

PREVIEW QUESTION BANK(Dual)

Module Name : Computer Science and Applications
Exam Date : 17-Jun-2023 Batch : 09:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negativ Marks																																								
Objective Question																																												
1	1701	The following table shows the number of employees in an organization in five different Cities-Delhi, Mumbai, Bangaluru, Hyderabad and Gurgaon with total number of employees being 4260 in the organization, along with the percentage (%) distribution of employees workin in four departments -HR, Finance, IT and Accounts. Based on the data in the table answer the questions that follows. <u>City-wise details of Employees in an Organization</u> <table><tr><th rowspan="2">City</th><th rowspan="2">Number of Employees</th><th colspan="4">Percentage (%) Distribution of Employees in</th></tr><tr><th>HR</th><th>Finance</th><th>IT</th><th>Accounts</th></tr><tr><td>Delhi</td><td>900</td><td>-</td><td>18%</td><td>-</td><td>28%</td></tr><tr><td>Mumbai</td><td>760</td><td>15%</td><td>-</td><td>30%</td><td>-</td></tr><tr><td>Bengaluru</td><td>-</td><td>18%</td><td>20%</td><td>-</td><td>32%</td></tr><tr><td>Hydrabad</td><td>-</td><td>-</td><td>25%</td><td>18%</td><td>35%</td></tr><tr><td>Gurgaon</td><td>700</td><td>20%</td><td>22%</td><td>-</td><td>20%</td></tr></table> Note: 1. Some values are missing in the table (marked as '___') that you are expected to calculate if required. 2. Each employee works in only one department. What is the total number of employees in Mumbai and Gurgaon who work in IT department? 1. 482 2. 452 3. 570 4. 494	City	Number of Employees	Percentage (%) Distribution of Employees in				HR	Finance	IT	Accounts	Delhi	900	-	18%	-	28%	Mumbai	760	15%	-	30%	-	Bengaluru	-	18%	20%	-	32%	Hydrabad	-	-	25%	18%	35%	Gurgaon	700	20%	22%	-	20%		
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निम्नलिखित तालिका में पाँच विभिन्न शहरों - दिल्ली, मुम्बई, बेंगलुरु, हैदराबाद और गुड़गाँव में किसी संगठन में कर्मचारियों की संख्या दर्शायी गई है। उस संगठन में कर्मचारियों की कुल संख्या 4260 है। साथ ही, चार विभागों - मानव संसाधन (एचआर), वित्त, आईटी और लेखा में कार्यरत कर्मचारियों के वितरण की प्रतिशतता भी दी गई है। इस तालिका में दिए गए आंकड़ों के आधार पर नीचे दिए गए प्रश्नों के उत्तर दीजिए।

किसी संगठन में कर्मचारियों का शहरवार व्योरा

शहर	कर्मचारियों की संख्या	कर्मचारियों के वितरण की प्रतिशतता			
		एचआर	वित्त	आईटी	लेखा
दिल्ली	900	-	18%	-	28%
मुम्बई	760	15%	-	30%	-
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गुड़गाँव	700	20%	22%	-	20%

नोट:

- (1) तालिका में '_____' के रूप में चिह्नित कुछ मान नहीं दिए गए हैं। जिनका परिकलन, यदि आवश्यक हो, किया जाना अपेक्षित है।
- (2) प्रत्येक कर्मचारी केवल एक ही विभाग में कार्यरत है।

मुम्बई और गुड़गाँव में आईटी विभाग में कार्यरत कर्मचारियों की कुल संख्या कितनी है?

1. 482
2. 452
3. 570
4. 494

A1 1

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1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

2 1702

The following table shows the number of employees in an organization in five different Cities-Delhi, Mumbai, Bangaluru, Hyderabad and Gurgaon with total number of employees being 4260 in the organization, along with the percentage (%) distribution of employees working in four departments -HR, Finance, IT and Accounts. Based on the data in the table answer the questions that follows.

City-wise details of Employees in an Organization

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Hyderabad	-	-	25%	18%	35%
Gurgaon	700	20%	22%	-	20%

Note: 1. Some values are missing in the table (marked as '-') that you are expected to calculate if required.

2. Each employee works in only one department.

If in Delhi, number of employees who work in Accounts department are 40% more than the number of employees who work in HR department, then what is the number of employees who work in IT department in Delhi?

1. 266
2. 306
3. 352
4. 294

निम्नलिखित तालिका में पाँच विभिन्न शहरों - दिल्ली, मुम्बई, बेंगलुरु, हैदराबाद और गुड़गाँव में किसी संगठन में कर्मचारियों की संख्या दर्शायी गई है। उस संगठन में कर्मचारियों की कुल संख्या 4260 है। साथ ही, चार विभागों - मानव संसाधन (एचआर), वित्त, आईटी और लेखा में कार्यरत कर्मचारियों के वितरण की प्रतिशतता भी दी गई है। इस तालिका में दिए गए आंकड़ों के आधार पर नीचे दिए गए प्रश्नों के उत्तर दीजिए।

किसी संगठन में कर्मचारियों का शहरवार व्योरा

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		एचआर	वित्त	आईटी	लेखा
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नोट:

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- (2) प्रत्येक कर्मचारी केवल एक ही विभाग में कार्यरत है।

यदि दिल्ली में लेखा विभाग में कार्यरत कर्मचारियों की संख्या एचआर विभाग में कार्यरत कर्मचारियों की संख्या की तुलना में 40% अधिक है, तो दिल्ली में आईटी विभाग में कार्यरत कर्मचारियों की संख्या कितनी है?

1. 266
2. 306
3. 352
4. 294

A1 1
:
1
A2 2
:

2
A3
:
3
A4
:
4

Objective Question

3 1703

The following table shows the number of employees in an organization in five different Cities-Delhi, Mumbai, Bangaluru, Hyderabad and Gurgaon with total number of employees being 4260 in the organization, along with the percentage (%) distribution of employees workin in four departments -HR, Finance, IT and Accounts. Based on the data in the table answer the questions that follows.

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Gurgaon	700	20%	22%	-	20%

Note: 1. Some values are missing in the table (marked as '___') that you are expected to calculate if required.

2. Each employee works in only one department.

If number of employees in Bengaluru is 10% less than the number of employees in Hyderabad, then what is the difference between the number of employees who work in Accounts department in these 2 cities?

1. 244
2. 208
3. 194
4. 270

निम्नलिखित तालिका में पाँच विभिन्न शहरों - दिल्ली, मुम्बई, बेंगलुरु, हैदराबाद और गुड़गाँव में किसी संगठन में कर्मचारियों की संख्या दर्शायी गई है। उस संगठन में कर्मचारियों की कुल संख्या 4260 है। साथ ही, चार विभागों - मानव संसाधन (एचआर), वित्त, आईटी और लेखा में कार्यरत कर्मचारियों के वितरण की प्रतिशतता भी दी गई है। इस तालिका में दिए गए आंकड़ों के आधार पर नीचे दिए गए प्रश्नों के उत्तर दीजिए।

किसी संगठन में कर्मचारियों का शहरवार व्योरा

शहर	कर्मचारियों की संख्या	कर्मचारियों के वितरण की प्रतिशतता			
		एचआर	वित्त	आईटी	लेखा
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- (2) प्रत्येक कर्मचारी केवल एक ही विभाग में कार्यरत है।

यदि बेंगलुरु में कर्मचारियों की संख्या हैदराबाद में कर्मचारियों की संख्या की तुलना में 10 प्रतिशत कम है, तो इन दो शहरों में लेखा विभाग में कार्यरत कर्मचारियों और इन दो शहरों में वित्त विभाग में कार्यरत कर्मचारियों की संख्या के बीच का अंतर कितना है?

1. 244
2. 208
3. 194
4. 270

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

4 1704

The following table shows the number of employees in an organization in five different Cities-Delhi, Mumbai, Bengaluru, Hyderabad and Gurgaon with total number of employees being 4260 in the organization, along with the percentage (%) distribution of employees working in four departments -HR, Finance, IT and Accounts. Based on the data in the table answer the questions that follows.

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Gurgaon	700	20%	22%	-	20%

Note: 1. Some values are missing in the table (marked as '-') that you are expected to calculate if required.

2. Each employee works in only one department.

If the number of employees in Bengaluru is 10% less than the number of employees in Hyderabad, then the total number of employees who work in Finance and Accounts departments of the organization is more than 415 in exactly ____ cities.

1. two
2. three
3. four
4. five

निम्नलिखित तालिका में पाँच विभिन्न शहरों - दिल्ली, मुम्बई, बेंगलुरु, हैदराबाद और गुड़गाँव में किसी संगठन में कर्मचारियों की संख्या दर्शायी गई है। उस संगठन में कर्मचारियों की कुल संख्या 4260 है। साथ ही, चार विभागों - मानव संसाधन (एचआर), वित्त, आईटी और लेखा में कार्यरत कर्मचारियों के वितरण की प्रतिशतता भी दी गई है। इस तालिका में दिए गए आंकड़ों के आधार पर नीचे दिए गए प्रश्नों के उत्तर दीजिए।

किसी संगठन में कर्मचारियों का शहरवार व्योरा

शहर	कर्मचारियों की संख्या	कर्मचारियों के वितरण की प्रतिशतता			
		एचआर	वित्त	आईटी	लेखा
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नोट:

- (1) तालिका में '_____' के रूप में चिह्नित कुछ मान नहीं दिए गए हैं। जिनका परिकलन, यदि आवश्यक हो, किया जाना अपेक्षित है।
- (2) प्रत्येक कर्मचारी केवल एक ही विभाग में कार्यरत है।

यदि बेंगलुरु में कर्मचारियों की संख्या हैदराबाद में कर्मचारियों की संख्या की तुलना में 10% कम है, तो संगठन में वित्त और लेखा विभाग में कार्यरत कर्मचारियों की कुल संख्या ठीक _____ शहरों में 415 से अधिक है।

1. दो
2. तीन
3. चार
4. पाँच

A1 1

:

1

A2 2

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2
A3
:
3
A4
:
4

Objective Question

5 1705

The following table shows the number of employees in an organization in five different Cities-Delhi, Mumbai, Bangaluru, Hyderabad and Gurgaon with total number of employees being 4260 in the organization, along with the percentage (%) distribution of employees working in four departments -HR, Finance, IT and Accounts. Based on the data in the table answer the questions that follows.

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Gurgaon	700	20%	22%	-	20%

Note: 1. Some values are missing in the table (marked as '-') that you are expected to calculate if required.

2. Each employee works in only one department.

If number of employees who work in Accounts department in Mumbai is 38 more than the number of employees who work in IT department in Gurgaon, then what is the number of employees who work in Finance department in Mumbai?

1. 114
2. 120
3. 98
4. 124

निम्नलिखित तालिका में पाँच विभिन्न शहरों - दिल्ली, मुम्बई, बेंगलुरु, हैदराबाद और गुड़गाँव में किसी संगठन में कर्मचारियों की संख्या दर्शायी गई है। उस संगठन में कर्मचारियों की कुल संख्या 4260 है। साथ ही, चार विभागों - मानव संसाधन (एचआर), वित्त, आईटी और लेखा में कार्यरत कर्मचारियों के वितरण की प्रतिशतता भी दी गई है। इस तालिका में दिए गए आंकड़ों के आधार पर नीचे दिए गए प्रश्नों के उत्तर दीजिए।

किसी संगठन में कर्मचारियों का शहरवार व्योरा

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		एचआर	वित्त	आईटी	लेखा
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मुम्बई	760	15%	-	30%	-
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नोट:

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- (2) प्रत्येक कर्मचारी केवल एक ही विभाग में कार्यरत है।

यदि मुम्बई में लेखा विभाग में कार्यरत कर्मचारियों की संख्या गुड़गाँव में आईटी विभाग में कार्यरत कर्मचारियों की संख्या की तुलना में 38 अधिक है, तो मुम्बई में वित्त विभाग में कार्यरत कर्मचारियों की संख्या कितनी है?

1. 114
2. 120
3. 98
4. 124

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

6 1706

Which of the following are the interrelated phases created by John Keller for stimulating and sustaining learner's motivation in the teaching and learning process?

- A. Attention
- B. Authority
- C. Relevance
- D. Confidence
- E. Satisfaction

Choose the most appropriate answer from the options given below:

1. A, C, D and E only
2. B, D and E only
3. A, C and D only
4. B and C only

निम्नलिखित में से कौन-से शिक्षण और अधिगम प्रक्रिया में अधिगमकर्ता के अभिप्रेरण को बढ़ाने और बनाए रखने के लिए जॉन केलर द्वारा सृजित परस्पर संबंधित चरण है?

- A. ध्यान
- B. प्राधिकार
- C. प्रासंगिकता
- D. आत्मविश्वास
- E. संतोष

नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए।

- 1. केवल A, C, D और E
- 2. केवल B, D और E
- 3. केवल A, C और D
- 4. केवल B और C

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

7 1707

The process of comparing a student's performance against his/her previous performance is known as:

- 1. Diagnostic evaluation
- 2. Summative Assessment
- 3. Ipsative Assessment
- 4. Informal Assessment

किसी छात्र के प्रदर्शन की उसके पूर्व प्रदर्शन से तुलना करने की प्रक्रिया को क्या कहा जाता है?

- 1. नैदानिक मूल्यांकन
- 2. समाकलनात्मक आकलन
- 3. स्वमानक आकलन
- 4. अनौपचारिक आकलन

A1
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A2
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A3
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A4
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4

Objective Question

8 1708

Match List I with List II

Match List I with List II

Online teaching tool		Advantages for Teachers	
A.	Learning Management System (LMS)	I.	Encouraging student engagement and collaboration fostering critical thinking and problem solving
B.	Video conferencing	II.	Creating and administering assessments quickly and easily automating grading and feedback
C.	Discussion forums	III.	Streamlining course administration, managing student record and grades
D.	Online Assessment platform	IV.	Delivering engaging and interactive class sessions connecting with remote learners

Choose the correct answer from the options given below:

1. A-IV, B-III, C-I, D-II
2. A-I, B-IV, C-II, D-III
3. A-II, B-III, C-IV, D-I
4. A-III, B-IV, C-I, D-II

सूची I के साथ सूची II का मिलान कीजिए।

सूची I (ऑनलाईन शिक्षण उपकरण)		सूची II (शिक्षकों के लिए लाभ)	
A.	अधिगम प्रबंधन प्रणाली (एलएमएस)	I.	छात्र की तल्लीनता और सहयोग बढ़ाना, समालोचनात्मक सोच और समस्या समाधान को प्रोत्साहित करना
B.	विडियो कॉन्फ्रेंसिंग	II.	मूल्यांकन तेजी से और शीघ्रता से सृजित और प्रशासित करना, ग्रेडिंग और फीडबैक स्वचालित करना
C.	चर्चा मंच	III.	पाठ्यक्रम प्रचालन को सरल बनाना, छात्रों के रिकॉर्ड और ग्रेड का प्रबंधन करना
D.	ऑनलाइन मूल्यांकन मंच	IV.	रोचक और अन्तः क्रियात्मक कक्षा सत्र करना, दूरस्थ अधिगमकर्ताओं के साथ जुड़ना

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. A-IV, B-III, C-I, D-II
2. A-I, B-IV, C-II, D-III
3. A-II, B-III, C-IV, D-I
4. A-III, B-IV, C-I, D-II

A1 1

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1

A2 2

:

2

A3 3

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3

A4 4

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4

Objective Question

9	1709	The teaching that provides all students with challenging instructions and uses supports when needed but removes those supports as students become able to handle more on their own is called as : 1. Recessive teaching 2. Active teaching 3. Adaptive teaching 4. Problem-oriented teaching ऐसे शिक्षण को क्या कहा जाता है जिसमें सभी छात्रों को चुनौतीपूर्ण अनुदेश दिए जाते हैं और आवश्यकतानुसार सहायता प्रदान की जाती है, परंतु जब छात्र स्वयं इन सभी को संभालने में सक्षम हो जाते हैं, तब सहायता हटा ली जाती है। 1. पश्चगामी शिक्षण 2. सक्रिय शिक्षण 3. अनुकूलनात्मक शिक्षण 4. समस्यापरक शिक्षण A1 : 1 A2 : 2 A3 : 3 A4 : 4
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Objective Question

10	1710	Given below are two statements: Statement I: Metacognition is the understanding about one's own use of language. Statement II: Mnemonics is the knowledge about our own thinking processes In the light of the above statements, choose the most appropriate answer from the options given below. 1. Both Statement I and Statement II are correct 2. Both Statement I and Statement II are incorrect 3. Statement I is correct but Statement II is incorrect 4. Statement I is incorrect but Statement II is correct नीचे दो कथन दिए गए हैं: कथन I : अधिसंज्ञान (मेटाकॉग्निशन) अपने ही भाषा-प्रयोग की समझ है। कथन II : स्मृति विज्ञान अपनी ही सोचने की प्रक्रिया का ज्ञान है। उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए। 1. कथन I और II दोनों सही हैं 2. कथन I और II दोनों गलत हैं 3. कथन I सही है, लेकिन कथन II गलत है 4. कथन I गलत है, लेकिन कथन II सही है A1 : 1
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A2 2
:
2
A3 3
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3
A4 4
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4

Objective Question

11 1711

Given below are two statements:

Statement I: A Cohort is a population whose members have some specific characteristics in common.

Statement II: In a prospective study, the researcher relies on people's memories and recollections of the past.

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : सहगण (कोहोर्ट) वह जनसंख्या है जिसके सदस्यों में कुछ विशिष्ट अभिलक्षण समान होती हैं।

कथन II : भविष्यालक्षी अध्ययन में अनुसंधानकर्ता लोगों की स्मृतिओं और अनुस्मरणों पर निर्भर रहता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

12 1712

When participants drop out of a study, leading to change in the nature of the sample, it would cause which of the following threats to internal validity?

1. Selection threat
2. Attrition threat
3. History threat
4. Testing threat

जब प्रतिभागी किसी अध्ययन से बीच में ही बाहर हो जाते हैं, जिससे प्रतिदर्श के स्वरूप में परिवर्तन हो जाता है, तो इससे आंतरिक वैधता को निम्नलिखित में से कौन सा खतरा हो सकता है?

1. चयन संबंधी खतरा
2. क्षयण संबंधी खतरा
3. इतिहास संबंधी खतरा
4. परीक्षण संबंधी खतरा

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

13 1713 According to UGC Regulations 2018 on plagiarism, common knowledge or coincidental terms, up to how many consecutive words shall be excluded while checking similarity for detection of plagiarism

1. 8
2. 12
3. 14
4. 18

साहित्यिक चोरी, सामान्य ज्ञान और सांयोगिक शब्दों के बारे में यूजीसी विनियम 2018 के अनुसार, साहित्यिक चोरी का पता लगाने के लिए समानता की जाँच करते समय कितने क्रमागत शब्दों को बाहर (एक्सक्लूड) किया जाएगा?

1. 8
2. 12
3. 14
4. 18

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

14 1714

Given below are two statements:

Statement I: The risk of rejecting the null hypothesis when it should be confirmed, is more at 0.05 p-level than at 0.01 p-level

Statement II: The risk of committing a type-I error is lower at 0.05 p-level than at 0.01 p-level

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : शून्य परिकल्पना की पुष्टि किए जाने के बजाय उसे अस्वीकार करने का जोखिम 0.01 p-स्तर की तुलना में 0.05 p-स्तर पर अधिक होता है।

कथन II : टाइप-I त्रुटि करने का जोखिम 0.01 p-स्तर की तुलना में 0.05 p-स्तर पर कम होता है।

उपरोक्त कथन के आलोक में नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

A1 1
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1

A2 2
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2

A3 3
:

3

A4 4
:

4

Objective Question

15 1715

Given below are two statements:

Statement I: A dichotomous variable is the one which has more than two categories.

Statement II: A nominal variable can have more than two categories.

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : द्विभाजी पर में दो से अधिक श्रेणियां होती हैं।

कथन II : नामित चर में दो से अधिक श्रेणियां हो सकती हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

A1
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1

A2
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A3
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3

A4
:

4

Objective Question

16 1716

According to Abhinava Gupta, the Rasa theory of communication provided an opportunity for audience's

1. Literary taste
2. Materialistic welfare
3. Socialisation
4. Moral cultivation

अभिनव गुप्त के अनुसार सम्प्रेषण के रस सिद्धांत ने श्रोताओं के _____ के लिए अवसर प्रदान किया?

1. साहित्यिक आस्वाद
2. भौतिक कल्याण
3. समाजीकरण
4. नैतिक परिष्कार

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

17 1717

When people metacommunicate, they are sending messages about

1. Senders
2. receivers
3. Channels
4. Messages

जब लोग अधिसम्प्रेषण करते हैं, वे _____ बारे में संदेश भेज रहे हैं।

1. प्रेषक
2. प्राप्तकर्ता
3. माध्यम
4. संदेश

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

18 1718 Media interactivity is experienced at different levels in different ____ relations.

1. Political
2. Economic
3. Techno-social
4. Techno-ethical

विभिन्न _____ संबंधों में विभिन्न स्तरों पर मीडिया अंतःक्रियात्मकता अनुभूत होती है।

1. राजनीतिक
2. आर्थिक
3. तकनीकी - सामाजिक
4. तकनीकी - नैतिक

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

19 1719

Given below are two statements:

Statement I: There is an argument that the emergence of cable and television audiences has brought in more personalised and interactive media culture.

Statement II: Within an integrated communication system, messages do not acquire communicability and socialisation.

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : एक युक्ति है कि केबल और टेलीविजन के दर्शकों के आविर्भाव से अधिक वैयक्तिक और अन्तः क्रियात्मक मीडिया संस्कृति की शुरुआत हुई है।

कथन II : एकीकृत सम्प्रेषण प्रणाली के भीतर संदेशों में सम्प्रेषणीयता और समाजीकरण नहीं होते हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

20 1720

Given below are two statements:

Statement I: The electronic space of Internet has failed to displace the Institutional space in a society even an iota.

Statement II: The Internet communication has broken down the hierarchies of race, ethnicity and gender

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : इंटरनेट का इलेक्ट्रॉनिकी जगह (स्पेस) समाज में संस्थागत जगह को किञ्चित मात्र विस्थापित करने में असफल रहा है।

कथन II : ईंटरनेट सम्प्रेषण ने नस्ल, नृजातीयता और लिंग की सोपानिकी को नष्ट कर दिया है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य हैं, लेकिन कथन II असत्य है
4. कथन I असत्य हैं, लेकिन कथन II सत्य है

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

21 1721

Determine the next term in the following number series

3,15,35,63,?,.....

1. 89
2. 91
3. 99
4. 106

संख्या श्रृंखला में आगामी पद ज्ञात करें

3, 15, 35, 63 ?

1. 89
2. 91
3. 99
4. 106

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

22 1722

In a certain coding scheme , 'WOMEN' is coded as '65'. How will the 'CHILDREN' be coded in this scheme?

1. 178
2. 143
3. 116
4. 78

किसी कूटलेखन योजना में, 'WOMEN' को '65' के रूप में कूटरचित किया गया है। 'CHILDREN' को इस योजना में कैसे कूटरचित किया जाएगा?

1. 178
2. 143
3. 116
4. 78

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

23 1723

If $x = 0.25$ and $y = 0.16$, the value of the expression $\frac{y}{x} + \sqrt{x}\sqrt{y} - xy$ is

1. 0.6
2. 0.8
3. 0.45
4. 0.58

यदि $x = 0.25$ और $y = 0.16$ है तो व्यंजक $\frac{y}{x} + \sqrt{x}\sqrt{y} - xy$ का मान क्या होगा?

1. 0.6
2. 0.8
3. 0.45
4. 0.58

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

24 1724

If A, B and C can complete a piece of work in 3, 5 and 6 days respectively, they together will complete the work in

1. $1\frac{3}{7}$ days
2. $2\frac{4}{7}$ days
3. $1\frac{1}{2}$ days
4. $2\frac{1}{3}$ days

यदि A, B और C किसी कार्य को क्रमशः 3, 5 और 6 दिन में पूर्ण कर सकते हैं, वे एक साथ मिलकर कार्य को कितने दिनों में पूर्ण करेंगे?

1. $1\frac{3}{7}$ दिन
2. $2\frac{4}{7}$ दिन
3. $1\frac{1}{2}$ दिन
4. $2\frac{1}{3}$ दिन

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

25 1725

A passenger train running at the speed of 75 km/hr leaves the railway station 9 hours after a goods train leaves and overtakes it in 6 hours. The speed of the goods train is

1. 35 km/hr
2. 32 km/hr
3. 30 km/hr
4. 28 km/hr

75 किमी/घं. की गति से चलने वाली सवारी गाड़ी किसी मालगाड़ी के स्टेशन छूटने के 9 घंटे पश्चात रेलवे स्टेशन छोड़ती है और 6 घंटे में इससे आगे निकल जाती है। मालगाड़ी की गति कितनी है?

1. 35 किमी/घं.
2. 32 किमी/घं.
3. 30 किमी/घं.
4. 28 किमी/घं.

A1
:

1

A2
:

2

A3
:

3

A4 4
:
4

Objective Question

26 1726

Arrange the following group of terms in order of increasing intension:

- A. Tiger
- B. Mammal
- C. Feline
- D. Animal

Choose the correct answer from the options given below:

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

निम्नलिखित शब्द समूह को गुणार्थ के आरोहीक्रम में व्यवस्थित कीजिए।

- A. बाघ
- B. स्तनपायी
- C. विडाल
- D. पशु

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

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

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

27 1727

Given below are two statements:

Statement I: A valid deductive argument that also has all true premises is called a "sound" argument.

Statement II: A strong inductive argument that has all true premises is called a "cogent" argument.

In the light of the above statements, choose the most appropriate answer from the options given below.

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

नीचे दो कथन दिए गए हैं:

कथन I : वह वैद्य निगमनात्मक युक्ति, जिसमें सभी आधार वाक्य सत्य होते हैं, 'ठोस' युक्ति कहलाती है।

कथन II : वह दृढ़ आगमनात्मक युक्ति जिसमें सभी आधारवाक्य सत्य होते हैं, 'संगत' युक्ति कहलाती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए।

1. कथन I और II दोनों सही हैं
2. कथन I और II दोनों लगत हैं
3. कथन I सही है, लेकिन कथन II गलत है
4. कथन I गलत है, लेकिन कथन II सही है

A1
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1

A2
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2

A3
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3

A4
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4

Objective Question

28 1728

Which informal fallacy is committed in the following statement- "American Indians are disappearing. That man is an American Indian. Therefore that man is disappearing"?

1. Red Herring
2. Hasty Generalisation
3. Begging the question
4. Fallacy of division

निम्नलिखित कथन में कौन सा अनाकारिक तर्कदोष है - "अमेरिकी भारतीय विलुप्त हो रहे हैं। वह व्यक्ति अमेरिकी भारतीय है। इस लिए वह व्यक्ति विलुप्त हो रहा है?"

1. रेड हेरिंग
2. अविचारित सामान्यीकरण
3. आत्माश्रय दोष
4. विग्रह दोष

A1
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1

A2
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2

A3
:

3

A4
:

4

Objective Question

29 1729

Identify the formal fallacy committed in the following argument: "Some good actors are not powerful athletes , All professional wrestlers are powerful athletes. Therefore all professional wrestlers are good actors".

1. Exclusive premises
2. Existential fallacy
3. Affirmative conclusion from negative premises
4. Affirming the consequent

निम्नलिखित युक्ति में किये गये आकारिक तर्कदोष की पहचान कीजिए: "कुछ अच्छे अभिनेता शक्तिशाली एथलीट नहीं हैं। सभी व्यावसायिक पहलवान शक्तिशाली एथलीट हैं। इसलिए सभी व्यावसायिक पहलवान अच्छे अभिनेता हैं।"

1. व्यावर्तक आधार वाक्य
2. अस्तित्वपरक तर्क दोष
3. निषेधात्मक आधार वाक्य से सकारात्मक निष्कर्ष
4. फलवाक्य विधान दोष

A1
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1

A2
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2

A3
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3

A4
:

4

Objective Question

30 1730

Which of the following arguments commits the fallacy of contradicted middle such that the middle term, instead of being pervaded by the presence of the major term, is pervaded by the absence of the major term?

1. All things are non eternal because they are knowable.
2. Sound is a quality because it is visible.
3. Fire is cold because it is a substance.
4. Sound is eternal because it is produced.

निम्नलिखित में से किस युक्ति में व्याघाती माध्य तर्क दोष इस प्रकार है कि मध्य पद मुख्य पद की उपस्थिति द्वारा व्याप्त होने की बजाय मुख्य पद की अनुपस्थिति द्वारा व्याप्त होता है?

1. सभी वस्तुएँ गैर-शाश्वत हैं क्योंकि वे ज्ञेय हैं
2. ध्वनि एक गुण है क्योंकि यह दृश्य होता है
3. अग्नि शीतल होती है क्योंकि यह द्रव्य पदार्थ है
4. ध्वनि शाश्वत होती है क्योंकि यह उत्पन्न होती है

A1
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1

A2
:

2

A3
:

3

A4
:

4

Objective Question

31 1731 When you sign up something like a free e-mail account, you may be presented with a CAPTCHA. the most common form of CAPTCHA is an image of several distorted letters. CAPTCHA stands for:

1. "Coverage Analysis and Planning Tool for Computers and Humans Apart."
2. "Completely Automated Public Turing test to tell Computers and Humans Apart"
3. "Completely Applied Parallel Technologies for Communication and Hardware Apart".
4. "Comparable Additional Protected Turing test to cell Computers and Humans Apart".

जब आप निःशुल्क ईमेल खाता जैसी किसी सुविधा को स्वीकार करते हैं, तो आपके समक्ष एक केप्चा (सीएपीटीसीएचए) प्रस्तुत किया जा सकता है। इस केप्चा का सर्वाधिक सामान्य रूप अनेक विकृत अक्षरों की एक छवि है। केप्चा का अर्थ निम्न में से क्या है?

1. कवरेज एनालिसिस एंड प्लानिंग टूल फॉर कंप्यूटर्स एंड ह्यूमंस अपार्ट
2. कंप्लीटली ऑटोमेटिड ट्यूरिंग टेस्ट टू टेल कंप्यूटर्स एंड ह्यूमंस अपार्ट
3. कंप्लीटली एप्लाइड पेरैलल टेक्नॉलाजीस फॉर कम्युनिकेशन एंड हार्डवेयर अपार्ट
4. कंपेरेबल एडीशनल प्रोटेक्टेड ट्यूरिंग टेस्ट टू टेल कंप्यूटर्स एंड ह्यूमंस अपार्ट

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

32 1732 You and your friends decided to go to Goa after you finish your finals, However, your demanding parents set a couple of conditions to join your friends (See MS-EXCEL spreadsheet below)

A	B	C	D
1	Category of condition	Minimal results needed	Actual results
2	Hours spent on homework weekly	2	3
3	Midterm score	70	68
4	Final exam score	75	77

Imagine your parents would care about exams (only Midterm score and Final exam score conditions are relevant). Choose one option/formula that you can use for cell D2 to answer the question: will you be able to join your friends with the results given?

1. =IF (C3>=B3, IF (C4>B4, "Yes", "No"), "No")
2. =IF (AND (C3>=B3, C4>=B4), "Yes", "No")
3. =IF (C3:C4>=B3: B4, "Yes", "No")
4. =IF(OR (C3 >= B3, C4>=B4), "Yes", "No")

वार्षिक परीक्षा समाप्त होने के बाद आप और आपके मित्रों ने गोवा जाने का निर्णय किया। तथापि आपके कठोर माता-पिता ने आपको अपने मित्रों के साथ जाने की अनुमति देने के लिए कुछ शर्तें रखी (निम्न एमएस-एक्सेल स्प्रेडशीट देखें)

	A	B	C	D
1	शर्त की श्रेणी	न्यूनतम आवश्यक परिणाम	वास्तविक परिणाम	अनुमति प्रदत्त (हां/नहीं)
2	प्रतिस्प्ताह गृहकार्य पर व्यय घंटे	2	3	
3	मध्यावधि अंक	70	68	
4	अंतिम परीक्षा अंक	75	77	

कल्पना कीजिए कि आपके माता-पिता को केवल परीक्षा की चिंता है (केवल मध्यावधि अंक व अंतिम परीक्षा के अंक की शर्त प्रासंगिक है)। एक ऐसा विकल्प/सूत्र चुनिए जिसे आप निम्न प्रश्न का उत्तर देने के लिए प्रकोष्ठ D2 में प्रयोग कर सकें। क्या आप दिए गए परिणामों से अपने मित्रों के साथ जा सकेंगे?

1. = IF (C3 >= B3, IF (C4 > B4, 'हां', 'नहीं'), 'नहीं')
2. = IF (AND (C3 >= B3, C4 >= B4), 'हां', 'नहीं')
3. = IF (C3 : C4 >= B3 : B4, 'हां', 'नहीं')
4. = IF (OR (C3 >= B3, C4 >= B4), 'हां', 'नहीं')

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

33 1733

Given below are two statements:

Statement I: A binary number that ends in a 1, e.g 110011, is always an odd decimal number.

Statement II: HTML is a set of rules that must be obeyed when transferring files across the Internet

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

नीचे दो कथन दिए गए हैं:

कथन I : 1 में समाप्त होने वाली द्विआधारी संख्या, उदाहरण के रूप में 110011, हमेशा एक विषम दशमलव संख्या होती है।

कथन II : HTML नियमों का एक सेट है जिसका इंटरनेट पर फाइलें स्थानांतरित करते समय अवश्य पालन किया जाना चाहिए।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

34 1734

Identify the correct order of the terms A-E to complete the paragraph about MAC addresses and IP addresses given below.

A MAC address is a media access _____ address. A network device has a _____ MAC address that can help _____ the device in the network. An IP address is an Internet _____ address. An IP address can be static or _____ .

- A. Protocol
- B. Control
- C. Dynamic
- D. Identify
- E. unique

Choose the correct answer from the options given below:

- 1. B, C, D, A, E
- 2. C, E, D, A, B
- 3. A, B, E, D, C
- 4. B, E, D, A, C

एमएसी एड्रेस व आईपी एड्रेस के संबंध में निम्न गद्यांश को पूरा करने के लिए A - E पदों के सही क्रम की पहचान कीजिए।

एमएसी एड्रेस एक मीडिया अभिगम _____ एड्रेस है। नेटवर्क युक्ति का एक _____ एमएसी एड्रेस होता है जो नेटवर्क में युक्ति की _____ में सहायता कर सकता है। आईपी एड्रेस एक इंटरनेट _____ एड्रेस है। आईसी एड्रेस स्थिर अथवा _____ हो सकता है।

- A. नयाचार (प्रोटोकॉल)
- B. नियंत्रण
- C. गतिक
- D. पहचान
- E. विशिष्ट

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

- 1. B, C, D, A, E
- 2. C, E, D, A, B
- 3. A, B, E, D, C
- 4. B, E, D, A, C

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

35 1735

Match List I with List II

(Security or data loss issues)		(Methods of data recovery or protection)	
A.	Data loss caused by hard disk crash	I.	Anti-spyware software
B.	Introduction of software that self-replicates and can cause data loss	II.	Anti-virus software
C.	reading of illegally accessed documents	III.	Back-up files
D.	Software that records all key presses on your computer without you knowing	IV.	Encryption

Choose the correct answer from the options given below:

1. A-III, B-IV, C-II, D-I
2. A-I, B-II, C-IV, D-III
3. A-III, B-II, C-IV, D-I
4. A-II, B-III, C-IV, D-I

सूची I के साथ सूची II का मिलान कीजिए

सूची I		सूची II	
(सुरक्षा अथवा डेटाक्षति मुद्दे)		(डेटा पुनःप्राप्ति अथवा संरक्षण के उपाय)	
A.	हार्ड डिस्क के ध्वस्त होने के कारण हुई डेटा क्षति	I.	स्पाईवेयर-रोधी साफ्टवेयर
B.	ऐसे साफ्टवेयर की पुनःस्थापना जो स्वयं दोहराता है और डेटाक्षति कर सकता है	II.	वाईरस-रोधी साफ्टवेयर
C.	अवैध अभिगम वाले दस्तावेजों का पाठन	III.	बैक अप फाइलें
D.	ऐसा सॉफ्टवेयर जो आपकी जानकारी बगैर आपके कम्प्यूटर पर दबाई गई प्रत्येक कुंजी को रिकार्ड करता है	IV.	कोडीकरण

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. A-III, B-IV, C-II, D-I
2. A-I, B-II, C-IV, D-III
3. A-III, B-II, C-IV, D-I
4. A-II, B-III, C-IV, D-I

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

36 1736

Given below are two statements:

Statement I: Due to climate change, Arctic sea ice is significantly thinner now than about a century ago

Statement II: Due to climate change, tropical regions have warmed much faster than rest of the world.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

नीचे दो कथन दिए गए हैं:

कथन I : जलवायु परिवर्तन के कारण उत्तर ध्रुवीय समुद्री हिम लगभग एक शताब्दी पूर्व की तुलना में अब अत्यधिक महीन हो गई है।

कथन II : जलवायु परिवर्तन के कारण शेष विश्व की अपेक्षा उष्णकटिबंधीय क्षेत्र अधिक तीव्र गति से गरम हुए हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए।

1. कथन I और II दोनों सही हैं
2. कथन I और II दोनों गलत हैं
3. कथन I सही है, लेकिन कथन II गलत है
4. कथन I गलत है, लेकिन कथन II सही है

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

37 1737

What is the correct increasing order of the contribution to the global warming by the following gases?

- A. Methane (CH_4)
- B. Carbon Dioxide (CO_2)
- C. Nitrous oxide (N_2O)

Choose the correct answer from the options given below:

1. A, B, C
2. C, A, B
3. B, A, C
4. B, C, A

वैश्विक तापन में निम्नलिखित गैसों के योगदान का सही आरोही क्रम कौन-सा है?

- A. मीथेन (CH_4)
- B. कार्बन डाईऑक्साइड (CO_2)
- C. नाइट्रस ऑक्साइड (N_2)

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. A, B, C
2. C, A, B
3. B, A, C
4. B, C, A

A1 1
:

1

A2 2
:

2

A3 3
:
3
A4 4
:
4

Objective Question

38 1738

Given below are two statements:

Statement I: Cultural eutrophication is caused by increased nutrient input into water body mainly due to human activities

Statement II: Cultural eutrophication deaccelerate the 'aging' of a water body enormously over natural rates.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

नीचे दो कथन दिए गए हैं:

कथन I : कल्चरल यूट्रोफिकेशन मुख्यतया मानवीय क्रियाकलापों से जल निकाय में वर्धित पोषक तत्वों की आगत के कारण होता है।

कथन II : कल्चरल यूट्रोफिकेशन, जल निकायों की 'एजिंग' को प्राकृतिक दर की तुलना में अत्यधिक तीव्र गति से कम करता है।

उपरोक्त कथन के आलोक में, नीचे दिए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए।

1. कथन I और II दोनों सही हैं
2. कथन I और II दोनों गलत हैं
3. कथन I सही है, लेकिन कथन II गलत है
4. कथन I गलत है, लेकिन कथन II सही है

A1 1
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1
A2 2
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2
A3 3
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3
A4 4
:
4

Objective Question

39 1739

A photovoltaic array is

1. a single solar cell
2. a single solar module
3. a single solar panel
4. combination of solar panels

प्रकाश वोल्टीय सारणी।

1. एक एकल सौर सेल है
2. एक एकल सौर माड्यूल है
3. एक एकल सौर पैनल है
4. सौर पैनलों का संयोजन है

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

40 1740

United Nations Framework Convention on Climate Change (UNFCCC) was the outcome of

1. Paris Agreement
2. Montreal Protocol
3. Convention on Biodiversity
4. Earth Summit

जलवायु परिवर्तन संबंधी संयुक्त राष्ट्र फ्रेमवर्क कन्वेंशन निम्नलिखित में से किस का परिणाम था।

1. पेरिस समझौता
2. मॉन्ट्रियल प्रोटोकॉल
3. जैव विविधता कन्वेंशन
4. पृथ्वी शिखर सम्मेलन (अर्थ सम्मिट)

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

41 1741

The union government's mandate for Humayun Kabir committee was to explore the possibility of

1. Privatisation of public universities
2. Setting up of new university
3. Establishing correspondence courses
4. Funding private universities

हमारे कबीर समिति का अधिवेशन किसकी संभावना तलाशने के लिए था?

1. सार्वजनिक विश्वविद्यालयों का निजीकरण
2. नए विश्वविद्यालय की स्थापना
3. पत्राचार पाठ्यक्रमों की स्थापना
4. निजी विश्वविद्यालयों का निधिपोषण

A1 1

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A2 2

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A3 3

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A4 4

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Objective Question

42 1742

The Education Despatch of 1854 suggested that the medium of instruction in Indian Universities should be

1. Persian
2. Sanskrit
3. Hindi
4. English

1854 के एजुकेशन डिस्पैच में सुझाव दिया गया था कि भारतीय विश्वविद्यालयों में अनुदेशन का माध्यम यह भाषा होनी चाहिये।

1. फारसी
2. संस्कृत
3. हिन्दी
4. अंग्रेजी

A1 1

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A2 2

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A3 3

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A4 4

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Objective Question

43 1743

As per the recommendation of the National Education Policy (2020), the Indian Standards of skills will aligned with the International Standard Classification of occupations of

1. UNDP
2. UNESCO
3. ILO
4. ITU

राष्ट्रीय शिक्षा नीति (2020) की सिफारिशों के अनुसार कौशल के भारतीय मानकों को निम्नलिखित में से किसके व्यवसायों के अंतर्राष्ट्रीय मानक वर्गीकरण के साथ संरेखित किया जाएगा।

1. यूएनडीपी
2. यूनेस्को
3. आईएलओ
4. आईटीयू

A1
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A2
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A3
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A4
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Objective Question

44 1744

Find out the chronological order of the following open universities in India.

- A. Karnatak state open university
- B. Netaji Subhash open university
- C. UP Rajarshi Tandon open university
- D. Madhya Pradesh Bhoj open university
- E. Nalanda open university

Choose the correct answer from the options given below:

1. A, B, D, C, E
2. E, D, A, B, C
3. B, C, E, D, A
4. D, E, A, B, C

भारत में निम्नलिखित मुक्त विश्वविद्यालयों के कालक्रम के अनुसार क्रमबद्ध कीजिए।

- A. कर्नाटक राज्य मुक्त विश्वविद्यालय
- B. नेता जी सुभाष मुक्त विश्वविद्यालय
- C. उत्तर प्रदेश राजर्षि टंडन मुक्त विश्वविद्यालय
- D. मध्यप्रदेश भोज मुक्त विश्वविद्यालय
- E. नालंदा मुक्त विश्वविद्यालय

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए।

1. A, B, D, C, E
2. E, D, A, B, C
3. B, C, E, D, A
4. D, E, A, B, C

A1
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A2
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A3
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	A4	4
	:	4
		4
Objective Question		
45	1745	Given below are two statements: Statement I: Reputed scholars like Panini and Chanakya had their education from Nalanda university Statement II: Thakshashila was a university known for its education in Indian arts and science especially medicine In the light of the above statements, choose the most appropriate answer from the options given below. - Both Statement I and Statement II are true - Both Statement I and Statement II are false - Statement I is true but Statement II is false - Statement I is false but Statement II is true नीचे दो कथन दिए गए हैं: एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में: कथन I : पाणिनि और चाणिक्य जैसे प्रसिद्ध विद्वानों ने नालंदा विश्वविद्यालय से अपनी शिक्षा ग्रहण की थी। कथन II : तक्षशिला भारतीय कला और विज्ञान विशेषरूप से चिकित्सा में अपनी शिक्षा के लिए जाना जाता था। उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए। - A और R दोनों सत्य हैं और R, A की सही व्याख्या है - A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है - A सत्य है, लेकिन R असत्य है - A असत्य है, लेकिन R सत्य है A1 1 : 1 A2 2 : 2 A3 3 : 3 A4 4 : 4
Objective Question		
46	1746	

Read the passage and answer the question that follow:

The transport department is planning to start a road safety campaign that will involve local resident welfare associations, market stakeholders, school children and society representatives. As part of the campaign, the district magistrates will form plans to address the increasing number of accidents in consensus with the locals.

The decision was taken after it was found during a government study that road sections passing through pedestrian heavy areas having schools, metro stations and commercial sites were more prone to accidents.

A senior official said that funds worth Crores, which were meant for ensuring road safety were not being being utilised. "The focus of the campaign will be to identify and rectify black spots, revisit speed limits, form road safety clubs, install AI cameras at strategic locations, encourage helmet use, check speed in high risk locations and regulate overloaded commercial vehicles, the official explained .

The number of deaths due to road accidents in Delhi totalled 1,239 in 2021 and an increase from 1,196 fatalities in the previous year, according to Delhi Crash Report 2021, which was prepared by the city's traffic police. Pedestrian deaths comprised more than 40% of the total fatalities.

The Government study found that areas that were more accident prone were

1. Main roads
2. Peripheral roads
3. Highways
4. Pedestrian-heavy areas

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए और उसके नीचे दिए गए प्रश्नों के उत्तर दीजिए।

परिवहन विभाग एक सड़क सुरक्षा अभियान शुरू करने की योजना बना रहा है जिसमें स्थानीय निवासी कल्याण संघ, बाजार हितधारक, स्कूली बच्चे और समाज के प्रतिनिधि शामिल होंगे। इस अभियान के एक भाग के रूप में जिलाधिकारी दुर्घटनाओं की बढ़ती संख्या को रोकने के लिए स्थानीय लोगों की सर्वसम्मति से योजनाएँ बनाएंगे।

यह निर्णय एक सरकारी अध्ययन के दौरान यह पाए जाने के बाद लिया गया था कि पदयात्रियों की अधिक संख्या वाले क्षेत्रों जैसे कि स्कूलों, मेट्रो स्टेशनों और वाणिज्यिक स्थलों से गुजरने वाले सड़क खंडों पर दुर्घटनाओं की अधिक संभावना थी।

एक वरिष्ठ अधिकारी ने बताया कि सड़क सुरक्षा सुनिश्चित करने के लिए आवंटित करोड़ों रुपये की निधियों का उपयोग नहीं किया जा रहा है। अधिकारी ने बताया कि "दुर्घटनाओं की अधिक संभावना वाले स्थानों (ब्लैक स्पॉट) की पहचान करना और वहाँ दुर्घटनाएँ रोकने के उपाय करना, गति सीमाओं की समीक्षा करना, सड़क सुरक्षा क्लबों का गठन करना, महत्वपूर्ण स्थानों पर एआई कैमरा स्थापित करना, हेलमेट के उपयोग को प्रोत्साहित करना, अधिक जोखिम वाले स्थानों पर गति कम करना और, क्षमता से अधिक लदे वाणिज्यिक वाहनों को विनियमित करने पर ध्यान केन्द्रित किया जाएगा।"

शहर की यातायात पुलिस द्वारा तैयार की गई दिल्ली क्रैश रिपोर्ट 2021 के अनुसार वर्ष 2021 में दिल्ली में सड़क दुर्घटनाओं के कारण कुल 1239 लोगों की मौत हुई जो पिछले वर्ष हुई 1196 मौतों से अधिक है। कुल मौतों में से 40% से अधिक मौतें पदयात्रियों की हुई।

सरकारी अध्ययन के अनुसार निम्नलिखित में से कौन से क्षेत्र दुर्घटना की अधिक संभावना वाले क्षेत्र थे?

1. मुख्य सड़कें
2. परिधीय सड़कें
3. राजमार्ग
4. पदयात्रियों की अधिक संख्या वाले क्षेत्र

A1 1

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A2 2

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A3 3

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A4 4

4

Objective Question

47 1747

Read the passage and answer the question that follow:

The transport department is planning to start a road safety campaign that will involve local resident welfare associations, market stakeholders, school children and society representatives. As part of the campaign, the district magistrates will form plans to address the increasing number of accidents in consensus with the locals.

The decision was taken after it was found during a government study that road sections passing through pedestrian heavy areas having schools, metro stations and commercial sites were more prone to accidents.

A senior official said that funds worth Crores, which were meant for ensuring road safety were not being being utilised. "The focus of the campaign will be to identify and rectify black spots, revisit speed limits, form road safety clubs, install AI cameras at strategic locations, encourage helmet use, check speed in high risk locations and regulate overloaded commercial vehicles, the official explained .

The number of deaths due to road accidents in Delhi totalled 1,239 in 2021 and an increase from 1,196 fatalities in the previous year, according to Delhi Crash Report 2021, which was prepared by the city's traffic police. Pedestrian deaths comprised more than 40% of the total fatalities.

Fill in the blank with the appropriate option:

The number of deaths due to road accidents _____ from 2020 to 2021.

1. Declined
2. Remained the same
3. Increased
4. Decreased

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए और उसके नीचे दिए गए प्रश्नों के उत्तर दीजिए।

परिवहन विभाग एक सड़क सुरक्षा अभियान शुरू करने की योजना बना रहा है जिसमें स्थानीय निवासी कल्याण संघ, बाजार हितधारक, स्कूली बच्चे और समाज के प्रतिनिधि शामिल होंगे। इस अभियान के एक भाग के रूप में जिलाधिकारी दुर्घटनाओं की बढ़ती संख्या को रोकने के लिए स्थानीय लोगों की सर्वसम्मति से योजनाएँ बनाएंगे।

यह निर्णय एक सरकारी अध्ययन के दौरान यह पाए जाने के बाद लिया गया था कि पदयात्रियों की अधिक संख्या वाले क्षेत्रों जैसे कि स्कूलों, मेट्रो स्टेशनों और वाणिज्यिक स्थलों से गुजरने वाले सड़क खंडों पर दुर्घटनाओं की अधिक संभावना थी।

एक वरिष्ठ अधिकारी ने बताया कि सड़क सुरक्षा सुनिश्चित करने के लिए आवंटित करोड़ों रुपये की निधियों का उपयोग नहीं किया जा रहा है। अधिकारी ने बताया कि "दुर्घटनाओं की अधिक संभावना वाले स्थानों (ब्लैक स्पॉट) की पहचान करना और वहाँ दुर्घटनाएँ रोकने के उपाय करना, गति सीमाओं की समीक्षा करना, सड़क सुरक्षा क्लबों का गठन करना, महत्वपूर्ण स्थानों पर एआई कैमरा स्थापित करना, हेलमेट के उपयोग को प्रोत्साहित करना, अधिक जोखिम वाले स्थानों पर गति कम करना और, क्षमता से अधिक लदे वाणिज्यिक वाहनों को विनियमित करने पर ध्यान केन्द्रित किया जाएगा।"

शहर की यातायात पुलिस द्वारा तैयार की गई दिल्ली क्रैश रिपोर्ट 2021 के अनुसार वर्ष 2021 में दिल्ली में सड़क दुर्घटनाओं के कारण कुल 1239 लोगों की मौत हुई जो पिछले वर्ष हुई 1196 मौतों से अधिक है। कुल मौतों में से 40% से अधिक मौतें पदयात्रियों की हुई।

रिक्त स्थान पर उपयुक्त विकल्प भरें: वर्ष 2020 से 2021 तक सड़क दुर्घटनाओं के कारण हुई मौतों की संख्या _____.

1. में गिरावट आई ।
2. एक समान रही ।
3. में वृद्धि हुई ।
4. में कमी आई ।

A1 1
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A2 2
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A3 3
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A4 4
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Objective Question

48 1748

Read the passage and answer the question that follow:

The transport department is planning to start a road safety campaign that will involve local resident welfare associations, market stakeholders, school children and society representatives. As part of the campaign, the district magistrates will form plans to address the increasing number of accidents in consensus with the locals.

The decision was taken after it was found during a government study that road sections passing through pedestrian heavy areas having schools, metro stations and commercial sites were more prone to accidents.

A senior official said that funds worth Crores, which were meant for ensuring road safety were not being being utilised. "The focus of the campaign will be to identify and rectify black spots, revisit speed limits, form road safety clubs, install AI cameras at strategic locations, encourage helmet use, check speed in high risk locations and regulate overloaded commercial vehicles, the official explained .

The number of deaths due to road accidents in Delhi totalled 1,239 in 2021 and an increase from 1,196 fatalities in the previous year, according to Delhi Crash Report 2021, which was prepared by the city's traffic police. Pedestrian deaths comprised more than 40% of the total fatalities.

"Revisit speed limits" means

1. Speed limits will be revised.
2. Speed limit will be re-assessed.
3. Speed limits will be reduced.
4. Speed limits will be increased.

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए और उसके नीचे दिए गए प्रश्नों के उत्तर दीजिए।

परिवहन विभाग एक सड़क सुरक्षा अभियान शुरू करने की योजना बना रहा है जिसमें स्थानीय निवासी कल्याण संघ, बाजार हितधारक, स्कूली बच्चे और समाज के प्रतिनिधि शामिल होंगे। इस अभियान के एक भाग के रूप में जिलाधिकारी दुर्घटनाओं की बढ़ती संख्या को रोकने के लिए स्थानीय लोगों की सर्वसम्मति से योजनाएँ बनाएंगे।

यह निर्णय एक सरकारी अध्ययन के दौरान यह पाए जाने के बाद लिया गया था कि पदयात्रियों की अधिक संख्या वाले क्षेत्रों जैसे कि स्कूलों, मेट्रो स्टेशनों और वाणिज्यिक स्थलों से गुजरने वाले सड़क खंडों पर दुर्घटनाओं की अधिक संभावना थी।

एक वरिष्ठ अधिकारी ने बताया कि सड़क सुरक्षा सुनिश्चित करने के लिए आवंटित करोड़ों रुपये की निधियों का उपयोग नहीं किया जा रहा है। अधिकारी ने बताया कि "दुर्घटनाओं की अधिक संभावना वाले स्थानों (ब्लैक स्पॉट) की पहचान करना और वहाँ दुर्घटनाएँ रोकने के उपाय करना, गति सीमाओं की समीक्षा करना, सड़क सुरक्षा क्लबों का गठन करना, महत्वपूर्ण स्थानों पर एआई कैमरा स्थापित करना, हेलमेट के उपयोग को प्रोत्साहित करना, अधिक जोखिम वाले स्थानों पर गति कम करना और, क्षमता से अधिक लदे वाणिज्यिक वाहनों को विनियमित करने पर ध्यान केन्द्रित किया जाएगा।"

शहर की यातायात पुलिस द्वारा तैयार की गई दिल्ली क्रेश रिपोर्ट 2021 के अनुसार वर्ष 2021 में दिल्ली में सड़क दुर्घटनाओं के कारण कुल 1239 लोगों की मौत हुई जो पिछले वर्ष हुई 1196 मौतों से अधिक है। कुल मौतों में से 40% से अधिक मौतें पदयात्रियों की हुई।

"गति सीमाओं की समीक्षा करना" का अर्थ है-

1. गति सीमाओं में संशोधन किया जाएगा।
2. गति सीमाओं का पुनः आकलन किया जाएगा।
3. गति सीमाओं को कम किया जाएगा।
4. गति सीमाओं को बढ़ाया जाएगा।

A1 1
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A2 2
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A3 3
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A4
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Objective Question

49 1749

Read the passage and answer the question that follow:

The transport department is planning to start a road safety campaign that will involve local resident welfare associations, market stakeholders, school children and society representatives. As part of the campaign, the district magistrates will form plans to address the increasing number of accidents in consensus with the locals.

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" Black spots" are areas

1. that have been blackened.
2. that have no light.
3. where a lot of accidents happen.
4. that are busy.

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए और उसके नीचे दिए गए प्रश्नों के उत्तर दीजिए।

परिवहन विभाग एक सड़क सुरक्षा अभियान शुरू करने की योजना बना रहा है जिसमें स्थानीय निवासी कल्याण संघ, बाजार हितधारक, स्कूली बच्चे और समाज के प्रतिनिधि शामिल होंगे। इस अभियान के एक भाग के रूप में जिलाधिकारी दुर्घटनाओं की बढ़ती संख्या को रोकने के लिए स्थानीय लोगों की सर्वसम्मति से योजनाएँ बनाएंगे।

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एक वरिष्ठ अधिकारी ने बताया कि सड़क सुरक्षा सुनिश्चित करने के लिए आवंटित करोड़ों रुपये की निधियों का उपयोग नहीं किया जा रहा है। अधिकारी ने बताया कि "दुर्घटनाओं की अधिक संभावना वाले स्थानों (ब्लैक स्पॉट) की पहचान करना और वहाँ दुर्घटनाएँ रोकने के उपाय करना, गति सीमाओं की समीक्षा करना, सड़क सुरक्षा क्लबों का गठन करना, महत्वपूर्ण स्थानों पर एआई कैमरा स्थापित करना, हेलमेट के उपयोग को प्रोत्साहित करना, अधिक जोखिम वाले स्थानों पर गति कम करना और, क्षमता से अधिक लदे वाणिज्यिक वाहनों को विनियमित करने पर ध्यान केन्द्रित किया जाएगा।"

शहर की यातायात पुलिस द्वारा तैयार की गई दिल्ली क्रैश रिपोर्ट 2021 के अनुसार वर्ष 2021 में दिल्ली में सड़क दुर्घटनाओं के कारण कुल 1239 लोगों की मौत हुई जो पिछले वर्ष हुई 1196 मौतों से अधिक है। कुल मौतों में से 40% से अधिक मौतें पदयात्रियों की हुई।

'ब्लैक स्पॉट' ऐसे क्षेत्र है-

1. जिन्हें काले रंग से रंग दिया गया है।
2. जहाँ प्रकाश नहीं है।
3. जहाँ अधिक दुर्घटनाएँ होती है।
4. जो भीड़-भाड़ वाले हैं।

A1
:
1
A2
:
2
2

A3 3
:
3
A4 4
:
4

Objective Question

50 1750

Read the passage and answer the question that follow:

The transport department is planning to start a road safety campaign that will involve local resident welfare associations, market stakeholders, school children and society representatives. As part of the campaign, the district magistrates will form plans to address the increasing number of accidents in consensus with the locals.

The decision was taken after it was found during a government study that road sections passing through pedestrian heavy areas having schools, metro stations and commercial sites were more prone to accidents.

A senior official said that funds worth Crores, which were meant for ensuring road safety were not being being utilised. "The focus of the campaign will be to identify and rectify black spots, revisit speed limits, form road safety clubs, install AI cameras at strategic locations, encourage helmet use, check speed in high risk locations and regulate overloaded commercial vehicles, the official explained .

The number of deaths due to road accidents in Delhi totalled 1,239 in 2021 and an increase from 1,196 fatalities in the previous year, according to Delhi Crash Report 2021, which was prepared by the city's traffic police. Pedestrian deaths comprised more than 40% of the total fatalities.

Given below are two statements:

Statement I: The focus of the passage is on making Delhi roads safer.

Statement II: Funds worth crores meant for ensuring road safety have been properly utilized.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए और उसके नीचे दिए गए प्रश्नों के उत्तर दीजिए।

परिवहन विभाग एक सड़क सुरक्षा अभियान शुरू करने की योजना बना रहा है जिसमें स्थानीय निवासी कल्याण संघ, बाजार हितधारक, स्कूली बच्चे और समाज के प्रतिनिधि शामिल होंगे। इस अभियान के एक भाग के रूप में जिलाधिकारी दुर्घटनाओं की बढ़ती संख्या को रोकने के लिए स्थानीय लोगों की सर्वसम्मति से योजनाएँ बनाएंगे।

यह निर्णय एक सरकारी अध्ययन के दौरान यह पाए जाने के बाद लिया गया था कि पदयात्रियों की अधिक संख्या वाले क्षेत्रों जैसे कि स्कूलों, मेट्रो स्टेशनों और वाणिज्यिक स्थलों से गुजरने वाले सड़क खंडों पर दुर्घटनाओं की अधिक संभावना थी।

एक वरिष्ठ अधिकारी ने बताया कि सड़क सुरक्षा सुनिश्चित करने के लिए आवंटित करोड़ों रूपये की निधियों का उपयोग नहीं किया जा रहा है। अधिकारी ने बताया कि "दुर्घटनाओं की अधिक संभावना वाले स्थानों (ब्लैक स्पॉट) की पहचान करना और वहाँ दुर्घटनाएँ रोकने के उपाय करना, गति सीमाओं की समीक्षा करना, सड़क सुरक्षा क्लबों का गठन करना, महत्वपूर्ण स्थानों पर एआई कैमरा स्थापित करना, हेलमेट के उपयोग को प्रोत्साहित करना, अधिक जोखिम वाले स्थानों पर गति कम करना और, क्षमता से अधिक लदे वाणिज्यिक वाहनों को विनियमित करने पर ध्यान केन्द्रित किया जाएगा"।

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नीचे दो कथन दिए गए हैं:

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1. कथन I और II दोनों सही हैं
2. कथन I और II दोनों गलत हैं
3. कथन I सही है, लेकिन कथन II गलत है
4. कथन I गलत है, लेकिन कथन II सही है

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

51 87001

There are M points on one straight line AB and n points on another straight line AC none of them being A . How many triangles can be formed with these points as vertices?

1. $mn(m+n-2)$
2. $\frac{1}{2}mn(m+n-2)$
3. $\frac{1}{2}mn(m+n-1)$
4. $mn(m+n-1)$

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4. कथन I गलत है, लेकिन कथन II सही है

A1

:

1

A2

:

2

A3

:

3

A4

:

4

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51 87001

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3. $\frac{1}{2}mn(m+n-1)$
4. $mn(m+n-1)$

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

52 87002 Find the sum of all four digit numbers formed using the digits 1,2,4 and 6.

1. 86,658
2. 88,8858
3. 91,958
4. 93,358

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1. 86,658
2. 88,8858
3. 91,958
4. 93,358

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

53 87003 How many integral solutions are there to $x + y + z + w = 29$, where $x \geq 1$, $y \geq 2$, $z \geq 3$ and $w \geq 0$?

1. 2400
2. 2600
3. 2800
4. 3000

How many integral solutions are there to $x + y + z + w = 29$, where $x \geq 1$, $y \geq 2$, $z \geq 3$ and $w \geq 0$?

1. 2400
2. 2600
3. 2800
4. 3000

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

54 87004 Let N denote the set of all natural numbers and R be the relation on $N \times N$ defined by $(a,b)R(c,d)$, if $ad(b+c) = bc(a+d)$. Then R is

1. Symmetric only
2. Reflexive only
3. Transitive only
4. An equivalence relation

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2. Reflexive only
3. Transitive only
4. An equivalence relation

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

55 87005 If $A = \{4n + 2 \mid n \text{ is a natural number}\}$ and $B = \{3n \mid n \text{ is a natural number}\}$. Which of the following is correct for $A \cap B$?

1. $\{12n^2 + 6n \mid n \text{ is a natural number}\}$
2. $\{24n - 12 \mid n \text{ is a natural number}\}$
3. $\{60n + 30 \mid n \text{ is a natural number}\}$
4. $\{12n - 6 \mid n \text{ is a natural number}\}$

If $A = \{4n + 2 \mid n \text{ is a natural number}\}$ and $B = \{3n \mid n \text{ is a natural number}\}$. Which of the following is correct for $A \cap B$?

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3. $\{60n + 30 \mid n \text{ is a natural number}\}$
4. $\{12n - 6 \mid n \text{ is a natural number}\}$

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

56 87006

Let $G = \frac{R}{\{0\}}$ and $H = \{-1, 1\}$ be groups under the multiplication. Then, the map $\phi: G \rightarrow H$ defined by $\phi(x) = \frac{x}{|x|}$ is

1. Not a homomorphism
2. A one-one homomorphism, which is not onto
3. An onto homomorphism, which is not one to one
4. An homomorphism

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1. Not a homomorphism
2. A one-one homomorphism, which is not onto
3. An onto homomorphism, which is not one to one
4. An homomorphism

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

57 87007

Let $(\mathbb{Z}, +)$ denote the group of all integers under addition. Then the number of all automorphisms of $(\mathbb{Z}, +)$ is

1. 1
2. 2
3. 3
4. 4

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1. 1
2. 2
3. 3
4. 4

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

58 87008 Let $R = \{x \mid x \in \mathbb{N}, x \text{ is multiple of } 3 \text{ and } x \leq 100\}$ and $S = \{x \mid x \in \mathbb{N}, x \text{ is a multiple of } 5 \text{ and } x < 100\}$. What is the number of elements in $(R \cap S) \times (S \cap R)$?

1. 36
2. 33
3. 20
4. 6

Let $R = \{x \mid x \in \mathbb{N}, x \text{ is multiple of } 3 \text{ and } x \leq 100\}$ and $S = \{x \mid x \in \mathbb{N}, x \text{ is a multiple of } 5 \text{ and } x < 100\}$. What is the number of elements in $(R \cap S) \times (S \cap R)$?

1. 36
2. 33
3. 20
4. 6

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

59 87009

Consider the following statements.

- A. The identity is unique in any monoid.
- B. A monoid is a group if there exists inverse of each element of monoid.
- C. Semi group has closure, associative and identity properties.
- D. Quasi group has closure property.

Choose the correct answer from the options given below :

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

Consider the following statements.

- A. The identity is unique in any monoid.
- B. A monoid is a group if there exists inverse of each element of monoid.
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Choose the correct answer from the options given below :

- 1. A, B and D only
- 2. B, C and D only
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A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

60 87010

Match List I with List II

LIST I		LIST II	
A.	PERT	I.	used for non repetitive jobs
B.	Optimistic time	II.	Used for repetitive jobs
C.	CPM	III.	The shortest possible time to complete the activity if all goes well
D.	Pessimistic time	IV.	The longest time that an activity takes

Choose the correct answer from the options given below:

- 1. A-III B-IV C-II D-I
- 2. A-IV B-I C-II D-III
- 3. A-I B-III C-II D-II
- 4. A-I B-III C-II D-IV

Match List I with List II

LIST I		LIST II	
A.	PERT	I.	used for non repetitive jobs
B.	Optimistic time	II.	Used for repetitive jobs
C.	CPM	III.	The shortest possible time to complete the activity if all goes well
D.	Pessimistic time	IV.	The longest time that an activity takes

Choose the correct answer from the options given below:

1. A-III B-IV C-II D-I
2. A-IV B-I C-II D-III
3. A-I B-III C-II D-II
4. A-I B-III C-II D-IV

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

61 87011

A processor chip is used for application in which 30% of execution time is spent on floating point addition. For the new model of the processor, the design team has come up with redesign the floating point adder to make it twice as fast. What will be possible maximum speed up by this redesign?

1. 2.0
2. 1.06
3. 1.18
4. 2.5

A processor chip is used for application in which 30% of execution time is spent on floating point addition. For the new model of the processor, the design team has come up with redesign the floating point adder to make it twice as fast. What will be possible maximum speed up by this redesign?

1. 2.0
2. 1.06
3. 1.18
4. 2.5

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

62 87012

What is the (4+4) fit binary fixed point equivalent of $-(3.72)_{10}$?

1. 0011.1100
2. 0011.1010
3. 1100.0100
4. 0011.1011

What is the (4+4) fit binary fixed point equivalent of $-(3.72)_{10}$?

1. 0011.1100
2. 0011.1010
3. 1100.0100
4. 0011.1011

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

63 87013 256 Mb DRAM is organized as a $32M \times 8$ memory externally and as a $16K \times 16K$ square array internally. Each row must be refreshed at least once every 50 mili second to forestall loss of data; refreshing one row takes 100 nanoseconds. What fraction of the total memory bandwidth is lost to refresh cycles?

1. 6.6%
2. 3.3%
3. 9.9%
4. 4.3%

256 Mb DRAM is organized as a $32M \times 8$ memory externally and as a $16K \times 16K$ square array internally. Each row must be refreshed at least once every 50 mili second to forestall loss of data; refreshing one row takes 100 nanoseconds. What fraction of the total memory bandwidth is lost to refresh cycles?

1. 6.6%
2. 3.3%
3. 9.9%
4. 4.3%

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

64 87014

Let $\oplus$ denote XOR operation. Let 1 and 0 denote the binary constants and F is the Boolean expression over two variables P and Q

$$F(P, Q) = ((1 \oplus P) \oplus (P \oplus Q)) \oplus ((P \oplus Q) \oplus (Q \oplus 0))$$

Which of the following is equivalent expression to F ?

1. $P \oplus Q$
2. $P + Q$
3. $\overline{P + Q}$
4. $\overline{P \oplus Q}$

Let $\oplus$ denote XOR operation. Let 1 and 0 denote the binary constants and F is the Boolean expression over two variables P and Q

$$F(P, Q) = ((1 \oplus P) \oplus (P \oplus Q)) \oplus ((P \oplus Q) \oplus (Q \oplus 0))$$

Which of the following is equivalent expression to F ?

1. $P \oplus Q$
2. $P + Q$
3. $\overline{P + Q}$
4. $\overline{P \oplus Q}$

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

65 87015 Match List I with List II

LIST I		LIST II	
A.	$A \Delta B$	I.	$(A - B) \cup (A - C)$
B.	$A - (B \cup C)$	II.	$(A - B) \cap (A - C)$
C.	$A - (B \cap C)$	III.	$(A - B) \cup (B - A)$
D.	$A \cap (B - C)$	IV.	$(A \cap B) - (A \cap C)$

Choose the correct answer from the options given below:

1. A-III B-II C-I D-IV
2. A-II B-III C-IV D-I
3. A-IV B-III C-I D-II
4. A-IV B-I C-III D-II

Match List I with List II

LIST I		LIST II	
A.	$A \Delta B$	I.	$(A - B) \cup (A - C)$
B.	$A - (B \cup C)$	II.	$(A - B) \cap (A - C)$
C.	$A - (B \cap C)$	III.	$(A - B) \cup (B - A)$
D.	$A \cap (B - C)$	IV.	$(A \cap B) - (A \cap C)$

Choose the correct answer from the options given below:

1. A-III B-II C-I D-IV

2. A-II B-III C-IV D-I

3. A-IV B-III C-I D-II

4. A-IV B-I C-III D-II

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

66 87016

What is the output of following code?

```

main ( )
{ static float a[ ] = { 13.24, 1.5,4.5,5.4,3.5}

float *j, *k;

j=a;

k= a+4

j= j*2;

k=k/2;

printf ("% f% f", *j, *k);

}

```

1. 13.25, 4.5

2. 1.5, 3.5

3. 13.24, 1.5, 4.5, 5.4, 3.5

4. Illegal use of pointer in main function

What is the output of following code?

```
main ()
{ static float a[] = { 13.24, 1.5, 4.5, 5.4, 3.5}

float *j, *k;

j=a;

k= a+4

j= j*2;

k=k/2;

printf ("%f %f", *j, *k);

}
```

1. 13.25, 4.5
2. 1.5, 3.5
3. 13.24, 1.5, 4.5, 5.4, 3.5
4. Illegal use of pointer in main function

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

67 87017

What is x in the following program?

```
# include < stdio.h>

int main ()

{typedef (* (* arrfptr [3]) ()) [10];

arrfptr x ;

return 0 ;

}
```

1. x is a pointer
2. x is a array of three pointer
3. x is an array of three function pointer
4. Error in x declaration

What is x in the following program?

```
# include < stdio.h>
```

```
int main ( )
```

```
{typedef (* (* arrfptr [3]) ( ) ) [10];
```

```
arrfptr x ;
```

```
return 0 ;
```

```
}
```

1. x is a pointer
2. x is a array of three pointer
3. x is an array of three function pointer
4. Error in x declaration

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

68 87018 What is the output of following code?

```
main ( )
```

```
struct s1
```

```
{ char * z;
```

```
int i;
```

```
struct s1 * p;
```

```
}
```

```
static struct s1 a [ ] = {
```

```
{ "Nagpur", 1, a+1}
```

```
{ "Raipur", 2, a+2}
```

```
{ "Kanpur", 3, a}
```

```
};
```

```
struct s1 * ptr =a;
```

```
printf ( %s %s %s \n", a[0].z, ptr→z, a[2].p →z);
```

```
}
```

1. Nagpur Raipur Kanpur
2. Nagpur Nagpur Nagpur
3. Kanpur Kanpur Kanpur
4. Error

What is the output of following code?

```
main ()  
  
struct s1  
{ char * z;  
  int i;  
  struct s1 * p;  
}  
  
static struct s1 a [ ] = {  
  {"Nagpur", 1, a+1}  
  {"Raipur", 2, a+2}  
  {"Kanpur", 3, a}  
};  
  
struct s1* ptr =a;  
printf ( %s %s %s \n", a[0].z, ptr→z, a[2].p →z);  
}
```

1. Nagpur Raipur Kanpur
2. Nagpur Nagpur Nagpur
3. Kanpur Kanpur Kanpur
4. Error

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

69 87019

What will be the output of the following code?

```
# include < stdio. h>
```

```
int main ( ) {
```

```
int a, b, c;
```

```
a= 0x10; b= o10;
```

```
c= a+b;
```

```
printf ( "%d", c);
```

```
return 0;
```

```
}
```

1. 20
2. 24
3. Garbage
4. error

What will be the output of the following code?

```
# include < stdio. h>
```

```
int main ( ) {
```

```
int a, b, c;
```

```
a= 0x10; b= o10;
```

```
c= a+b;
```

```
printf ( "%d", c);
```

```
return 0;
```

```
}
```

1. 20
2. 24
3. Garbage
4. error

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

70 87020

How will you free the memory allocated by the following program?

```
#include <stdio.h>

#include <stdlib.h>

#define MAXROW 3

#define MAXCOL 4

int main ( )
{
    int ** p, i, j;

    p= (int **) malloc (MAXROW * size of (int*));

    return 0;
}
```

1. memfree (int p);
2. dealloc (p);
3. malloc (p,0);
4. free (p);

How will you free the memory allocated by the following program?

```
#include <stdio.h>

#include <stdlib.h>

#define MAXROW 3

#define MAXCOL 4

int main ( )
{
    int ** p, i, j;

    p= (int **) malloc (MAXROW * size of (int*));

    return 0;
}
```

1. memfree (int p);
2. dealloc (p);
3. malloc (p,0);
4. free (p);

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

71 87021 Southerland Hodgeman method is used on

1. Smooth curves
2. Line segment
3. Convex polygons
4. Concave polygons

Southerland Hodgeman method is used on

1. Smooth curves
2. Line segment
3. Convex polygons
4. Concave polygons

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

72 87022 The clipping process in computer graphics is used for

1. Adding graphics
2. Copying
3. Zooming
4. Removing objects and lines

The clipping process in computer graphics is used for

1. Adding graphics

2. Copying

3. Zooming

4. Removing objects and lines

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

73 87023

Consider the rectangle with vertices (0,0), (0,2), (3,0), (3,2). There is scaling of 2 towards x-axis and 3 towards y-axis. The new coordinate of the rectangle are

1. (0,0), (6,0), (0,4), (6,4)
2. (0,0), (6,0), (0,4), (3,2)
3. (0,0), (6,0), (0,6), (6,6)
4. (0,0), (4,0), (0,6), (4,6)

Consider the rectangle with vertices (0,0), (0,2), (3,0), (3,2). There is scaling of 2 towards x-axis and 3 towards y-axis. The new coordinate of the rectangle are

1. (0,0), (6,0), (0,4), (6,4)
2. (0,0), (6,0), (0,4), (3,2)
3. (0,0), (6,0), (0,6), (6,6)
4. (0,0), (4,0), (0,6), (4,6)

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

74 87024 Which of the following transforms in 2 dimension is used to resize a 2-dimensional object?

1. Translation
2. Rotation
3. Scaling
4. Shearing

Which of the following transforms in 2 dimension is used to resize a 2-dimensional object?

1. Translation
2. Rotation
3. Scaling
4. Shearing

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

75 87025

Match List I with List II

LIST I		LIST II	
A.	Bezier curves	I.	3 dim objects that have translation rotational symmetry
B.	B-Splines	II.	Fractal geometry
C.	Sweep representations	III.	Bias and tension
D.	Natural objects	IV.	painting drawing CAD

Choose the correct answer from the options given below:

1. A-IV B-I C-III D-II
2. A-II B-III C-IV D-I
3. A-IV B-III C-I D-II
4. A-II B-IV C-I D-III

Match List I with List II

LIST I		LIST II	
A.	Bezier curves	I.	3 dim objects that have translation rotational symmetry
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C.	Sweep representations	III.	Bias and tension
D.	Natural objects	IV.	painting drawing CAD

Choose the correct answer from the options given below:

1. A-IV B-I C-III D-II
2. A-II B-III C-IV D-I
3. A-IV B-III C-I D-II
4. A-II B-IV C-I D-III

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

76 87026

let R (A,B,C, D) be a relational schema with following function dependencies:

 $A \rightarrow B, B \rightarrow C$ $C \rightarrow D$ and $D \rightarrow B$

The decomposition of R into

(A,B) (B,C) (B,D)

1. gives a lossless join, and is dependency preserving
2. gives lossless join, but is not dependency preserving
3. does not give a lossless join, but is dependency preserving
4. does not give a lossless join and is not dependency preserving

let $R(A, B, C, D)$ be a relational schema with following function dependencies:

$A \rightarrow B, B \rightarrow C$

$C \rightarrow D$ and $D \rightarrow B$

The decomposition of R into

$(A, B) (B, C) (B, D)$

1. gives a lossless join, and is dependency preserving
2. gives lossless join, but is not dependency preserving
3. does not give a lossless join, but is dependency preserving
4. does not give a lossless join and is not dependency preserving

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

77 87027 A B-tree used as an index for a large database table has four levels including the root node. If a new key is inserted in this index, then maximum number of nodes that could be newly created in the process is

1. 5
2. 4
3. 3
4. 2

A B-tree used as an index for a large database table has four levels including the root node. If a new key is inserted in this index, then maximum number of nodes that could be newly created in the process is

1. 5
2. 4
3. 3
4. 2

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

78 87028

Consider the following statements:

- A. A database design is in BCNF if each member of the set of relation schemas that constitutes the design is in BCNF
- B. A BCNF schema can have transitive dependency
- C. It is always possible to obtain a 3NF design without sacrificing a lossless join
- D. There are multivalued dependencies in 4NF

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

Consider the following statements:

- A. A database design is in BCNF if each member of the set of relation schemas that constitutes the design is in BCNF
- B. A BCNF schema can have transitive dependency
- C. It is always possible to obtain a 3NF design without sacrificing a lossless join
- D. There are multivalued dependencies in 4NF

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

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

79 87029

Given below are two statements:

Which of the following concurrency control protocol ensures both conflict serializability and freedom from deadlock?

Statement I: Two phase locking

Statement II: Timestamp ordering

In the light of the above statements, choose the most appropriate answer from the options given below:

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

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Which of the following concurrency control protocol ensures both conflict serializability and freedom from deadlock?

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4. Statement I is incorrect but Statement II is correct

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

80 87030

Which one of the following is NOT a part of ACID properties of a database transaction?

1. Atomicity
2. Consistency
3. Isolation
4. Deadlock-freedom

Which one of the following is NOT a part of ACID properties of a database transaction?

1. Atomicity
2. Consistency
3. Isolation
4. Deadlock-freedom

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

81 87031

Let R (A,B, C,D,F) be a relational schema with following functional dependencies:

$C \rightarrow F$, $E \rightarrow A$, $EC \rightarrow D$, $A \rightarrow B$. Which of the following is a key for R?

1. CD
2. EC
3. AE
4. AC

Let R (A,B, C,D,F) be a relational schema with following functional dependencies:

$C \rightarrow F$, $E \rightarrow A$, $EC \rightarrow D$, $A \rightarrow B$. Which of the following is a key for R?

1. CD
2. EC
3. AE
4. AC

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

82 87032

Which of the following scenario may lead to an irrecoverable error in a database system?

1. A transaction writes a data item after it is read by an uncommitted transaction
2. A transaction reads a data item after it is read by an uncommitted transaction
3. A transaction reads a data item after it is written by a committed transactions
4. A transaction reads a data item after it is written by an uncommitted transaction.

Which of the following scenario may lead to an irrecoverable error in a database system?

1. A transaction writes a data item after it is read by an uncommitted transaction
2. A transaction reads a data item after it is read by an uncommitted transaction
3. A transaction reads a data item after it is written by a committed transactions
4. A transaction reads a data item after it is written by an uncommitted transaction.

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

83 87033

Given the basic E R diagram and relational model, which of the the following is incorrect?

1. An attribute of an entity can have more than one value
2. An attribute of an entity can be composite
3. In a row of relational table, an attribute can have more than one value
4. In a row of a relational table, an attribute can have exactly one value or a NULL value

Given the basic E R diagram and relational model, which of the the following is incorrect?

1. An attribute of an entity can have more than one value
2. An attribute of an entity can be composite
3. In a row of relational table, an attribute can have more than one value
4. In a row of a relational table, an attribute can have exactly one value or a NULL value

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

84 87034 The total cost of retrieving records in sorted order using an unclustered B+ tree is

(P- Average number of records per data page

N- Data pages

F- Ratio of the size of a data entry to the size of a data record)

1. $(F*N) + P$
2. $(F+P) * N$
3. $F*N*P$
4. $F+P/N$

The total cost of retrieving records in sorted order using an unclustered B+ tree is

(P- Average number of records per data page

N- Data pages

F- Ratio of the size of a data entry to the size of a data record)

1. $(F*N) + P$
2. $(F+P) * N$
3. $F*N*P$
4. $F+P/N$

A1 1
:

1

A2 2
:

2

A3 3
:

3

3
A4 4
:
4

Objective Question

85 87035

Match List I with List II

LIST I		LIST II	
A.	RAID level 2	I.	Bit interleaved parity
B.	RAID level 4	II.	Block interleaved distributed parity
C.	RAID level 5	III.	Error correcting parity
D.	RAID level 3	IV.	Block interleaved parity

Choose the correct answer from the options given below:

1. A-IV B-III C-I D-II
2. A-III B-IV C-II D-I
3. A-III B-I C-II D-IV
4. A-I B-III C-IV D-I

Match List I with List II

LIST I		LIST II	
A.	RAID level 2	I.	Bit interleaved parity
B.	RAID level 4	II.	Block interleaved distributed parity
C.	RAID level 5	III.	Error correcting parity
D.	RAID level 3	IV.	Block interleaved parity

Choose the correct answer from the options given below:

1. A-IV B-III C-I D-II
2. A-III B-IV C-II D-I
3. A-III B-I C-II D-IV
4. A-I B-III C-IV D-I

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

86 87036

At a particular time of computation, the value of a counting semaphore is 7. Then 20 p operations and 'x' V operations were completed on this semaphore. If the final value of semaphore is 5. x will be

1. 15
2. 22
3. 18
4. 13

At a particular time of computation, the value of a counting semaphore is 7. Then 20 P operations and 'x' V operations were completed on this semaphore. If the final value of semaphore is 5, x will be

1. 15
2. 22
3. 18
4. 13

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

87 87037 In a multiuser operating system, 20 requests are made to use a particular resource per hour, on an average. The probability that no request is made in 45 minutes is

1. e^{-15}
2. e^{-5}
3. $1-e^{-5}$
4. $1-e^{-10}$

In a multiuser operating system, 20 requests are made to use a particular resource per hour, on an average. The probability that no request is made in 45 minutes is

1. e^{-15}
2. e^{-5}
3. $1-e^{-5}$
4. $1-e^{-10}$

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

88 87038

Consider the following table of arrival time and burst time for three processes P0,P1 P2:

Process	arrival time	Burst time
P0	0 ms	7
P1	1 ms	3
P2	2 ms	7

The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of a process. What is the average waiting time for the three processes?

1. 3 ms
2. 3.67 ms
3. 4.47 ms
4. 4 ms

Consider the following table of arrival time and burst time for three processes P0,P1 P2:

Process	arrival time	Burst time
P0	0 ms	7
P1	1 ms	3
P2	2 ms	7

The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of a process. What is the average waiting time for the three processes?

1. 3 ms
2. 3.67 ms
3. 4.47 ms
4. 4 ms

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

89 87039

Consider a disk system with cylinders. The request to access the cylinders occurs in the following sequence:

4,34,10,7,19,73,2,15,6,20

Assuming that the head is currently at cylinder 50, what is the time taken to satisfy all requests if it takes 1 ms to move from one cylinder to adjacent one and shortest seek time first policy is used?

1. 119 ms
2. 120 ms
3. 142 ms
4. 146 ms

Consider a disk system with cylinders. The request to access the cylinders occurs in the following sequence:

4,34,10,7,19,73,2,15,6,20

Assuming that the head is currently at cylinder 50, what is the time taken to satisfy all requests if it takes 1 ms to move from one cylinder to adjacent one and shortest seek time first policy is used?

1. 119 ms
2. 120 ms
3. 142 ms
4. 146 ms

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

90 87040

Consider the following statements:

S1: LRU page replacement algorithm suffers from the belady's anomaly

S2: Shortest remaining time first scheduling may cause starvations

S3: Stack is shared by all threads in a process

1. S1 S2 and S3 are true
2. S1, S3 false and S2 is true
3. S1, S2 are false and S3 is true
4. S1, S2 and S3 are false

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4. S1, S2 and S3 are false

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

4

Objective Question

91 87041

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: I/O protection is ensured by a hardware trap

Reason R: I/O interrupt caused by the condition like I/O completion and device malfunction occurring within the I/O devices

In the light of the above statements, choose the **correct** answer from the options given below.

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

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A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

92 87042

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A: A process involves a library function to create a thread.

Reason R: The threads make system calls to convey their resource and I/O requirement to the Kernel.

In the light of the above statements, choose the correct answer from the options given below.

1. Both A and R are true and R is the correct explanation of A
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4. A is false but R is true

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

93 87043

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

A virtual memory system uses first-in first-out page replacement policy and allocates a fixed number of frames to a process

Assertion A: Increasing number of page frames allocated to a process sometimes increases the page fault rate.

Reason R: Some programs do not exhibit locality of reference.

In the light of the above statements, choose the correct answer from the options given below.

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4. A is false but R is true

A1 1

:

1

A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

94 87044

Given below are two statements:

Which of the following statement/s is/are correct with respect to virtual memory

Statement I: Address translation is performed for every logical address used during the execution of a program

Statement II: A program can execute only when all of its components are loaded in the memory

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

95 87045

Match List I with List II

LIST I		LIST II	
A.	Critical region	I.	Hoare's monitor
B.	Wait/signal	II.	Mutual exclusion
C.	Working set	III.	Principle of locality
D.	Deadlock	IV.	Circular wait

Choose the correct answer from the options given below:

1. A-IV B-I C-III D-II
2. A-II B-I C-III D-IV
3. A-I B-II C-III D-IV
4. A-IV B-III C-I D-II

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2. A-II B-I C-III D-IV
3. A-I B-II C-III D-IV
4. A-IV B-III C-I D-II

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

96 87046

An observational technique that can be used to understand operational process and help to derive requirement for software to support operational process is known as

1. Requirement specification
2. Structural specification
3. Ethnography
4. Natural language specification

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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

97 87047 Which of the following is used to determine the cost performance index?

1. Budgeted cost of work performed-budget at completion
2. Budgeted cost of work performed÷budget at completion
3. Budgeted cost of work performed÷Actual cost of work performed
4. Budgeted cost of work performed-Actual cost of work performed

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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

98 87048 _____ is intended to show that a system both conforms to its specifications and meets the expectations of the system customer.

1. Software specification
2. Software design
3. Software evaluation
4. software validation

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A1 1
:
1

A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

99 87049 The following table shows the time between failures for a software :

Error number	1	2	3	4	5
time since last failure (Hours)	6	4	8	5	6

The reliability of the system for one hour operation assuming an exponential model is-

1. $e^{-9/29}$
2. $e^{-7/29}$
3. $e^{-5/29}$
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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

100 87050

Consider a popular sports news site. At a given moment, 20,000 concurrent users submit a request (a transaction, T) once every 2 minutes on average. Each transaction requires the webapp to download a new article that on average has 3k bytes in length. What is the throughput?

1. 8 megabits per second
2. 4 megabits per second
3. 6 megabits per second
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A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

101 87051

Consider the following statements about the software product line system:

Statement I: At the interaction level, components provide an operator display interface and an interface with the communication system used.

Statement II: At the I/O management level, components handle operator authentication, report generator and query manager.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
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A1
:

1

A2
:

2

A3 3
:
3
A4 4
:
4

Objective Question

102 87052

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Validity checks real need of system users

Reason R: Completeness checks system user defined requirements.

In the light of the above statements, choose the correct answer from the options given below.

1. Both A and R are true and R is the correct explanation of A
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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

103 87053

Given below are two statements:

Statement I: subsystem models show logical grouping of objects into coherent subsystem

Statement II: State machine models show how objects change their states in response to events.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
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A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

104 87054

Consider the following statements:

- A. Dynamic metrics are collected by measurements made of a program in execution
- B. Static metrics are collected by measurements made of representations of the system
- C. The assessment of software quality is an objective process
- D. An important part of quality assurance in the selection of standards that should apply to the software development process.

Choose the correct answer from the options given below:

1. A, B C only
2. B, C and D only
3. A, C and D only
4. A, B and D only

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A1 1
:

1

A2 2
:

2

A3 3
:

3

3
A4
:
4

Objective Question

105 87055

Match List I with List II

LIST I		LIST II	
A.	Scenario testing	I.	To verify the I/O behavior of text object
B.	Regression testing	II.	user acceptance methodology
C.	Component testing	III.	No new bugs after changes in program
D.	Beta testing	IV.	The documentation of a use case

Choose the correct answer from the options given below:

1. A-IV B-III C-II D-I
2. A-II B-I C-III D-IV
3. A-IV B-III C-I D-II
4. A-III B-I C-IV D-II

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A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

106 87056

A three dimensional array in C++ is declared as `int A [a] [b] [c]`. Consider that array elements are stored in row major order and indexing begin from 0. Here the address of an item at the location `A [r] [s] [t]` computed in terms of word length `w` of an integer is

1. $\&A[0][0][0] + w (b*c*s + c*r + t)$
2. $\&A[0][0][0] + w (b*c*r + c*s + t)$
3. $\&A[0][0][0] + w (a*b*r + c*s + t)$
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1. $\&A[0][0][0] + w(b \cdot c \cdot s + c \cdot r + t)$
2. $\&A[0][0][0] + w(b \cdot c \cdot r + c \cdot s + t)$
3. $\&A[0][0][0] + w(a \cdot b \cdot r + c \cdot s + t)$
4. $\&A[0][0][0] + w(a \cdot b \cdot s + c \cdot r + t)$

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

107 87057

Suppose a circular queue of capacity $(n-1)$ elements is implemented with an array of n elements. Assume that the insertion and deletion operations are carried out using REAR and FRONT as array index variable respectively. Initially, $REAR=FRONT=0$. The conditions to detect queue empty and queue full are

1. EMPTY: $REAR == FRONT$
FULL : $(REAR+1) \bmod n == FRONT$
2. EMPTY: $(FRONT + 1) \bmod n == REAR$
FULL: $(REAR + 1) \bmod n == FRONT$
3. EMPTY $(REAR + 1) \bmod n == FRONT$
FULL: $REAR == FRONT$
4. EMPTY: $REAR == FRONT$
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A1 1
:

1

A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

108 87058

Consider a hash table of size seven with starting index zero and a hash function $(6x + 3) \bmod 4$. Assuming the hash table is initially empty. Which of the following is the content of the table when the sequence 1,3,8,10,5, is inserted into the table using closed hashing? Here "___" denotes an empty location in the table.

1. 1,3,8,10,5,_,_
2. 3,8,1,_,10,_,5
3. _,3,8,1,_,10,5
4. _,1,3,8,10,5,_,_

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3. _,3,8,1,_,10,5
4. _,1,3,8,10,5,_,_

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

109 87059

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: The AVL trees are more balanced as compared to Red Black trees, but they may cause more rotations during insertion and deletion

Reason R: A Red Black tree with n nodes has height that is greater than $2 \log_2 (n+1)$ and the AVL tree with n nodes has height less than $\log_{\Phi} (\sqrt{5} (n+2)) - 2$ (where Φ is golden ratio)

In the light of the above statements, choose the correct answer from the options given below.

1. Both A and R are correct and R is the correct explanation of A
2. Both A and R are correct and R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

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A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

110 87060

Given below are two statements:

Let $f(n)$ and $g(n)$ be asymptotically positive functions. The following conjectures are given

Statement I: $f(n) \geq 1$ and $f(n) = O(g(n)) \Rightarrow g(n) = \Omega(f(n))$

Statement II: $f(n) = O(g(n)) \Rightarrow \lg(f(n)) = O(\lg(g(n)))$ where $\lg(g(n)) \geq 1$ for all sufficient large n .

In the light of the above statements, choose the most appropriate answer from the options given below.

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4. Statement I is incorrect but Statement II is correct

A1 1

:

1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

111 87061

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: It is possible to create doubly linked list using only one pointer with every node.

Reason R: By storing the XOR of the addresses of the previous and next nodes.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

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2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

112 87062

Consider the following statements about heap sort algorithm:

- A. The MAX-HEAPIFY procedure which runs in $O(\lg n)$ time, is the key to maintaining the max heap property
- B. The BUILD-MAX-HEAP procedure, which runs in $O(\lg n)$ time, produces max-heap from an unordered input array
- C. The MAX-HEAP-INSERT, which runs in $O(\lg n)$ time, implements the insertion operation
- D. The HEAP-INCREASE-KEY procedure runs in $O(n \lg n)$ time, to set the key of new node of its correct value

Choose the correct answer from the options given below:

- 1. A, B only
- 2. A, C only
- 3. B, D only
- 4. A, B, C, D

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Choose the correct answer from the options given below:

- 1. A, B only
- 2. A, C only
- 3. B, D only
- 4. A, B, C, D

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

113 87063

- A. If some NP-complete problem P is in $\mathbb{P}$ that $\mathbb{P} = \text{NP}$
- B. TSP is in NP
- C. SAT is in NP
- D. Hamilton circuit problem is not NP-complete

Choose the correct answer from the options given below:

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

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 B. TSP is in NP
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 D. Hamilton circuit problem is not NP-complete

Choose the correct answer from the options given below:

1. A, B and C only
 2. B, C and D only
 3. C, D and A only
 4. D, A and B only

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

114 87064

Match List I with List II

LIST I		LIST II	
A.	The running time of straight forward recursive method to compute nth Fibonacci number Fn	I.	$O(n^2)$
B.	The running time to compute Fn using memoization	II.	$O(\lg n)$
C.	The running time to compute Fibonacci number Fn using only integer addition and multiplication	III.	$O(n)$
D.	The running time to determine an optimal bitonic tour	IV.	$\Theta(\phi^n)$

Choose the correct answer from the options given below:

1. A-I B-III C-IV D-II
 2. A-IV B-III C-II D-I
 3. A-I B-II C-IV D-III
 4. A-IV B-II C-III D-I

Match List I with List II

LIST I		LIST II	
A.	The running time of straight forward recursive method to compute nth Fibonacci number Fn	I.	$O(n^2)$
B.	The running time to compute Fn using memoization	II.	$O(\lg n)$
C.	The running time to compute Fibonacci number Fn using only integer addition and multiplication	III.	$O(n)$
D.	The running time to determine an optimal bitonic tour	IV.	$\Theta(\phi^n)$

Choose the correct answer from the options given below:

1. A-I B-III C-IV D-II
 2. A-IV B-III C-II D-I
 3. A-I B-II C-IV D-III
 4. A-IV B-II C-III D-I

A1
:

1

A2
:

2

A3 3
:
3
A4 4
:
4

Objective Question

115 87065 Match List I with List II

LIST I		LIST II	
A.	Parallel FFT	I.	$O(n^2)$
B.	Iterative FFT	II.	$O(n)$
C.	Evaluation of polynomial at n points by Horner method	III.	$O(\lg n)$
D.	Product of two polynomials that are represented in point value form	IV.	$O(n \lg n)$

Choose the correct answer from the options given below:

1. A-III B-I C-II D-III
2. A-II B-I C-III D-IV
3. A-III B-IV C-I D-II
4. A-II B-III C-IV D-I

Match List I with List II

LIST I		LIST II	
A.	Parallel FFT	I.	$O(n^2)$
B.	Iterative FFT	II.	$O(n)$
C.	Evaluation of polynomial at n points by Horner method	III.	$O(\lg n)$
D.	Product of two polynomials that are represented in point value form	IV.	$O(n \lg n)$

Choose the correct answer from the options given below:

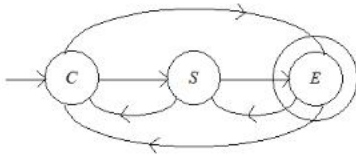
1. A-III B-I C-II D-III
2. A-II B-I C-III D-IV
3. A-III B-IV C-I D-II
4. A-II B-III C-IV D-I

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

116 87066

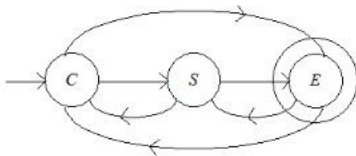
Consider the following finite automata F1 that accepts a language L



Let F2 be a finite automata which is obtained by reversal of F1. Then which of the following is correct?

1. $L(F1) \neq L(F2)$
2. $L(F1) = L(F2)$
3. $L(F1) \leq L(F2)$
4. $L(F1) \geq L(F2)$

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3. $L(F1) \leq L(F2)$
4. $L(F1) \geq L(F2)$

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

117 87067 Which of the following statement is correct?

1. Ackermann's function is primitive recursive.
2. $L = \{a^n b^k c^{n+k} : n \geq 0, k \geq 0\}$ is regular language.
3. $L = \{a^n b^j : n = j^2\}$ is not context free language
4. For every context sensitive language L not including λ , there exists some linear bounded automata M such that $L \neq L(M)$.

Which of the following statement is correct?

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4. For every context sensitive language L not including λ , there exists some linear bounded automata M such that $L \neq L(M)$.

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

118 87068

The maximum yield length of the following CNF CFG is

 $S \rightarrow AB$
 $A \rightarrow CD$
 $B \rightarrow e$
 $C \rightarrow a$
 $D \rightarrow b$

- 1. 8
- 2. 7
- 3. 4
- 4. 5

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 $S \rightarrow AB$
 $A \rightarrow CD$
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 $C \rightarrow a$
 $D \rightarrow b$

- 1. 8
- 2. 7
- 3. 4
- 4. 5

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

119 87069

Consider the following language :

$$L = \{ w \in \{ a, b, c \}^* : n_a(w) + n_b(w) = n_c(w) \}$$

L is

1. Context free but not linear
2. Not context free
3. Context free and linear
4. Linear

Consider the following language :

$$L = \{ w \in \{ a, b, c \}^* : n_a(w) + n_b(w) = n_c(w) \}$$

L is

1. Context free but not linear
2. Not context free
3. Context free and linear
4. Linear

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

120 87070

The compiler for high level language that runs on one machine and produces code for other machine is called-

1. Cross compiler
2. Multipass compiler
3. Optimizing Compiler
4. One pass Compiler

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1. Cross compiler
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A1
:

1

A2
:

2

A3
:

3

A4
:

4

4

Objective Question

121 87071 Which of the following parser is most powerful parser?

1. Operator precedence
2. SLR
3. Canonical LR
4. LALR

Which of the following parser is most powerful parser?

1. Operator precedence
2. SLR
3. Canonical LR
4. LALR

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

122 87072 Which phase of compiler checks the grammar of programming?

1. Code optimization
2. Semantic analysis
3. Code generators
4. Syntax analysis

Which phase of compiler checks the grammar of programming?

1. Code optimization
2. Semantic analysis
3. Code generators
4. Syntax analysis

A1

:

1

A2

:

2

A3

:

3

A4

:

4

Objective Question

123 87073

Given below are two statements:

Statement I: If f and g are two functions and $f = O(g)$ but $g \neq o(f)$, we say that the growth rate of g is smaller than that of f

Statement II: The class of all decision problems decided by a TM in exponential time, that is $O(2^k)$, k being a constant.

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

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4. Statement I is incorrect but Statement II is correct

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

124 87074

- A. The set of turning machine codes for TM's that accept all inputs that are palindromes (possible along with some other inputs) is decidable
- B. The language of codes for TM's M that when started with blank tape, eventually write a 1 somewhere on the tape is undecidable
- C. The language accepted by a TM M is $L(M)$ is always recursive
- D. Post's correspondence problem is undecidable

Choose the correct answer from the options given below:

1. A, B and C only
2. B, C and D only
3. A and C only
4. B and D only

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Choose the correct answer from the options given below:

1. A, B and C only
2. B, C and D only
3. A and C only
4. B and D only

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

125 87075

Consider following statements:

- A. A context free language is generated by LR(o) grammar if and only if it is accepted by a deterministic pushdown automata and has prefix property
- B. If M1 is the single tape TM simulating multilape TM M, then time taken by M1 to simulate n moves is (n^3)
- C. Push down automata behaves like a Turning machine when it has one auxiliary memory.
- D. $L = \{a^n b^n c^n : n \geq 1\}$ is not context free but context sensitive.

Choose the correct answer from the options given below:

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

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- A. A context free language is generated by LR(o) grammar if and only if it is accepted by a deterministic pushdown automata and has prefix property
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Choose the correct answer from the options given below:

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- 2. A, B only
- 3. C, D only
- 4. B, C only

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

126 87076

In the standard Ethernet with transmission rate of 10 Mbps, assume that the length of the medium is 2500m and size of a frame is 512 bytes. The propagation speed of a signal in a cable is normally 2×10^8 m/s. The transmission delay and propagation delay are

1. 25.25 μ s and 51.2 μ s
2. 51.2 μ s and 12.5 μ s
3. 10.24 μ s and 50.12 μ s
4. 12.5 μ s and 51.2 μ s

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A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

127 87077

A TCP server application is programmed to listen on port P on host S. A TCP client is connected to the TCP server over the network. Consider that while TCP connection is active the server is crashed and rebooted. Assume that the client does not use TCP keepalive timer. Which of the following behaviour/s is/are possible ?

Statement I: The TCP application server on S can listen on P after reboot.

Statement II: If client sends a packet after the server reboot, it will receive the RST segment.

In the light of the above statements, choose the correct answer from the options given below.

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

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4. Statement I is false but Statement II is true

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

128 87078

Consider two hosts P and Q that are connected through a router R. The maximum transfer unit (MTU) value of the link between P and R is 1500 bytes and between R and Q is 820 bytes. A TCP segment of size 1400 bytes is transferred from P to Q through R with IP identification value of 0x1234. Assume that IP header size is 20 bytes. Further the packet is allowed to be fragmented that is Don't fragment (DF) flag in the IP Header is not set by P. Which of the following statement/s is/are true?

- A. Two fragments are created at R and IP datagram size carrying the second fragment is 620 bytes
- B. If the second fragment is lost, then R resends the fragment with IP identification value of 0x1234
- C. If the second fragment lost, then P requires to resend the entire TCP segment.
- D. TCP destination port can be determined by analyzing the second fragment only.

Choose the correct answer from the options given below:

1. A, B and C only
2. A and C only
3. C and D only
4. B and D only

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Choose the correct answer from the options given below:

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

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

129 87079

Match List I with List II

LIST I		LIST II	
A.	Physical layer	I.	Transforming the raw bits in the form of frame for transmission
B.	Data Link Layer	II.	Control and monitoring of subnet
C.	Network layer	III.	Transmission of raw bits over communication channel
D.	Transport layer	IV.	Datagrams transmission data through connection oriented or connectionless using datagram

Choose the correct answer from the options given below:

- 1. A-III B-II C-I D-IV
- 2. A-II B-III C-I D-IV
- 3. A-III B-I C-II D-IV
- 4. A-II B-IV C-I D-III

Match List I with List II

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C.	Network layer	III.	Transmission of raw bits over communication channel
D.	Transport layer	IV.	Datagrams transmission data through connection oriented or connectionless using datagram

Choose the correct answer from the options given below:

- 1. A-III B-II C-I D-IV
- 2. A-II B-III C-I D-IV
- 3. A-III B-I C-II D-IV
- 4. A-II B-IV C-I D-III

A1
:

1

A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

130 87080

Match List I with List II

LIST I		LIST II	
A. CDMA	I.	It provides mobile internet connection with faster data transfer rates	
B. GSM	II.	It allows user to connect to a network or to other devices over wireless channel	
C. UMTS	III.	Accessing mechanism for multiple transmitters over a single channel	
D. WiFi	IV.	It is a cellular technology that employs hybrid of FDMA and TDMA	

Choose the correct answer from the options given below:

1. A-III B-IV C-II D-I
2. A-III B-IV C-I D-II
3. A-II B-III C-IV D-I
4. A-II B-I C-IV D-III

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2. A-III B-IV C-I D-II
3. A-II B-III C-IV D-I
4. A-II B-I C-IV D-III

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

131 87081

Which is not the component of the natural language understanding process?

1. Morphological analysis
2. Semantic analysis
3. Pragmatic analysis
4. Meaning analysis

Which is not the component of the natural language understanding process?

1. Morphological analysis
2. Semantic analysis
3. Pragmatic analysis
4. Meaning analysis

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

132 87082 Which is not a basic approach to the problem of conflict resolution in a production system?

1. Assigning a preference based on the rule that matched
2. Assigning a preference based the object that matched
3. Assigning a preference based on the action that the matched rule would perform
4. Assigning a preference based on the action that the matched object would perform

Which is not a basic approach to the problem of conflict resolution in a production system?

1. Assigning a preference based on the rule that matched
2. Assigning a preference based the object that matched
3. Assigning a preference based on the action that the matched rule would perform
4. Assigning a preference based on the action that the matched object would perform

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

133 87083 Which of the following is not a property of a good system for representation of knowledge in a particular domain?

1. Presentation adequacy
2. inferential adequacy
3. Inferential efficiency
4. acquisitional efficiency

Which of the following is not a property of a good system for representation of knowledge in a particular domain?

1. Presentation adequacy
2. inferential adequacy
3. Inferential efficiency
4. acquisitional efficiency

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

134 87084 Consider universe positive integer $X = \{1 \leq n \leq 8\}$, proposition $P = "n \text{ is an even integers}"$, $Q = "(3 \leq n \leq 7) \wedge (n \neq 6)"$. Then truth set of $P \leftrightarrow Q$ is

1. $\{1,4\}$
2. $\{2,6\}$
3. $\{3,4,5\}$
4. $\{1\}$

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1. $\{1,4\}$
2. $\{2,6\}$
3. $\{3,4,5\}$
4. $\{1\}$

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

135 87085 Which of the following is not a solution representation in a genetic algorithm?

1. Binary valued
2. Real valued
3. Permutation
4. Combinations

Which of the following is not a solution representation in a genetic algorithm?

1. Binary valued
2. Real valued
3. Permutation
4. Combinations

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

136 87086

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Dendral is an expert system

Reason R: The rationality of an agent is not related to its reaction to the environment.

In the light of the above statements, choose the **correct** answer from the options given below.

1. Both A and R are true and R is the correct explanation of A
2. Both A and R are true but R is NOT the correct explanation of A
3. A is true but R is false
4. A is false but R is true

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

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Reason R: The rationality of an agent is not related to its reaction to the environment.

In the light of the above statements, choose the **correct** answer from the options given below.

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3. A is true but R is false
4. A is false but R is true

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

137 87087

Given below are two statements:

Statement I: Fuzzifier is a part of a fuzzy system

Statement II: Inference engine is a part of fuzzy system

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

Given below are two statements:

Statement I: Fuzzifier is a part of a fuzzy system

Statement II: Inference engine is a part of fuzzy system

In the light of the above statements, choose the most appropriate answer from the options given below.

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

138 87088 Which of the following is not a mutation operator in a genetic algorithm?

- A. Random resetting
- B. Scramble
- C. Inversion
- D. Difference

Choose the correct answer from the options given below:

1. A and B only
2. B and D only
3. C and D only
4. D only

Which of the following is not a mutation operator in a genetic algorithm?

- A. Random resetting
- B. Scramble
- C. Inversion
- D. Difference

Choose the correct answer from the options given below:

- 1. A and B only
- 2. B and D only
- 3. C and D only
- 4. D only

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

139 87089

Consider the following statements

- A. C-Fuzzy means clustering is a supervised method of learning
- B. PCA is used for dimension reduction
- C. Apriori is not a supervised technique
- D. When a machine learning model becomes so specially tuned to its exact input data that it fails to generalize to other similar data it is called underfitting

Choose the correct answer from the options given below:

- 1. A and B
- 2. B and C
- 3. C and D
- 4. D and A

Consider the following statements

- A. C-Fuzzy means clustering is a supervised method of learning
- B. PCA is used for dimension reduction
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- D. When a machine learning model becomes so specially tuned to its exact input data that it fails to generalize to other similar data it is called underfitting

Choose the correct answer from the options given below:

- 1. A and B
- 2. B and C
- 3. C and D
- 4. D and A

A1 1
:

1

A2 2
:

2

A3 3
:
3
A4 4
:
4

Objective Question

140 87090

Match List I with List II

LIST I		LIST II	
A.	Expert system	I.	Decision tree
B.	Fuzzy system	II.	Scramble
C.	Operator in genetic algorithm	III.	Inference engine
D.	Supervised technique	IV.	Mycin

Choose the correct answer from the options given below:

1. A-IV B-I C-III D-II
2. A-III B-IV C-II D-I
3. A-IV B-III C-II D-I
4. A-I B-II C-III D-IV

Match List I with List II

LIST I		LIST II	
A.	Expert system	I.	Decision tree
B.	Fuzzy system	II.	Scramble
C.	Operator in genetic algorithm	III.	Inference engine
D.	Supervised technique	IV.	Mycin

Choose the correct answer from the options given below:

1. A-IV B-I C-III D-II
2. A-III B-IV C-II D-I
3. A-IV B-III C-II D-I
4. A-I B-II C-III D-IV

A1 1
:
1

A2 2
:
2

A3 3
:
3

A4 4
:
4

Objective Question

141 87091

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

How many page faults will be encountered?

1. 16,402
2. 17,408
3. 18,208
4. 18,608

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```
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temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

How many page faults will be encountered?

1. 16,402
2. 17,408
3. 18,208
4. 18,608

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

142 87092

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

What is the main memory hit ratio?

1. 0
2. 1
3. 2
4. 3

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

What is the main memory hit ratio?

1. 0
2. 1
3. 2
4. 3

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

143 87093

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

Consider that T is stored in column major format, how many page faults will be encountered?

1. 14
2. 15
3. 16
4. 17

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

Consider that T is stored in column major format, how many page faults will be encountered?

1. 14
2. 15
3. 16
4. 17

A1 1
:
1
A2 2
:
2
A3 3
:
3
A4 4
:
4

Objective Question

144 87094

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

Consider again that T is stored in column-major format, what is the main memory hit ratio?

1. 80%
2. 95.6%
3. 97.8%
4. 99.9%

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

Consider again that T is stored in column-major format, what is the main memory hit ratio?

1. 80%
2. 95.6%
3. 97.8%
4. 99.9%

A1 1

:

1

A2 2

:

2

A3 3

:

3

A4 4

:

4

Objective Question

145 87095

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

What is fault ratio of row major to column major arrangements ?

1. 1024:1
2. 1301:1
3. 1240:1
4. 9107:8

Consider the following program fragment that deals with a table T with 17 rows and 1024 columns, computing an average for each column and printing it to screen (i is row index and j is column index):

```
for j = [ 0..... 1023]{
temp = 0;
for i = [0 . . . . 16]:
temp = temp + T [i] [j];
print (temp/ 17.0) ; }
```

T [i] [j] and temp are 32 bit floating point values and memory is word addressable. The temporary variable temp is kept in a processor register so access to temp does not involve a memory reference. The main memory is page and holds 16 pages of size 1024 words, the page replacement policy is "least recently used ", If T is stored in the virtual address space in row major format.

What is fault ratio of row major to column major arrangements ?

1. 1024:1
2. 1301:1
3. 1240:1
4. 9107:8

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

146 87096

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the header size ?

1. 10 bytes
2. 20 bytes
3. 30 bytes
4. 40 bytes

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the header size ?

1. 10 bytes
2. 20 bytes
3. 30 bytes
4. 40 bytes

A1
:

1

A2
:

2

A3
:

3

A4
:

4

Objective Question

147 87097

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the size of datagram?

1. 64 bytes
2. 74 bytes
3. 84 bytes
4. 104 bytes

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the size of datagram?

1. 64 bytes
2. 74 bytes
3. 84 bytes
4. 104 bytes

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

148 87098

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

How many more routers can the packet travel to?

1. 22
2. 26
3. 30
4. 32

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

How many more routers can the packet travel to?

1. 22
2. 26
3. 30
4. 32

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:
4

Objective Question

149 87099

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the protocol of the payload being carried by the packet?

1. ICMP
2. SCTP
3. TCP protocol
4. IGMP

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the protocol of the payload being carried by the packet?

1. ICMP
2. SCTP
3. TCP protocol
4. IGMP

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4

Objective Question

150 87100

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the efficiency of this datagram?

1. 76.19%
2. 80.50%
3. 82.24%
4. 85.45%

IP datagram has arrived with following partial information in the header (in hexadecimal)

45000054000300002006.....

What is the efficiency of this datagram?

1. 76.19%
2. 80.50%
3. 82.24%
4. 85.45%

A1 1
:

1

A2 2
:

2

A3 3
:

3

A4 4
:

4