you will compile and execute the following C language code?

```
void main() {  
    int i;  
    float a = 5.2;  
    char *ptr;  
    ptr = (char *)&a;  
    for (i=0, i<=3; i++)  
        printf("%d", *ptr++);  
}
```

Options :

1. ✖ 0 0 0 0
2. ✖ GarbageGarbageGarbageGarbage
3. ✖ 102 56 -80 32
4. ✔ 102 102 -90 64

Question Number : 76 Question Id : 50939817998 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What will be output if you will compile and execute the following C language code?

```
#include "string.h"  
void main() {  
    clrscr( );  
    printf("%d %d", sizeof("string"), strlen("string"));  
    getch( );  
}
```

Options :

1. ✖ 6 6
2. ✖ 7 7
3. ✖ 6 7
4. ✔ 7 6

Question Number : 77 Question Id : 50939817999 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes Time interval to replay(In Seconds) : 0 Allow Volume Control : Yes

Correct Marks : 3 Wrong Marks : 1

Question Label : Multiple Choice Question

What will be output if you will compile and execute the following C language code?

```
int extern x;
void main( )
{
    printf(“%d”, x);
    x=2;
}
int x = 23;
```

Options :

1. ✖ 0
2. ✖ 2
3. ✖ 23
4. ✔ Compiler error

Question Number : 78 Question Id : 50939818000 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 hash table with 10 buckets with one slot per bucket is depicted in Figure. The symbols, S1 to S7 are initially entered using a hashing function with linear probing. The maximum number of comparisons needed in searching an item that is not present is

S7
S1
S4
S2
S5
S6
S3

Options :

1. ✖ 6
2. ✖ 4
3. ✔ 5
4. ✖ 3

Question Number : 79 Question Id : 50939818001 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Let  $W(n)$  and  $A(n)$  denote respectively, the worst case and average ca of an algorithm executed on an input of size  $n$ . Which of the follow TRUE?

Options :

1. ✖  $A(n) = \Omega(W(n))$

2. ✖  $A(n) = \Theta(W(n))$

3. ✔  $A(n) = O(W(n))$

4. ✖  $A(n) = o(W(n))$

Question Number : 80 Question Id : 50939818002 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider a hash table with 9 slots. The hash function is  $h(k) = k \bmod 9$ . The collisions are resolved by chaining. The following 9 keys are inserted in the order: 5, 28, 19, 15, 20, 33, 12, 17, 10. The maximum, minimum and average chain lengths in the hash table, respectively are

Options :

1. ✔ 3, 0 and 1

2. ✖ 3, 3 and 3

3. ✖ 4, 0 and 1

4. ✖ 3, 0 and 2

Question Number : 81 Question Id : 50939818003 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 program attempts to generate as many permutations as possible of the string, 'abcd' by pushing the characters a, b, c, d in the same order onto a stack, but it may pop off the top character at any time. Which one of the following strings CANNOT be generated using this program?

Options :

1. ✖ abcd

2. ✖ dcba

3. ✖ cbad

4. ✔ cabd

Question Number : 82 Question Id : 50939818004 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider the following pseudocode. What is the total number of multiplications to be performed?

D = 2

for i = 1 to n do

for j = i to n do

for k = j+1 to n do

D = D \* 3

Options :

1. ✖ Half of the product of the 3 consecutive integers

2. ✖ One-third of the product of the 3 consecutive integers

3. ✔ One-sixth of the product of the 3 consecutive integers

4. ✖ None of these

Question Number : 83 Question Id : 50939818005 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 queue is implemented using an array such that ENQUEUE and DEQUEUE operations are performed efficiently. Which one of the following statements is CORRECT (n refers to the number of items in the queue)?

Options :

1. ✔ Both operations can be performed in  $O(1)$  time.

2. ✖ At most one operation can be performed in  $O(1)$  time but the worst case time for the other operation will be  $\Omega(n)$ .

3. ✖ The worst case time complexity for both operations will be  $\Omega(n)$ .

4. ✖ Worst case time complexity for both operations will be  $\Omega(\log n)$ .

Question Number : 84 Question Id : 50939818006 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 worst case running times of Insertion sort, Merge sort and Quick sort, respectively are:

Options :

1. ✖  $\Theta(n \log n)$ ,  $\Theta(n \log n)$  and  $\Theta(n^2)$
2. ✖  $\Theta(n^2)$ ,  $\Theta(n^2)$  and  $\Theta(n \log n)$
3. ✖  $\Theta(n^2)$ ,  $\Theta(n \log n)$  and  $\Theta(n \log n)$
4. ✔  $\Theta(n^2)$ ,  $\Theta(n \log n)$  and  $\Theta(n^2)$

Question Number : 85 Question Id : 50939818007 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 minimum number of arithmetic operations required to evaluate the polynomial  $P(X)=x^5+4x^3+6x+5$  for a given value of x using only temporary variable

Options :

1. ✖ 6
2. ✔ 7
3. ✖ 8
4. ✖ 9

Question Number : 86 Question Id : 50939818008 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 the tightest upper bound that represents the time complexity of inserting an object into a binary search tree of n nodes?

Options :

1. ✖  $O(1)$
2. ✖  $O(\log n)$
3. ✔  $O(n)$
4. ✖  $O(n \log n)$

Question Number : 87 Question Id : 50939818009 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 are some events that occurs after a device controller issues an interrupt while process L is under execution

- (P) The processor pushes the process status of L onto the control stack
- (Q) The processor finishes the execution of the current instruction
- (R) The processor executes the interrupt service routine
- (S) The processor pops the process status of L from the control stack
- (T) The processor loads the new PC value based on the interrupt

Which one of the following is the correct order in which the events above occur?

Options :

- 1. ✓ QPTRS
- 2. ✘ PTRSQ
- 3. ✘ TRPQS
- 4. ✘ QTPRS

Question Number : 88 Question Id : 50939818010 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider a process executing on an operating system that uses demand paging. The average time for a memory access in the system is M units if the corresponding memory page is available in memory and D units if the memory access causes a page fault. It has been experimentally measured that the average time taken for a memory access in the process is X units. Which one of the following is the correct expression for the page fault rate experienced by the process?

Options :

- 1. ✘  $(D - M)/(X - M)$
- 2. ✓  $(X - M)/(D - M)$
- 3. ✘  $(D - X)/(D - M)$
- 4. ✘  $(X - M)/(D - X)$

Question Number : 89 Question Id : 50939818011 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 a system, there are three types of resources E, F and G. Four processes P1, P2 and P3 execute concurrently. At the outset, the processes have their maximum resource requirements using a matrix named Max. For example, Max[P2, F] is the maximum number of instances of F that P2 requires. The number of instances of the resources allocated to the processes at any given state is given by a matrix named Allocation.

Consider a state of the system with the Allocation matrix as shown in which 3 instances of E and 3 instances of F are the only resources available.

Allocation			
	E	F	G
P0	1	0	1
P1	1	1	2
P2	1	0	3
P3	2	0	0

Max		
	E	F
P0	4	3
P1	2	1
P2	1	3
P3	5	4

From the perspective of deadlock avoidance, which one of the following is true?

Options :

1. ✓ The system is in safe state.
2. ✗ The system is not in safe state, but would be safe if one more instance of E were available.
3. ✗ The system is not in safe state, but would be safe if one more instance of F were available.
4. ✗ The system is not in safe state, but would be safe if one more instance of G were available.

Question Number : 90 Question Id : 50939818012 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Let  $m[0] \dots m[4]$  be mutexes (binary semaphores) and  $P[0] \dots P[4]$  be processes. Suppose each process  $P[i]$  executes the following

```

Wait (m[i]); wait(m[(i+1) mode 4]);
- - - -
release (m[i]); release(m[(i+1) mode 4]);
    
```

This could cause

Options :



1. ✖ Thrashing
2. ✔ Deadlock
3. ✖ Starvation, but not deadlock
4. ✖ None of these

Question Number : 91 Question Id : 50939818013 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 are TRUE?

- I. Shortest remaining time first scheduling may cause starvation
- II. Preemptive scheduling may cause starvation
- III. Round robin is better than FCFS in terms of response time

Options :

1. ✖ I only
2. ✔ I, II and III
3. ✖ I and III only
4. ✖ II and III only

Question Number : 92 Question Id : 50939818014 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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

Consider a system having  $m$  resources of the same type. These resources are shared by 3 processes A, B and C which have peak demand of 3, 4 and 6 respectively. For what value of  $m$  deadlock will not occur?

Options :

1. ✖ 7
2. ✖ 9
3. ✔ 13
4. ✖ 10

Question Number : 93 Question Id : 50939818015 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 two of the following are true regarding the distance-vector and link-state routing protocols?

- (a) Link-state sends its complete routing table out all active interfaces on periodic time intervals
- (b) Distance-vector sends its complete routing table out all active interfaces on periodic time intervals
- (c) Link-state sends updates containing the state of its own links to all routers in the internetwork
- (d) Distance-vectors sends updates containing the state of its own links to all routers in the internetwork

Options :

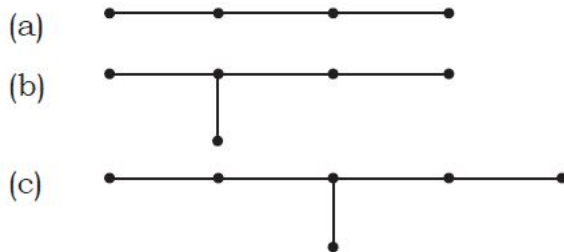
- 1. ✖ (a) only
- 2. ✖ (c) only
- 3. ✖ (b) and (c) only
- 4. ✔ (a) and (d) only

Question Number : 94 Question Id : 50939818016 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 tree with  $n$  vertices is called graceful, if its vertices can be labelled with integers  $1, 2, \dots, n$  such that the absolute value of the difference of the labels of adjacent vertices are all different. Which of the following trees are graceful?



Options :

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

Question Number : 95 Question Id : 50939818017 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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(s) is/are FALSE?

- I. A connected multigraph has a Euler Circuit if and only if each vertex has even degree.
- II. A connected multigraph has an Euler path but not an Euler circuit only if it has exactly two vertices of odd degree.
- III. A Complete graph ( $K_n$ ) has a Hamilton Circuit whenever  $n \geq 3$ .
- IV. A cycle over six vertices ( $C_6$ ) is not a bipartite graph but a cycle over 3 vertices is bipartite.

Options :

- 1. ✖ I only
- 2. ✖ I and III
- 3. ✖ III only
- 4. ✔ IV only

Question Number : 96 Question Id : 50939818018 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 end points of a line are (0, 0) and (6, 18). Compute each value of y as x steps from 0 to 3, by using equation of straight line

Options :

- 1. ✔ For  $x = 0, y = 0$ ;  $x = 1, y = 3$ ;  $x = 2, y = 6$ ;  $x = 3, y = 9$
- 2. ✖ For  $x = 0, y = 1$ ;  $x = 1, y = 3$ ;  $x = 2, y = 4$ ;  $x = 3, y = 9$
- 3. ✖ For  $x = 0, y = 2$ ;  $x = 1, y = 3$ ;  $x = 2, y = 6$ ;  $x = 3, y = 9$
- 4. ✖ For  $x = 0, y = 0$ ;  $x = 1, y = 3$ ;  $x = 2, y = 4$ ;  $x = 3, y = 6$

Question Number : 97 Question Id : 50939818019 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 a TDM medium access control bus LAN, each station is assigned a time slot per cycle for transmission. Assume that the length of each time slot is 100 bits plus the end-to-end propagation delay. Assume a propagation speed of  $2 \times 10^8$  m/sec. The length of the LAN is 1 km with a bandwidth of 20 Mbps. The maximum number of stations that can be allowed in the LAN such that the throughput of each station can be  $2/3$  Mbps is

Options :

1. ✖ 3
2. ✖ 5
3. ✔ 10
4. ✖ 20

Question Number : 98 Question Id : 50939818020 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 a host machine that uses the token bucket algorithm for congestion control, the token bucket has a capacity of 1 Megabyte and the maximum output rate is 20 Megabytes per second. Tokens arrive at a rate to sustain an output rate of 10 Megabytes per second. The token bucket is currently full and the host has to send 12 Megabytes of data. The minimum time required to transmit the data is \_\_\_\_\_ seconds.

Options :

1. ✔ 1.1
2. ✖ 0.1
3. ✖ 2.1
4. ✖ 2.0

Question Number : 99 Question Id : 50939818021 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 key issue stressed by an Agile philosophy of software engineering?

Options :

1. ✖ The importance of self-organizing teams as well as communication and collaboration between team members and customers

2. ✖ Recognition that change represent opportunity
3. ✖ Emphasis on rapid delivery of software that satisfies the customer
4. ✔ Having a separate testing phase after a build phase

Question Number : 100 Question Id : 50939818022 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 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 are TRUE?

- I. The context diagram should depict the system as a single bubble.
- II. External entities should be identified clearly at all levels of DFDs.
- III. Control information should not be represented in a DFD.
- IV. A data store can be connected weather to another data store or to an external entity.

Options :

1. ✖ II and III
2. ✖ II and IV
3. ✔ I and III
4. ✖ I, II and III