

Comprehension:

The Following table shows total number of students in the Department of the Institute along with percentage of Females and Male students. Answer questions 1 to 5 based on the data given below :

Department	Total No. of Students	Percentage of female	Percentage of Male
Computer	840	45	55
Civil	220	35	65
Mech.	900	23	77
Electrical	360	65	35
Electronics	450	44	56
Mining	540	40	60

SubQuestion No : 2

Q.2 What is the respective ratio of the number of females in Mechanical Department to the number of females in Electronics Department?

Options 1, 1

- 2.2
3.3
4.4

Question Type : MCQ

Question ID : 5362284237

Option 1 ID : 53622816501

Option 2 ID : **53622816502**

Option 3 ID : **53622816503**

Option 4 ID : **536228165**

Status : A
Chosen Option : 2

Comprehension:

The Following table shows total number of students in the Department of the Institute along with percentage of Females and Male students. Answer questions 1 to 5 based on the data given below :

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Electronics	450	44	56
Mining	540	40	60

SubQuestion No : 3

- Q.3** What is the ratio of the number of females in Civil and Electrical departments together to the number of males in the same Departments together?

- | | |
|------------------|------------------|
| (1) 311 : 270 | (2) 329 : 261 |
| (3) 411 : 469 | (4) 311 : 269 |

Options 1. 1

- 2.2
3.3
4.4

Question Type : MCQ

Question ID : 5362284240

Option 1 ID : 53622816513

Option 2 ID : 53622816514

Option 3 ID : 53622816515

Option 4 ID : 53622816516

Status : **Answered**

Chosen Option : 4

Comprehension:

The Following table shows total number of students in the Department of the Institute along with percentage of Females and Male students. Answer questions 1 to 5 based on the data given below :

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Electronics	450	44	56
Mining	540	40	60

SubQuestion No : 4

Q.4 What is the average percentage of female students in the whole Institute?

- (1) 42.0% (2) 41.0%
 (3) 43.0% (4) 41.5%

Options 1. 1

- 2.2
3.3
4.4

Question Type : **MCQ**

Question ID : 5362284241

Option 1 ID : 53622816517

Option 2 ID : **53622816518**

Option 3 ID : 53622816519

Option 4 ID : **536228165**

Status : **Answered**

Chosen Option : 1

Comprehension:

The Following table shows total number of students in the Department of the Institute along with percentage of Females and Male students. Answer questions 1 to 5 based on the data given below :

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Computer	840	45	55
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Electrical	360	65	35
Electronics	450	44	56
Mining	540	40	60

SubQuestion No : 5

Q.5 What is the total number of students in all the Departments?

- (1) 2210 (2) 3210
 (3) 3400 (4) 3310

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284238

Option 1 ID : **53622816505**

Option 2 ID : 53622816506

Option 3 ID : 53622816507

Option 4 ID : 53622816508

Status : **Answered**

Chosen Option : 4

Q.6 In a 100 meters race, A beat B by 10 meter or 2 second. What is the speed of A?

Options 1, 1

- 2.2

Question Type : MCQ

Question ID : 5362284260

Option 1 ID : **53622816593**

Option 2 ID : 53622816594

Option 3 ID : **53622816595**

Option 4 ID : 53622816596

Status : **Answered**

Chosen Option : 1

Q.7 Given below are two statements :

Statement I: Interactive and multimedia systems provide for a new culture of teaching and learning.

Statement II: Virtual classrooms convert students into senseless humanoids.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284254
Option 1 ID : 53622816569
Option 2 ID : 53622816570
Option 3 ID : 53622816571
Option 4 ID : 53622816572
Status : Answered
Chosen Option : 1

Q.8

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Carbon dioxide emissions from bioenergy. Production have traditionally been excluded from most emission inventories and climate impact studies.

Reason (R) : Carbon dioxide emissions associated with production of bioenergy are significantly less compared to those from combustion of fossil fuels.

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284273

Option 1 ID : 53622816645

Option 2 ID : 53622816646

Option 3 ID : 53622816647

Option 4 ID : 53622816648

Status : Answered

Chosen Option : 1

Q.9

In which of the following, there is a greater flexibility in both the methods and process of research?

- (1) Ethnography and phenomenology
- (2) Descriptive survey and impact studies
- (3) Experimental and observation based studies
- (4) Expost facto and historical studies

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284247

Option 1 ID : 53622816541

Option 2 ID : 53622816542

Option 3 ID : 53622816543

Option 4 ID : 53622816544

Status : Answered

Chosen Option : 3

Q.10 Which of the following teacher competency belongs to the domain of personality and attitude?

- (1) Locus of control and self-efficacy (2) Managing and Monitoring
(3) Planning and instructing (4) Personalising and contextualizing

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284242

Option 1 ID : 53622816521

Option 2 ID : 53622816522

Option 3 ID : 53622816523

Option 4 ID : 53622816524

Status : Answered

Chosen Option : 2

Q.11 Three pipes fill a tank in 4 hours. If two of them take 8 and 12 hours each to fill the tank, how many hours will the third pipe take to fill the tank?

- (1) 6 hours (2) 15 hours
(3) 18 hours (4) 24 hours

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284261

Option 1 ID : 53622816597

Option 2 ID : 53622816598

Option 3 ID : 53622816599

Option 4 ID : 53622816600

Status : Answered

Chosen Option : 2

Q.12

In a park A, B, C, D, E and F are sitting. C is the brother of D's husband and son of A. F is the daughter of D and sister of E.

- (A) E is the grandson of A
- (B) F is the daughter of C
- (C) B is the father of F
- (D) There are one son and one daughter in the group
- (E) C is the uncle of E

Choose the correct answer from the options given below :

- | | |
|---------------------------|---------------------------|
| (1) (A), (B) and (C) only | (2) (A), (C) and (E) only |
| (3) (B), (D) and (E) only | (4) (B), (C) and (D) only |

Options

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

Question Type : **MCQ**

Question ID : **5362284257**

Option 1 ID : **53622816581**

Option 2 ID : 53622816582

Option 3 ID : **53622816583**

Option 4 ID : **53622816584**

Status : **Answered**

Chosen Option : **2**

Q.13 What are the advantages of Choice Based Credit System (CBCS) introduced by the UGC for higher education institutions?

- (A) Focuses on student-centric education
- (B) Allows students to choose inter-disciplinary and intra-disciplinary courses.
- (C) Makes education at par with global standards
- (D) Makes it easy to estimate the performance levels of students in terms of marks.
- (E) Offers flexibility for students to undertake studies at different times and at different institutions.

Choose the correct answer from the options given below :

- | | |
|-----------------------------|-----------------------------|
| (1) (A), (B), (C), (D) only | (2) (B), (C), (D), (E) only |
| (3) (A), (B), (C), (E) only | (4) (C), (D), (E), (A) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284281
Option 1 ID : 53622816677
Option 2 ID : 53622816678
Option 3 ID : 53622816679
Option 4 ID : 53622816680
Status : Answered
Chosen Option : 1

Q.14 The word blog is derived from the word

- | | |
|------------|-------------|
| (1) My log | (2) We blog |
| (3) E blog | (4) Blogger |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284270
Option 1 ID : 53622816633
Option 2 ID : 53622816634
Option 3 ID : 53622816635
Option 4 ID : 53622816636
Status : Answered
Chosen Option : 4

Q.15 Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Substance is always the subject of all predicates.

Reason (R) : Substance is self-existent and self-conceived.

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

Options

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

Question Type : MCQ

Question ID : 5362284263

Option 1 ID : 53622816605

Option 2 ID : 53622816606

Option 3 ID : 53622816607

Option 4 ID : 53622816608

Status : Answered

Chosen Option : 1

Q.16 Identifying the sequence of stages of message processing

- (A) Action
- (B) Internalisation
- (C) Selection
- (D) Understanding
- (E) Perception

Choose the correct answer from the options given below :

- | | |
|-----------------------------|-----------------------------|
| (1) (A), (B), (D), (E), (C) | (2) (B), (C), (A), (D), (E) |
| (3) (D), (E), (B), (A), (C) | (4) (E), (D), (C), (B), (A) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284255
Option 1 ID : 53622816573
Option 2 ID : 53622816574
Option 3 ID : 53622816575
Option 4 ID : 53622816576
Status : Answered
Chosen Option : 4

Q.17 Match List I with List II :

List I	List II
(A) Input	(I) Mouse
(B) Output	(II) Monitor
(C) Memory	(III) Cache
(D) Software	(IV) Python

Choose the correct answer from the options given below :

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284271
Option 1 ID : 53622816637
Option 2 ID : 53622816638
Option 3 ID : 53622816639
Option 4 ID : 53622816640
Status : Answered
Chosen Option : 4

Q.18 Which of the following is considered as an effective form of verbal communication?

- (1) Story-telling
- (2) Sloganeering
- (3) Use of high pitch of voice
- (4) Monologues

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284252
Option 1 ID : 53622816561
Option 2 ID : 53622816562
Option 3 ID : 53622816563
Option 4 ID : 53622816564
Status : Answered
Chosen Option : 3

Q.19 Given below are two Statements :

'The water of the pond is muddy. It must have rained last night.'

What kind of Anumāna (inference) has been used in the above statements. Choose the correct option from the following :

- (A) S'esavat anumāna
- (B) Comparison
- (C) Pūrvovat anumāna
- (D) Both (A) and (B)

Choose the most appropriate answer from the options given below :

- | | |
|--------------|--------------|
| (1) (A) only | (2) (B) only |
| (3) (C) only | (4) (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284264
Option 1 ID : 53622816609
Option 2 ID : 53622816610
Option 3 ID : 53622816611
Option 4 ID : 53622816612
Status : Answered
Chosen Option : 3

Q.20 Match List I with List II : List I consists of the Vedangas and List II contains subjects dealt in them.

List I	List II
(A) Nirukta	(I) Phonetics
(B) Chandas	(II) Ritual
(C) Shiksha	(III) Metrics
(D) Kalpa	(IV) Etymology

Choose the correct answer from the options given below :

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**
Question ID : **5362284277**
Option 1 ID : **53622816661**
Option 2 ID : 53622816662
Option 3 ID : **53622816663**
Option 4 ID : **53622816664**
Status : **Answered**
Chosen Option : **2**

Q.21 Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : In order to bridge the gap between theory and practice both fundamental and applied research formats have to be promoted.

Reason (R) : Fundamental research focuses on theory making and applied research is directed at exploring the applicability of theory in varied practical situations.

In the light of the above statements, choose the most appropriate 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 but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284250
Option 1 ID : 53622816553
Option 2 ID : 53622816554
Option 3 ID : 53622816555
Option 4 ID : 53622816556
Status : Answered
Chosen Option : 1

Q.22 Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : Carbon monoxide (CO) is a serious asphyxiant; even a short exposure may have fatal health issues.

Reason (R) : Hemoglobin present in the blood has greater affinity towards carbon monoxide than oxygen.

In the light of the above statements, choose the most appropriate 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 but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284276**

Option 1 ID : **53622816657**

Option 2 ID : **53622816658**

Option 3 ID : **53622816659**

Option 4 ID : **53622816660**

Status : **Answered**

Chosen Option : **1**

Q.23

Which of the International Agreements/Convention/Protocols are legally binding on the member countries (parties)?

- (A) Convention on Biological Diversity
- (B) Kyoto Protocol
- (C) Montreal Protocol
- (D) Paris Agreement

Choose the most appropriate answer from the options given below :

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284272

Option 1 ID : 53622816641

Option 2 ID : 53622816642

Option 3 ID : 53622816643

Option 4 ID : 53622816644

Status : Answered

Chosen Option : 4

Q.24 Which of the following are non-probability sampling methods?

- (A) Cluster sampling
- (B) Judgemental sampling
- (C) Systematic sampling
- (D) Snowball sampling
- (E) Quota sampling

Choose the correct answer from the options given below :

- (1) (A), (B) and (C) only
- (2) (B), (D) and (E) only
- (3) (B), (C) and (D) only
- (4) (C), (D) and (E) only

Options

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

Question Type : **MCQ**

Question ID : **5362284249**

Option 1 ID : **53622816549**

Option 2 ID : 53622816550

Option 3 ID : **53622816551**

Option 4 ID : **53622816552**

Status : **Answered**

Chosen Option : **3**

Q.25 Which of the following come under the mandate of the University Grants Commission (UGC)?

- (A) Promotion and coordination of University education.
- (B) Determining and monitoring standards of teaching, examination and research in Universities.
- (C) Organising continuous professional development programmes for college and University teachers.
- (D) Framing regulations on minimum standards of education.
- (E) Disbursing and regulating grants to the universities and colleges.

Choose the correct answer from the options given below :

- (1) (A), (B), (C), (D) only
- (2) (B), (C), (D), (E) only
- (3) (A), (C), (D), (E) only
- (4) (A), (B), (D), (E) only

Options

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

Question Type : MCQ

Question ID : 5362284279

Option 1 ID : 53622816669

Option 2 ID : 53622816670

Option 3 ID : 53622816671

Option 4 ID : 53622816672

Status : Answered

Chosen Option : 2

Q.26 Match List I with List II :

List I (Medium)	List II (Example for description)
(A) Newspaper	(I) Networking
(B) Radio and television	(II) Audio, Video and graphics
(C) Social Media	(III) Broadsheet
(D) Multi-media	(IV) Broadcasting

Choose the correct answer from the options given below :

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284256
Option 1 ID : 53622816577
Option 2 ID : 53622816578
Option 3 ID : 53622816579
Option 4 ID : 53622816580
Status : Answered
Chosen Option : 1

Q.27 The ratio of ages of two persons A and B is 3 : 4 and that of ages of B and C is 4 : 5. If the average of all three is 40 years, what is B's age?

- (1) 20 years
- (2) 30 years
- (3) 40 years
- (4) 50 years

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284258
Option 1 ID : 53622816585
Option 2 ID : 53622816586
Option 3 ID : 53622816587
Option 4 ID : 53622816588
Status : Answered
Chosen Option : 3

Q.28 In which level of teaching, the teacher's role is more active rather than being interactive?

- (1) Memory level
- (2) Understanding level
- (3) Reflective level
- (4) Autonomous development level

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284244

Option 1 ID : 53622816529

Option 2 ID : 53622816530

Option 3 ID : 53622816531

Option 4 ID : 53622816532

Status : Answered

Chosen Option : 2

Q.29 In conducting an empirical study, a researcher employs a non-parametric test for data analysis and finds that the 'statistics' arrived at is 'significant' at .05 level. What decisions will be warranted thereafter?

- (A) Rejecting the Null hypothesis (H_0)
- (B) Accepting the Null hypothesis (H_0)
- (C) Accepting the alternate hypothesis (H_1)
- (D) Keeping the decision in abeyance
- (E) Rejecting the alternate hypothesis (H_1)

Choose the correct answer from the options given below :

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (D) only
- (4) (A) and (C) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284248

Option 1 ID : 53622816545

Option 2 ID : 53622816546

Option 3 ID : 53622816547

Option 4 ID : 53622816548

Status : Answered

Chosen Option : 2

Q.30

Which of the following explain the concept of values?

- (A) Values are beliefs tied inextricably to human emotion and behaviour
- (B) Values refer to desirable goals people strive to attain
- (C) Values are conflict-free
- (D) Values are ordered by importance relative to one another
- (E) Values are utilized primarily to effect change in knowledge of a person

Choose the correct answer from the options given below :

- | | |
|------------------------|------------------------|
| (1) (A), (B), (C) only | (2) (A), (B), (D) only |
| (3) (B), (C), (D) only | (4) (C), (D), (E) only |

Options

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

Question Type : MCQ

Question ID : 5362284278

Option 1 ID : 53622816665

Option 2 ID : 53622816666

Option 3 ID : 53622816667

Option 4 ID : 53622816668

Status : Answered

Chosen Option : 4

Q.31 If some pens are pencils but no pencil is sharpener then

- (A) All pencils are pens
- (B) Some sharpeners are pencils
- (C) Some pens are not sharpener
- (D) Some pencils are not pens

Choose the correct answer from the options given below :

- | | |
|----------------------|----------------------|
| (1) (A) and (C) only | (2) (B) and (C) only |
| (3) (A) and (D) only | (4) (B) and (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284259
Option 1 ID : 53622816589
Option 2 ID : 53622816590
Option 3 ID : 53622816591
Option 4 ID : 53622816592
Status : Answered
Chosen Option : 1

Q.32 Which one of the following schools has not accepted anumāna (inference) as a valid source of knowledge?

- | | |
|---------------------|-------------------|
| (1) Advaita Vedānta | (2) Visistādvaita |
| (3) Chārvāka | (4) Sāṅkhya |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284262
Option 1 ID : 53622816601
Option 2 ID : 53622816602
Option 3 ID : 53622816603
Option 4 ID : 53622816604
Status : Answered
Chosen Option : 3

Q.33 Match List I with List II :

List I (Scales of measurement)	List II (Description of properties)
(A) Nominal	(I) Classification and order
(B) Ordinal	(II) Classification
(C) Interval	(III) Classification, order and equal units
(D) Ratio	(IV) Classification, order, equal units and Absolute Zero

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)-(I), (B)-(II), (C)-(IV), (D)-(III)
- (4) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284245
Option 1 ID : 53622816533
Option 2 ID : 53622816534
Option 3 ID : 53622816535
Option 4 ID : 53622816536
Status : Answered
Chosen Option : 1

Q.34 A type of memory that holds the computer startup routine is

- (1) Cache
- (2) RAM
- (3) DRAM
- (4) ROM

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284267
Option 1 ID : 53622816621
Option 2 ID : 53622816622
Option 3 ID : 53622816623
Option 4 ID : 53622816624
Status : Answered
Chosen Option : 4

Q.35 Which of the following are useful in positive components of classroom communication?

- (A) Restrictive actions
- (B) Empathy
- (C) Punctuality
- (D) Follow-up
- (E) Scattered reflections

Choose the most appropriate answer from the options given below :

- (1) (A), (B), (C) only
- (2) (B), (C), (D) only
- (3) (C), (D), (E) only
- (4) (A), (D), (E) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284253
Option 1 ID : 53622816565
Option 2 ID : 53622816566
Option 3 ID : 53622816567
Option 4 ID : 53622816568
Status : Answered
Chosen Option : 3

Q.36 Given below are two statements :

Statement I : Qualitative research is an umbrella term to refer to various research strategies that share certain characteristics. The data collected have been termed 'soft' i.e. rich in description.

Statement II : Quantitative research is mainly hypothetico deductive and employs mostly statistical techniques for data analysis.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284251
Option 1 ID : 53622816557
Option 2 ID : 53622816558
Option 3 ID : 53622816559
Option 4 ID : 53622816560
Status : Answered
Chosen Option : 1

Q.37 Cloud computing has the following distinct characteristics :

- (A) The service is hosted on the internet.
- (B) It is made available by a service provider.
- (C) It computes and predicts rain when the weather is cloudy.
- (D) The service is fully managed by the provider

Choose the correct answer from the options given below :

- | | |
|-------------------|------------------------|
| (1) (A), (B) only | (2) (A), (B), (C) only |
| (3) (A), (D) only | (4) (A), (B), (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284268
Option 1 ID : 53622816625
Option 2 ID : 53622816626
Option 3 ID : 53622816627
Option 4 ID : 53622816628
Status : Answered
Chosen Option : 3

Q.38 During physical treatment process of waste water, what is the correct order of following operations to be followed?

- (A) Flocculation
- (B) Filtration
- (C) Screening
- (D) Sedimentation

Choose the correct answer from the options given below :

- | | |
|------------------------|------------------------|
| (1) (C), (D), (B), (A) | (2) (C), (D), (A), (B) |
| (3) (B), (D), (A), (C) | (4) (B), (C), (D), (A) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284275
Option 1 ID : 53622816653
Option 2 ID : 53622816654
Option 3 ID : 53622816655
Option 4 ID : 53622816656
Status : Answered
Chosen Option : 4

Q.39 Given below are two statements :

Statement I : Equality of educational opportunities is a pre-condition for achieving equity in education.

Statement II : Equity in education can be achieved without equality of educational opportunities.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284280

Option 1 ID : 53622816673

Option 2 ID : 53622816674

Option 3 ID : 53622816675

Option 4 ID : 53622816676

Status : Answered

Chosen Option : 3

Q.40 Match List I with List II :

List I (Philosophical doctrines)	List II (Philosophical schools)
(A) Syādavāda	(I) Nyāya
(B) Anupalabdhī	(II) Buddhism
(C) Apoha	(III) Vedānta
(D) Abhāva	(IV) Jainism

Choose the correct answer from the options given below :

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : 5362284265
 Option 1 ID : 53622816613
Option 2 ID : 53622816614
 Option 3 ID : 53622816615
 Option 4 ID : 53622816616
 Status : Answered
 Chosen Option : 2

Q.41 Given below are two statements :

Statement I : Indirect instruction is an approach to teaching and learning in which the process is inquiry, the content involves concept and the context is a problem.

Statement II : In NRT test data tell us about a student's level of proficiency in mastery of some skills or set of skills.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : 5362284246
 Option 1 ID : 53622816537
 Option 2 ID : 53622816538
Option 3 ID : 53622816539
 Option 4 ID : 53622816540
 Status : Answered
 Chosen Option : 1

Q.42 Which one of the following pramānas has been accepted in Buddhism?

- | | |
|----------------|-----------------|
| (1) Arthāpatti | (2) Anupalabdhī |
| (3) S'abda | (4) Pratyaksha |

Options

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

Question Type : MCQ

Question ID : 5362284266

Option 1 ID : 53622816617

Option 2 ID : 53622816618

Option 3 ID : 53622816619

Option 4 ID : 53622816620

Status : Answered

Chosen Option : 2

Q.43 Identify the teaching strategies which are employed during indirect instruction :

- (A) Emphasizing direct and indirect exemplars
- (B) Presenting the stimulus material
- (C) Inquiry based question-answer session
- (D) Presenting, asking and providing feed back
- (E) Promoting problem solving approach

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 (E) only | (4) (A), (C) and (E) only |

Options

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

Question Type : MCQ

Question ID : 5362284243

Option 1 ID : 53622816525

Option 2 ID : 53622816526

Option 3 ID : 53622816527

Option 4 ID : 53622816528

Status : Answered

Chosen Option : 2

Q.44 A firewall is a software tool that protects

- (A) Server
- (B) Network
- (C) Fire
- (D) Individual Computer

Choose the correct answer from the options given below :

- (1) (A), (C) only
- (2) (B), (C) only
- (3) (A), (B), (C) only
- (4) (A), (B), (D) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284269
Option 1 ID : 53622816629
Option 2 ID : 53622816630
Option 3 ID : 53622816631
Option 4 ID : 53622816632

Status : Answered

Chosen Option : 4

Q.45

Wind energy is very sensitive to the wind velocity because wind power is directly proportional to the

- (1) wind velocity
- (2) square of the wind velocity
- (3) square root of the wind velocity
- (4) cube of the wind velocity

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284274
Option 1 ID : 53622816649
Option 2 ID : 53622816650
Option 3 ID : 53622816651
Option 4 ID : 53622816652

Status : Answered

Chosen Option : 3

Comprehension:

Read the passage and answer questions from 46 to 50.

Through their work and the efforts of others, managers in all kinds of organisational settings, whether industrial, educational, governmental, or military are attempting to run their organizations with the management by objectives process as a basic underlying management concept. Management by objectives is basically a process where by the seniors and the junior managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected... use these measures as guides for operating the unit and assessing the contribution of each of its members. In some cases, this process has been successfully carried beyond the managerial level to include hourly employees. The concept rests on a philosophy of management that emphasizes an integration between external control by managers and self-control by employees. It can apply to any manager or individual no matter what level or function, and to any organisation, regardless of size. The effective functioning of this system is an agreement between a manager and an employee about that employee's groups performance goals during a stated time period. These goals can emphasise either output variables of intervening variables or some combination of both. The important thing is that goals are jointly established and agreed upon in advance. At the end of the time period, performance is reviewed in relation to accepted goals. Both the employee and the manager participate in this review.

SubQuestion No : 46

Q.46 The philosophy behind management by objectives is to

- (1) effect improvement through a joint review of achievement of performance goals within a given timeframe
- (2) integrate external and internal controls by managers
- (3) provide managers scope to review the accepted output variables
- (4) agree upon different performance goals for managers and employees

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284287**

Option 1 ID : **53622816697**

Option 2 ID : **53622816698**

Option 3 ID : **53622816699**

Option 4 ID : **53622816700**

Status : **Answered**

Chosen Option : **1**

Comprehension:

Read the passage and answer questions from 46 to 50.

Through their work and the efforts of others, managers in all kinds of organisational settings, whether industrial, educational, governmental, or military are attempting to run their organizations with the management by objectives process as a basic underlying management concept. Management by objectives is basically a process where by the seniors and the junior managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected... use these measures as guides for operating the unit and assessing the contribution of each of its members. In some cases, this process has been successfully carried beyond the managerial level to include hourly employees. The concept rests on a philosophy of management that emphasizes an integration between external control by managers and self-control by employees. It can apply to any manager or individual no matter what level or function, and to any organisation, regardless of size. The effective functioning of this system is an agreement between a manager and an employee about that employee's groups performance goals during a stated time period. These goals can emphasise either output variables of intervening variables or some combination of both. The important thing is that goals are jointly established and agreed upon in advance. At the end of the time period, performance is reviewed in relation to accepted goals. Both the employee and the manager participate in this review.

SubQuestion No : 47

- Q.47** The critical feature of the concept in this type of management is related to
- (1) the assignment of responsibility to the workers
 - (2) distinguishing the operational role between managers and workers
 - (3) promoting of uniformity of work environment among all types of organisation
 - (4) sharing of responsibility with an eye on results

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284285

Option 1 ID : 53622816689

Option 2 ID : 53622816690

Option 3 ID : 53622816691

Option 4 ID : 53622816692

Status : Answered

Chosen Option : 3

Comprehension:

Read the passage and answer questions from 46 to 50.

Through their work and the efforts of others, managers in all kinds of organisational settings, whether industrial, educational, governmental, or military are attempting to run their organizations with the management by objectives process as a basic underlying management concept. Management by objectives is basically a process where by the seniors and the junior managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected... use these measures as guides for operating the unit and assessing the contribution of each of its members. In some cases, this process has been successfully carried beyond the managerial level to include hourly employees. The concept rests on a philosophy of management that emphasizes an integration between external control by managers and self-control by employees. It can apply to any manager or individual no matter what level or function, and to any organisation, regardless of size. The effective functioning of this system is an agreement between a manager and an employee about that employee's groups performance goals during a stated time period. These goals can emphasise either output variables of intervening variables or some combination of both. The important thing is that goals are jointly established and agreed upon in advance. At the end of the time period, performance is reviewed in relation to accepted goals. Both the employee and the manager participate in this review.

SubQuestion No : 48

Q.48 The requisite for management by objectives is centred on

- | | |
|-------------------------------|---------------------------------|
| (1) the control by seniors | (2) the guidance of juniors |
| (3) the participatory process | (4) the organisational settings |

Options

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

Question Type : MCQ

Question ID : 5362284284

Option 1 ID : 53622816685

Option 2 ID : 53622816686

Option 3 ID : 53622816687

Option 4 ID : 53622816688

Status : Answered

Chosen Option : 4

Comprehension:

Read the passage and answer questions from 46 to 50.

Through their work and the efforts of others, managers in all kinds of organisational settings, whether industrial, educational, governmental, or military are attempting to run their organizations with the management by objectives process as a basic underlying management concept. Management by objectives is basically a process where by the seniors and the junior managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected... use these measures as guides for operating the unit and assessing the contribution of each of its members. In some cases, this process has been successfully carried beyond the managerial level to include hourly employees. The concept rests on a philosophy of management that emphasizes an integration between external control by managers and self-control by employees. It can apply to any manager or individual no matter what level or function, and to any organisation, regardless of size. The effective functioning of this system is an agreement between a manager and an employee about that employee's groups performance goals during a stated time period. These goals can emphasise either output variables of intervening variables or some combination of both. The important thing is that goals are jointly established and agreed upon in advance. At the end of the time period, performance is reviewed in relation to accepted goals. Both the employee and the manager participate in this review.

SubQuestion No : 49

- Q.49** In this frame of reference, how does an organisation function effectively?
- (1) By including the hourly employees in the managerial positions
 - (2) By identifying and executing performance targets in a collaborative mode
 - (3) By imposing a rigid philosophy of management
 - (4) By providing separate work environment for both managers and workers

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : **5362284286**

Option 1 ID : **53622816693**

Option 2 ID : **53622816694**

Option 3 ID : **53622816695**

Option 4 ID : **53622816696**

Status : **Answered**

Chosen Option : **4**

Comprehension:

Read the passage and answer questions from 46 to 50.

Through their work and the efforts of others, managers in all kinds of organisational settings, whether industrial, educational, governmental, or military are attempting to run their organizations with the management by objectives process as a basic underlying management concept. Management by objectives is basically a process where by the seniors and the junior managers of an enterprise jointly identify its common goals, define each individual's major areas of responsibility in terms of the results expected... use these measures as guides for operating the unit and assessing the contribution of each of its members. In some cases, this process has been successfully carried beyond the managerial level to include hourly employees. The concept rests on a philosophy of management that emphasizes an integration between external control by managers and self-control by employees. It can apply to any manager or individual no matter what level or function, and to any organisation, regardless of size. The effective functioning of this system is an agreement between a manager and an employee about that employee's groups performance goals during a stated time period. These goals can emphasise either output variables of intervening variables or some combination of both. The important thing is that goals are jointly established and agreed upon in advance. At the end of the time period, performance is reviewed in relation to accepted goals. Both the employee and the manager participate in this review.

SubQuestion No : 50

Q.50 In an MBO, organisation is managed through the identification of

- | | |
|----------------------------------|--------------------------------|
| (1) competing goals | (2) common objectives |
| (3) its specific characteristics | (4) senior and junior managers |

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284283

Option 1 ID : 53622816681

Option 2 ID : 53622816682

Option 3 ID : 53622816683

Option 4 ID : 53622816684

Status : Answered

Chosen Option : 4

Section : PART II Computer Science and Applications

Q.1

The period of a signal is 100ms. Then the frequency of this signal in kilohertz is _____.

- | | |
|---------------|---------------|
| (1) 10 | (2) 10^{-1} |
| (3) 10^{-2} | (4) 10^{-3} |

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284321

Option 1 ID : 53622816833

Option 2 ID : 53622816834

Option 3 ID : 53622816835

Option 4 ID : 53622816836

Status : Answered

Chosen Option : 3

Q.2

If $f(x) = x$ is my friend, and $p(x) = x$ is perfect, then correct logical translation of the statement "some of my friends are not perfect" is _____.

- (1) $\forall_x (f(x) \wedge \neg p(x))$ (2) $\exists_x (f(x) \wedge \neg p(x))$
(3) $\neg (f(x) \wedge \neg p(x))$ (4) $\exists_x (\neg f(x) \wedge \neg p(x))$

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284324

Option 1 ID : 53622816845

Option 2 ID : 53622816846

Option 3 ID : 53622816847

Option 4 ID : 53622816848

Status : Answered

Chosen Option : 2

Q.3

Protocols in which the sender sends one frame and then waits for an acknowledgement before proceeding for next frame are called as _____.

- (1) Simplex protocols (2) Unrestricted simplex protocols
(3) Simplex stop and wait protocols (4) Restricted simplex protocols.

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284320

Option 1 ID : 53622816829

Option 2 ID : 53622816830

Option 3 ID : 53622816831

Option 4 ID : 53622816832

Status : Answered

Chosen Option : 3

Q.4

Consider the following pseudo-code fragment, where a and b are integer variables that have been initialized:

```
/* Pre-conditions : (a > 1 ∧ a < b) */  
/* Assume that overflow never occurs */  
  
int x = 0; int p = 1;  
  
while (p < b) {  
    p = p * a;  
    x = x + 1;  
}
```

When the while loop terminates, what will be the value of x in terms of a and b?

- (1) a^b
- (2) b^a
- (3) $\lfloor \log_a^b \rfloor$ /* $\lfloor \cdot \rfloor$ means floor */
- (4) $\lceil \log_a^b \rceil$ /* $\lceil \cdot \rceil$ means ceil */

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284296**

Option 1 ID : **53622816733**

Option 2 ID : **53622816734**

Option 3 ID : **53622816735**

Option 4 ID : **53622816736**

Status : **Answered**

Chosen Option : **3**

Q.5

Which of the following grammars is (are) ambiguous?

(A) $s \rightarrow ss \mid asb \mid bsa \mid \lambda$

(B) $s \rightarrow asbs \mid bsas \mid \lambda$

(C) $s \rightarrow aAB$

$A \rightarrow bBb$

$B \rightarrow A \mid \lambda$ where λ denotes empty string

Choose the correct answer from the options given below:

(1) (A) and (C) only

(2) (B) only

(3) (B) and (C) only

(4) (A) and (B) only

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **5362284344**

Option 1 ID : **53622816925**

Option 2 ID : **53622816926**

Option 3 ID : **53622816927**

Option 4 ID : **53622816928**

Status : **Answered**

Chosen Option : **3**

Q.6 Match List I with List II

- | List I | List II |
|--|-----------------------|
| (A) Topological sort of DAG | (I) $O(V + E)$ |
| (B) Kruskal's MST algorithm | (II) $O(VE)$ |
| (C) Bellman-Ford's single-source shortest path algorithm | (III) $\theta(V + E)$ |
| (D) Floyd-Warshall's all-pair shortest path algorithm | (IV) $\theta(V^3)$ |

Choose the correct answer from the options given below:

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

Options

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

Question Type : MCQ
 Question ID : 5362284357
 Option 1 ID : 53622816977
 Option 2 ID : 53622816978
Option 3 ID : 53622816979
 Option 4 ID : 53622816980
 Status : Answered
 Chosen Option : 4

Q.7

Which of the following is/are behavioral testing technique(s)?

- (A) Equivalence Partitioning
- (B) Graph-Based Teating Method
- (C) Boundary Value Analysis
- (D) Data flow Testing
- (E) Loop Testing

Choose the correct answer from the options given below:

- (1) (B) and (D) only
- (2) (A), (B) and (C) only
- (3) (D) and (E) only
- (4) (A), (C) and (E) only

Options

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

Question Type : MCQ
 Question ID : 5362284338
 Option 1 ID : 53622816901
Option 2 ID : 53622816902
 Option 3 ID : 53622816903
 Option 4 ID : 53622816904
 Status : Answered
 Chosen Option : 2

Q.8

Which of the following statements with respect to multiprocessor system are true?

- (A) Multiprocessor system is controlled by one operating system.
- (B) In Multiprocessor system, multiple computers are connected by the means of communication lines.
- (C) Multiprocessor system is classified as multiple instruction stream and multiple data stream system.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) only | (2) (A) and (B) only |
| (3) (A) and (C) only | (4) (B) and (C) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284331

Option 1 ID : 53622816873

Option 2 ID : 53622816874

Option 3 ID : 53622816875

Option 4 ID : 53622816876

Status : Answered

Chosen Option : 3

Q.9

In the context of concurrency control, a given pair of operations in a schedule is called conflict schedule if

- (A) At least one of the operations is write operation.
- (B) Both the operations are performed on the same data item.
- (C) Both the operations are performed by different transactions.
- (D) Both the operations are performed on different data items.

Choose the correct answer from the options given below:

- | | |
|---------------------------|---------------------------|
| (1) (A) and (B) only | (2) (A), (B) and (C) only |
| (3) (A), (C) and (D) only | (4) (C) and (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284335

Option 1 ID : 53622816889

Option 2 ID : 53622816890

Option 3 ID : 53622816891

Option 4 ID : 53622816892

Status : Answered

Chosen Option : 3

Q.10 Which of the following UML diagrams has a static view?

- (1) Collaboration diagram (2) Use-Case diagram
(3) State chart diagram (4) Activity diagram

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
Question ID : 5362284306
Option 1 ID : 53622816773
Option 2 ID : 53622816774
Option 3 ID : 53622816775
Option 4 ID : 53622816776
Status : Answered
Chosen Option : 2

Q.11

Firewall is a device that filters access to the protected network from the outside network.
Firewalls can filter the packets on the basis of

- (A) Source IP Address
(B) Destination IP Address
(C) TCP Source Port
(D) UDP Source Port
(E) TCP Destination Port

Choose the correct answer from the options given below:

- (1) (A), (B) and (C) only (2) (B) and (E) only
(3) (C) and (D) only (4) (A), (B), (C), (D) and (E) only

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
Question ID : 5362284347
Option 1 ID : 53622816937
Option 2 ID : 53622816938
Option 3 ID : 53622816939
Option 4 ID : 53622816940
Status : Answered
Chosen Option : 4

Q.12

Simplified expression/s for following Boolean function

$F(A, B, C, D) = \sum(0, 1, 2, 3, 6, 12, 13, 14, 15)$ is/are

- (A) $A'B' + AB + A'C'D'$
- (B) $A'B' + AB + A'CD'$
- (C) $A'B' + AB + BC'D'$
- (D) $A'B' + AB + BCD'$

Choose the correct answer from the options given below:

- (1) (A) only
- (2) (B) only
- (3) (A) and (B) only
- (4) (B) and (D) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284329
Option 1 ID : 53622816865
Option 2 ID : 53622816866
Option 3 ID : 53622816867
Option 4 ID : 53622816868

Status : Answered

Chosen Option : 2

Q.13

Which of the following cloud concept/s is/are related to pooling and sharing of resources?

- (A) Virtual Memory
- (B) Service
- (C) Virtualization

Choose the correct answer from the options given below:

- (1) (C) only
- (2) (A) and (B) only
- (3) (A) only
- (4) (B) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284345
Option 1 ID : 53622816929
Option 2 ID : 53622816930
Option 3 ID : 53622816931
Option 4 ID : 53622816932

Status : Answered

Chosen Option : 2

Q.14

Match List I with List II

- | List I | List II |
|-----------------------------------|--|
| (A) Branch-and-bound | (I) Keeps track of all partial paths which can be candidate for further exploration. |
| (B) Steepest-ascent hill climbing | (II) Detects difference between current state and goal state |
| (C) Constraint satisfaction | (III) Discovers problem state(s) that satisfy a set of constraints. |
| (D) Means-end-analysis | (IV) Considers all moves from current state and selects best move |

Choose the correct answer from the options given below:

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

Options

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

Question Type : **MCQ**Question ID : **5362284356**Option 1 ID : **53622816973**Option 2 ID : **53622816974**Option 3 ID : **53622816975**Option 4 ID : **53622816976**Status : **Answered**Chosen Option : **3**

Q.15

Consider the statement below.

A person who is radical (R) is electable (E) if he/she is conservative (C), but otherwise is not electable.

Few probable logical assertions of the above sentence are given below.

- (A) $(R \wedge E) \Leftrightarrow C$
- (B) $R \Rightarrow (E \Leftrightarrow C)$
- (C) $R \Rightarrow ((C \Rightarrow E) \vee \neg E)$
- (D) $(\neg R \vee \neg E \vee C) \wedge (\neg R \vee \neg C \vee E)$

Which of the above logical assertions are true?

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (B) only | (2) (C) only |
| (3) (A) and (C) only | (4) (B) and (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284348**

Option 1 ID : **53622816941**

Option 2 ID : **53622816942**

Option 3 ID : **53622816943**

Option 4 ID : 53622816944

Status : **Answered**

Chosen Option : **3**

Q.16

Post office protocol (POP) is a message access protocol which is used to extract message for client. In this regard, which of the following are true?

- (A) POP has two modes, Delete mode and keep
- (B) In Delete mode, mail is deleted from mail box after each retrieval
- (C) In Delete mode, mail is deleted from mail box before each retrieval
- (D) In keep mode, mail is deleted before retrieval
- (E) In keep mode, mail remains in mail box after retrieval

Choose the correct answer from the options given below:

- | | |
|--------------------------------|---------------------------|
| (1) (A) and (B) only | (2) (A), (D) and (E) only |
| (3) (A), (B), (C) and (D) only | (4) (A), (B) and (E) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284346**

Option 1 ID : **53622816933**

Option 2 ID : **53622816934**

Option 3 ID : **53622816935**

Option 4 ID : 53622816936

Status : **Answered**

Chosen Option : **4**

Q.17

Given below are two statements:

Statement I: Quality control involves the series of inspections, reviews and tests used throughout the software process, to ensure each work product meets the requirements placed upon it.

Statement II: Quality assurance consists of auditing and reporting functions of management.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284372

Option 1 ID : 53622817037

Option 2 ID : 53622817038

Option 3 ID : 53622817039

Option 4 ID : 53622817040

Status : Answered

Chosen Option : 1

Q.18

Let L_1 and L_2 be languages over $\Sigma = \{a, b\}$ represented by the regular expressions $(a^* + b)^*$ and $(a + b)^*$ respectively.

Which of the following is true with respect to the two languages?

- | | |
|-----------------------|--------------------------------|
| (1) $L_1 \subset L_2$ | (2) $L_2 \subset L_1$ |
| (3) $L_1 = L_2$ | (4) $L_1 \cap L_2 = \emptyset$ |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284315

Option 1 ID : 53622816809

Option 2 ID : 53622816810

Option 3 ID : 53622816811

Option 4 ID : 53622816812

Status : Answered

Chosen Option : 1

Q.19

What is the radix of the numbers if the solution to the quadratic equation $x^2 - 10x + 26 = 0$ is $x = 4$ and $x = 7$?

- | | |
|--------|--------|
| (1) 8 | (2) 9 |
| (3) 10 | (4) 11 |

Options

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

Question Type : MCQ

Question ID : 5362284295

Option 1 ID : 53622816729

Option 2 ID : 53622816730

Option 3 ID : 53622816731

Option 4 ID : 53622816732

Status : Answered

Chosen Option : 1

Q.20

In a binary max heap containing n numbers, the smallest element can be found in _____ time.

- | | |
|------------|--------------------------|
| (1) $O(n)$ | (2) $O(\log_2 n)$ |
| (3) $O(1)$ | (4) $O(\log_2 \log_2 n)$ |

Options

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

Question Type : MCQ

Question ID : 5362284311

Option 1 ID : 53622816793

Option 2 ID : 53622816794

Option 3 ID : 53622816795

Option 4 ID : 53622816796

Status : Answered

Chosen Option : 1

- Q.21** The following program is stored in memory unit of the basic computer. What is the content of the accumulator after the execution of program? (All location numbers listed below are in hexadecimal).

Location	Instruction
210	CLA
211	ADD 217
212	INC
213	STA 217
214	LDA 218
215	CMA
216	AND 217
217	1234H
218	9CE2H

- (1) 1002H
- (2) 2011H
- (3) 2022H
- (4) 0215H

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284293
Option 1 ID : 53622816721
Option 2 ID : 53622816722
Option 3 ID : 53622816723
Option 4 ID : 53622816724
Status : Answered
Chosen Option : 2

- Q.22** Modifying the software by restructuring is called

- (1) Adaptive maintenance
- (2) Corrective maintenance
- (3) Perfective maintenance
- (4) Preventive maintenance

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284307
Option 1 ID : 53622816777
Option 2 ID : 53622816778
Option 3 ID : 53622816779
Option 4 ID : 53622816780
Status : Answered
Chosen Option : 2

Q.23 Given below are two statements:

If two variables V_1 and V_2 are used for clustering, then consider the following statements for k means clustering with $k = 3$:

Statement I : If V_1 and V_2 have correlation of 1 the cluster centroid will be in straight line.

Statement II : If V_1 and V_2 have correlation of 0 the cluster centroid will be in straight line.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options

1. 1

2. 2

3. 3

4. 4

Question Type : MCQ

Question ID : 5362284370

Option 1 ID : 53622817029

Option 2 ID : 53622817030

Option 3 ID : 53622817031

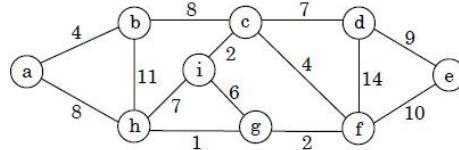
Option 4 ID : 53622817032

Status : Answered

Chosen Option : 3

Q.24

Consider the undirected graph below:



Using Prim's algorithm to construct a minimum spanning tree starting with node a, which one of the following sequences of edges represents a possible order in which the edges would be added to construct the minimum spanning tree?

- (1) (a,b), (a,h), (g,h), (f,g), (c,f), (c,i), (c,d), (d,e)
- (2) (a,b), (b,h), (g,h), (g,i), (c,i), (c,f), (c,d), (d,e)
- (3) (a,b), (b,c), (c,i), (c,f), (f,g), (g,h), (c,d), (d,e)
- (4) (a,b), (g,h), (g,f), (c,f), (c,i), (f,e), (b,c), (d,e)

Options

1. 1

2. 2

3. 3

4. 4

Question Type : MCQ

Question ID : 5362284365

Option 1 ID : 53622817009

Option 2 ID : 53622817010

Option 3 ID : 53622817011

Option 4 ID : 53622817012

Status : Answered

Chosen Option : 3

Q.25

Consider a disk system having 60 cylinders. Disk requests are received by a disk drive for cylinders 10, 22, 20, 2, 40, 6 and 38, in that order. Assuming the disk head is currently at cylinder 20, what is the time taken to satisfy all the requests if it takes 2 milliseconds to move from one cylinder to adjacent one and Shortest Seek Time First (SSTF) algorithm is used?

- (1) 240 milliseconds
- (2) 96 milliseconds
- (3) 120 milliseconds
- (4) 112 milliseconds

Options

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

Question Type : MCQ

Question ID : 5362284303

Option 1 ID : 53622816761

Option 2 ID : 53622816762

Option 3 ID : 53622816763

Option 4 ID : 53622816764

Status : Answered

Chosen Option : 2

Q.26

Which of the following is NOT true in problem solving in artificial intelligence?

- (1) Implements heuristic search techniques
- (2) Solution steps are not explicit
- (3) Knowledge is imprecise
- (4) It works on or implements repetition mechanism

Options

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

Question Type : MCQ

Question ID : 5362284323

Option 1 ID : 53622816841

Option 2 ID : 53622816842

Option 3 ID : 53622816843

Option 4 ID : 53622816844

Status : Answered

Chosen Option : 2

Q.27

If algorithm A and another algorithm B take $\log_2(n)$ and \sqrt{n} microseconds, respectively, to solve a problem, then the largest size n of a problem these algorithms can solve, respectively, in one second are _____ and _____.

- (1) 2^{10^6} and 10^6 (2) 2^{10^6} and 10^{12}
(3) 2^{10^6} and $6 \cdot 10^6$ (4) 2^{10^6} and $6 \cdot 10^{12}$

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
Question ID : 5362284312
Option 1 ID : 53622816797
Option 2 ID : 53622816798
Option 3 ID : 53622816799
Option 4 ID : 53622816800
Status : Answered
Chosen Option : 3

Q.28

Match List I with List II

With reference to CMM developed by Software Engineering Institute (SEI)

List I	List II
(A) INITIAL	(I) Process measurement
(B) REPEATABLE	(II) Process definition
(C) DEFINED	(III) Project management
(D) MANAGED	(IV) ADHOC

Choose the correct answer from the options given below:

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
Question ID : 5362284355
Option 1 ID : 53622816969
Option 2 ID : 53622816970
Option 3 ID : 53622816971
Option 4 ID : 53622816972
Status : Answered
Chosen Option : 3

Q.29

Find the lexicographic ordering of the bit strings given below based on the ordering $0 < 1$.

- (A) 001
- (B) 010
- (C) 011
- (D) 0001
- (E) 0101

Choose the correct answer from the options given below:

- (1) $001 < 010 < 011 < 0001 < 0101$
- (2) $0001 < 001 < 010 < 0101 < 011$
- (3) $0001 < 0101 < 001 < 010 < 011$
- (4) $001 < 010 < 0001 < 0101 < 011$

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284361
Option 1 ID : 53622816993
Option 2 ID : 53622816994
Option 3 ID : 53622816995
Option 4 ID : 53622816996
Status : Answered
Chosen Option : 2

Q.30

The process of removing details from a given state representation is called _____.

- (1) Extraction
- (2) Mining
- (3) Selection
- (4) Abstraction

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284322
Option 1 ID : 53622816837
Option 2 ID : 53622816838
Option 3 ID : 53622816839
Option 4 ID : 53622816840
Status : Answered
Chosen Option : 1

Q.31

The data node and name node in HADOOP are

- (1) Worker Node and Master Node respectively
- (2) Master Node and Worker Node respectively
- (3) Both Worker Nodes
- (4) Both Master Nodes

Options

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

Question Type : MCQ

Question ID : 5362284300

Option 1 ID : 53622816749

Option 2 ID : 53622816750

Option 3 ID : 53622816751

Option 4 ID : 53622816752

Status : Answered

Chosen Option : 3

Q.32

Which of the following statements are true?

- (A) A sentence α entails another sentence β if β is true in few worlds where α is true.
- (B) Forward chaining and backward chaining are very natural reasoning algorithms for knowledge bases in Horn form.
- (C) Sound inference algorithms derive all sentences that are entailed.
- (D) Propositional logic does not scale to environments of unbounded size.

Choose the correct answer from the options given below:

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (C) and (D) only
- (4) (B) and (D) only

Options

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

Question Type : MCQ

Question ID : 5362284349

Option 1 ID : 53622816945

Option 2 ID : 53622816946

Option 3 ID : 53622816947

Option 4 ID : 53622816948

Status : Answered

Chosen Option : 4

Q.33

To create an object-behavioral model, the analyst performs the following steps:

- (A) Evaluates all use-cases
- (B) Builds state transition diagram for the system.
- (C) Reviews the object behaviour model to verify accuracy and consistency
- (D) Identifies events that do not derive the interaction sequence.

Choose the correct answer from the options given below:

- | | |
|---------------------------|---------------------------|
| (1) (A), (B) and (C) only | (2) (A), (B) and (D) only |
| (3) (B), (C) and (D) only | (4) (A), (C) and (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284337
Option 1 ID : 53622816897
Option 2 ID : 53622816898
Option 3 ID : 53622816899
Option 4 ID : 53622816900
Status : Answered
Chosen Option : 1

Q.34

Given below are two statements:

Statement I : Hardwired control unit can be optimized to produce fast mode of operation.

Statement II : Indirect addressing mode needs two memory reference to fetch the operand.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284368
Option 1 ID : 53622817021
Option 2 ID : 53622817022
Option 3 ID : 53622817023
Option 4 ID : 53622817024
Status : Answered
Chosen Option : 4

Q.35

Which of the following statements with respect to K-segment pipelining are true?

- (A) Maximum speedup that a pipeline can provide is k theoretically.
- (B) It is impossible to achieve maximum speedup k in k -segment pipeline.
- (C) All segments in pipeline take same time in computation.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (B) and (C) only |
| (3) (A) and (C) only | (4) (A), (B) and (C) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284330
Option 1 ID : 53622816869
Option 2 ID : 53622816870
Option 3 ID : 53622816871
Option 4 ID : 53622816872
Status : Answered
Chosen Option : 4

Q.36

Which of the following statements regarding XML is/are True?

- (A) XML is a set of tags designed to tell browsers how to display text and images in a web page.
- (B) XML defines a syntax for representing data, but the meaning of data varies from application to application.
- (C) $< Letter >$, $< LETTER >$ and $< letter >$ are three different tags in XML.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (A) and (C) only |
| (3) (B) and (C) only | (4) (A), (B) and (C) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284332
Option 1 ID : 53622816877
Option 2 ID : 53622816878
Option 3 ID : 53622816879
Option 4 ID : 53622816880
Status : Answered
Chosen Option : 4

Q.37

Let G_1 and G_2 be arbitrary context free languages and R an arbitrary regular language.
Consider the following problems:

- (A) Is $L(G_1) = L(G_2)$?
- (B) Is $L(G_2) \leq L(G_1)$?
- (C) Is $L(G_1) = R$?

Which of the problems are undecidable?

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) only | (2) (B) only |
| (3) (A) and (B) only | (4) (A), (B) and (C) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : 5362284342
 Option 1 ID : 53622816917
 Option 2 ID : 53622816918
 Option 3 ID : 53622816919
Option 4 ID : 53622816920
 Status : Answered

Chosen Option : 1

Q.38

Given below are two statements:

Statement I : The laws of nature put two fundamental limits on data rate of a channel. The H.Nyquist limit restricts the number of independent samples per second to twice the band-width in a Noiseless channel.

Statement II : Shannon's major result about noised channel is that maximum data rate of a channel whose band width is H Hz, and whose signal-to-noise ratio is S/N is given by:

$$\text{Maximum number of bits/sec} = H \log_2(1 + \frac{S}{N})$$

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : 5362284375
Option 1 ID : 53622817049
 Option 2 ID : 53622817050
 Option 3 ID : 53622817051
 Option 4 ID : 53622817052
 Status : Answered

Chosen Option : 1

Q.39

Match List I with List II

- | List I | List II |
|-----------------------------|---|
| (A) Handshaking | (I) I/O interface informs the CPU that device is ready for transfer |
| (B) Programmed I/O | (II) requires two control signals working in opposite directions |
| (C) Interrupt-initiated I/O | (III) has local memory & control large set of I/O devices. |
| (D) I/O processor | (IV) require CPU to check the I/O flag & perform transfer |

Choose the correct answer from the options given below:

- | | |
|----------------------------|----------------------------|
| (1) A-I, B-II, C-III, D-IV | (2) A-II, B-IV, C-III, D-I |
| (3) A-II, B-IV, C-I, D-III | (4) A-IV, B-III, C-II, D-I |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284352

Option 1 ID : 53622816957

Option 2 ID : 53622816958

Option 3 ID : 53622816959

Option 4 ID : 53622816960

Status : Answered

Chosen Option : 4

Q.40

How many ways are there to pack six copies of the same book into four identical boxes, where a box can contain as many as six books?

- (1) 4
- (2) 6
- (3) 7
- (4) 9

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284289

Option 1 ID : 53622816705

Option 2 ID : 53622816706

Option 3 ID : 53622816707

Option 4 ID : 53622816708

Status : Answered

Chosen Option : 1

Q.41

Concerning phong shading and Gouraud shading in a 3D scene, which of the following statements are true?

- (A) Gouraud shading requires more computation than phong shading.
- (B) Gouraud shading linearly interpolates the color of an interior pixel from the color at the vertices.
- (C) Phong shading interpolates over the normal vectors specified at the vertices.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (A) and (C) only |
| (3) (B) and (C) only | (4) (A), (B) and (C) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284334**

Option 1 ID : **53622816885**

Option 2 ID : **53622816886**

Option 3 ID : **53622816887**

Option 4 ID : **53622816888**

Status : **Answered**

Chosen Option : **3**

Q.42

Given below are two statements:

Statement I : Bezier curves are curves that interpolate all of their control points.

Statement II : A cubic bezier curve has four control points.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284369**

Option 1 ID : **53622817025**

Option 2 ID : **53622817026**

Option 3 ID : **53622817027**

Option 4 ID : **53622817028**

Status : **Answered**

Chosen Option : **1**

Q.43

The number of positive integers not exceeding 100 that are either odd or the square of an integer is _____.

- (1) 63
- (2) 59
- (3) 55
- (4) 50

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284288

Option 1 ID : 53622816701

Option 2 ID : 53622816702

Option 3 ID : 53622816703

Option 4 ID : 53622816704

Status : Answered

Chosen Option : 1

Q.44

Match List I with List II:

L_R : Regular language, LCF: Context free language

L_{REC} : Recursive language, L_{RE} : Recursively enumerable language.

List I

- (A) Recursively Enumerable language (I) $\bar{L}_{REC} \cup L_{RE}$
- (B) Recursive language (II) $\bar{L}_{CF} \cup L_{REC}$
- (C) Context Free language (III) $L_R^* \cap L_{CF}$

List II

Choose the correct answer from the options given below:

- (1) A-II, B-III, C-I (2) A-III, B-I, C-II
- (3) A-I, B-II, C-III (4) A-II, B-I, C-III

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284358

Option 1 ID : 53622816981

Option 2 ID : 53622816982

Option 3 ID : 53622816983

Option 4 ID : 53622816984

Status : Answered

Chosen Option : 4

Q.45

Match List-I with List-II. List I gives 3x3 matrices representing 2D transformations and List-II shows the corresponding transformation diagrams.

List I (Matrix)

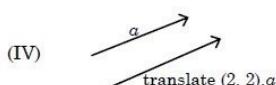
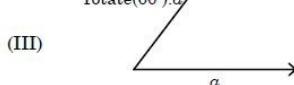
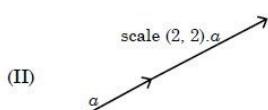
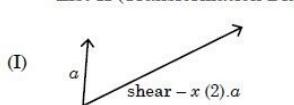
(A) $\begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

(B) $\begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 2 \\ 0 & 0 & 1 \end{bmatrix}$

(C) $\begin{bmatrix} 0.5 & -0.866 & 0 \\ 0.866 & 0.5 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

(D) $\begin{bmatrix} 1 & 2 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

List II (Transformation Diagram)



Choose the correct answer from the options given below:

- | | |
|----------------------------|----------------------------|
| (1) A-IV, B-II, C-III, D-I | (2) A-IV, B-III, C-II, D-I |
| (3) A-III, B-II, C-IV, D-I | (4) A-II, B-IV, C-III, D-I |

Options 1. 1

2. 2

3. 3

4. 4

Question Type : MCQ

Question ID : 5362284353

Option 1 ID : 53622816961

Option 2 ID : 53622816962

Option 3 ID : 53622816963

Option 4 ID : 53622816964

Status : Answered

Chosen Option : 4

Q.46

Arrange the following types of Cohesion from best to worst type.

- (A) Logical Cohesion
- (B) Sequential Cohesion
- (C) Communication Cohesion
- (D) Temporal Cohesion
- (E) Procedural Cohesion

Choose the correct answer from the options given below:

- | | |
|---|---|
| (1) $A \rightarrow D \rightarrow E \rightarrow C \rightarrow B$ | (2) $A \rightarrow E \rightarrow D \rightarrow C \rightarrow B$ |
| (3) $B \rightarrow E \rightarrow C \rightarrow D \rightarrow A$ | (4) $B \rightarrow C \rightarrow E \rightarrow D \rightarrow A$ |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284364

Option 1 ID : 53622817005

Option 2 ID : 53622817006

Option 3 ID : 53622817007

Option 4 ID : 53622817008

Status : Answered

Chosen Option : 4

Q.47

Suppose you have a Linux file system where the block size is 2K bytes, a disk address is 32 bits, and an i-node contains the disk addresses of the first 12 direct blocks of file, a single indirect block, and a double indirect block. Approximately, what is the largest file that can be represented by an i-node?

- | | |
|----------------|----------------|
| (1) 513 Kbytes | (2) 513 MBytes |
| (3) 537 Mbytes | (4) 537 KBytes |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284304

Option 1 ID : 53622816765

Option 2 ID : 53622816766

Option 3 ID : 53622816767

Option 4 ID : 53622816768

Status : Answered

Chosen Option : 1

Q.48

Software reliability is described with respect to

- (A) Execution Time
- (B) Calendar Time
- (C) Clock Time

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (B) and (C) only |
| (3) (A), (B) and (C) | (4) (A) and (C) only |

Options

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

Question Type : **MCQ**

Question ID : **5362284336**

Option 1 ID : **53622816893**

Option 2 ID : **53622816894**

Option 3 ID : **53622816895**

Option 4 ID : **53622816896**

Status : **Answered**

Chosen Option : **4**

- Q.49** Assuming that the system call fork () never fails, consider the following C programs P1 and P2 executed on a UNIX / Linux system:

<pre>/* P1 */ int main () { fork (); fork (); fork (); printf("Happy\n"); }</pre>	<pre>/* P2 */ int main () { fork (); printf("Happy\n"); fork () printf("Happy\n"); fork(); printf("Happy\n"); }</pre>
---	---

Statement I : P1 displays "Happy" 8 times.

Statement II : P2 displays "Happy" 12 times.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options

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

Question Type : MCQ

Question ID : 5362284371

Option 1 ID : 53622817033

Option 2 ID : 53622817034

Option 3 ID : 53622817035

Option 4 ID : 53622817036

Status : Answered

Chosen Option : 1

Q.50

Given below are two statements:

Statement I : The problem "Is $L_1 \wedge L_2 = \phi$?" is undecidable for context sensitive languages L_1 and L_2 .

Statement II : The problem "Is $W \in L$?" is decidable for context sensitive language L. (where W is a string).

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options

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

Question Type : MCQ

Question ID : 5362284374

Option 1 ID : 53622817045

Option 2 ID : 53622817046

Option 3 ID : 53622817047

Option 4 ID : 53622817048

Status : Answered

Chosen Option : 2

Q.51 A Software project was estimated at 864 Function Points. A six person team will be assigned to project consisting of a requirement gathering person, one designer, two programmers and two testers. The salary of the designer is ₹70,000 per month, requirement gatherer is ₹50,000 per month, programmer is ₹60,000 per month and a tester is ₹60,000 per month. Average productivity for the team is 12 FP per person month. Which of the following represents the projected cost of the project?

- (1) ₹33,20,000 (2) ₹43,20,000
(3) ₹33,10,000 (4) ₹22,10,000

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284309

Option 1 ID : 53622816785

Option 2 ID : 53622816786

Option 3 ID : 53622816787

Option 4 ID : 53622816788

Status : Answered

Chosen Option : 2

Q.52 Consider the following statements:

- (A) Any tree is 2-colorable
(B) A graph G has no cycles of even length if it is bipartite.
(C) A graph G is 2-colorable if it is bipartite
(D) A graph G can be colored with $d+1$ colors if d is the maximum degree of any vertex in the graph G.
(E) A graph G can be colored with $O(\log|v|)$ colors if it has $O(|v|)$ edges.

Choose the correct answer from the options given below:

- (1) (C) and (E) are incorrect (2) (B) and (C) are incorrect
(3) (B) and (E) are incorrect (4) (A) and (D) are incorrect

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284340

Option 1 ID : 53622816909

Option 2 ID : 53622816910

Option 3 ID : 53622816911

Option 4 ID : 53622816912

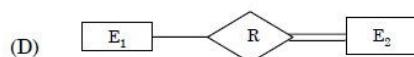
Status : Answered

Chosen Option : 2

Q.53

Match List I with List II.

List I (E-R symbols)



List II (Description)

(I) Key Attribute Type

(II) Weak Entity Type

(III) Total Participation of Entity in a relation

(IV) Multivalue Attribute type

Choose the correct answer from the options given below:

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**Question ID : **5362284354**Option 1 ID : **53622816965**Option 2 ID : **53622816966**Option 3 ID : **53622816967**Option 4 ID : **53622816968**Status : **Answered**Chosen Option : **1**

Q.54

Given below are two statements:

Statement I : In Ceasar Cipher each letter of Plain text is replaced by another letter for encryption.

Statement II : Diffie-Hellman algorithm is used for exchange of secret key.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284376

Option 1 ID : 53622817053

Option 2 ID : 53622817054

Option 3 ID : 53622817055

Option 4 ID : 53622817056

Status : Answered

Chosen Option : 1

Q.55

Using 'RSA' public key cryptosystem, if $P = 3$, $q = 11$ and $d = 7$, find the value of e and encrypt the number '19'.

- (1) 20, 19
- (2) 33, 11
- (3) 3, 28
- (4) 77, 28

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284319

Option 1 ID : 53622816825

Option 2 ID : 53622816826

Option 3 ID : 53622816827

Option 4 ID : 53622816828

Status : Answered

Chosen Option : 3

Q.56

Match List I with List II

- | List I | List II |
|---------------------------------|---|
| (A) Greedy Best-First Search | (I) Space complexity is $O(d)$ where $d=\text{depth}$ of the deepest optimal solution |
| (B) A* | (II) Incomplete even if the search space is finite. |
| (C) Recursive Best-First Search | (III) Optimal if optimal solution is reachable; otherwise, returns the best reachable optimal solution. |
| (D) SMA* | (IV) Computation and space complexity is too high. |

Choose the correct answer from the options given below:

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
 Question ID : 5362284360
Option 1 ID : 53622816989
 Option 2 ID : 53622816990
 Option 3 ID : 53622816991
 Option 4 ID : 53622816992
 Status : Answered
 Chosen Option : 4

Q.57

Arrange the following types of machine in descending order of complexity.

- (A) SISD
 (B) MIMD
 (C) SIMD

Choose the correct answer from the options given below:

- (1) A, B, C (2) C, B, A
 (3) B, C, A (4) C, A, B

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ
 Question ID : 5362284362
Option 1 ID : 53622816997
 Option 2 ID : 53622816998
Option 3 ID : 53622816999
 Option 4 ID : 53622817000
 Status : Answered
 Chosen Option : 2

Q.58

A Company has a choice of two languages L_1 and L_2 to develop a software for their client. Number of LOC required to develop an application in L_2 is thrice the LOC in language L_1 . Also, software has to be maintained for next 10 years. Various parameters for two languages are given below to decide which language should be preferred for development.

PARAMETER	L_1	L_2
Man-year needed for development	LOC/1000	LOC/1000
Development cost	Rs.70,000	Rs.90,000
Cost of Maintenance per year	Rs.1,00,000	Rs.40,000

Total cost of project include cost of development and maintenance. What is the LOC for L_1 for which cost of developing the software with both languages must be same?

- (1) 2000
- (2) 6000
- (3) 3000
- (4) 5000

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : **5362284308**
 Option 1 ID : **53622816781**
 Option 2 ID : **53622816782**
Option 3 ID : 53622816783
 Option 4 ID : **53622816784**
 Status : **Answered**
 Chosen Option : **4**

Q.59

Consider the following regular expressions:

- (a) $r = a(b + a)^*$
- (b) $s = a(a + b)^+$
- (c) $t = aa^*b$

Choose the correct answer from the options given below based on the relation between the languages generated by the regular expressions above:

- (1) $L(r) \subseteq L(s) \subseteq L(t)$
- (2) $L(r) \supseteq L(s) \supseteq L(t)$
- (3) $L(r) \supseteq L(t) \supseteq L(s)$
- (4) $L(s) \supseteq L(t) \supseteq L(r)$

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
 Question ID : **5362284366**
 Option 1 ID : **53622817013**
Option 2 ID : 53622817014
 Option 3 ID : **53622817015**
 Option 4 ID : **53622817016**
 Status : **Answered**
 Chosen Option : **1**

Q.60

Consider the following properties:

- A. Reflexive
- B. Antisymmetric
- C. Symmetric

Let $A = \{a, b, c, d, e, f, g\}$ and $R = \{(a, a), (b, b), (c, d), (c, g), (d, g), (e, e), (f, f), (g, g)\}$ be a relation on A. Which of the following property (properties) is (are) satisfied by the relation R?

- (1) Only A
- (2) Only C
- (3) Both A and B
- (4) B and not A

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284326

Option 1 ID : 53622816853

Option 2 ID : 53622816854

Option 3 ID : 53622816855

Option 4 ID : 53622816856

Status : Answered

Chosen Option : 4

Q.61

Given below are different properties of 3D projections from A-D. Identify the correct order on the basis of property true of (i) a perspective projection only, (ii) an orthographic projection only, (iii) both orthographic and projective transformations and (iv) neither orthographic nor projective transformation, respectively.

- (A) Straight lines are mapped to straight lines.
- (B) Distances and angles are (in general) preserved.
- (C) Far away objects appear the same size as closer ones.
- (D) Requires homogeneous coordinates in order for it to be encoded into a linear transformation.

Choose the correct answer from the options given below:

- | | |
|----------------|----------------|
| (1) D, C, B, A | (2) B, C, D, A |
| (3) D, C, A, B | (4) C, D, B, A |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284363

Option 1 ID : 53622817001

Option 2 ID : 53622817002

Option 3 ID : 53622817003

Option 4 ID : 53622817004

Status : Answered

Chosen Option : 1

Q.62

Consider the following argument with premise $\forall_x(P(x) \vee Q(x))$ and conclusion $(\forall_x P(x)) \wedge (\forall_x Q(x))$

(A) $\forall_x(P(x) \vee Q(x))$	Premise
(B) $P(c) \vee Q(c)$	Universal instantiation from (A)
(C) $P(c)$	Simplification from (B)
(D) $\forall_x P(x)$	Universal Generalization of (C)
(E) $Q(c)$	Simplification from (B)
(F) $\forall_x Q(x)$	Universal Generalization of (E)
(G) $(\forall_x P(x)) \wedge (\forall_x Q(x))$	Conjunction of (D) and (F)

- (1) This is a valid argument.
- (2) Steps (C) and (E) are not correct inferences
- (3) Steps (D) and (F) are not correct inferences
- (4) Step (G) is not a correct inference

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284327

Option 1 ID : 53622816857

Option 2 ID : 53622816858

Option 3 ID : 53622816859

Option 4 ID : 53622816860

Status : Answered

Chosen Option : 1

Q.63

Which of the following statements are true?

- (A) Minimax search is breadth-first; it processes all the nodes at a level before moving to a node in next level.
- (B) The effectiveness of the alpha-beta pruning is highly dependent on the order in which the states are examined.
- (C) The alpha-beta search algorithm computes the same optimal moves as minimax algorithm.
- (D) Optimal play in games of imperfect information does not require reasoning about the current and future belief states of each player.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (C) only | (2) (A) and (D) only |
| (3) (B) and (C) only | (4) (C) and (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284350

Option 1 ID : 53622816949

Option 2 ID : 53622816950

Option 3 ID : 53622816951

Option 4 ID : 53622816952

Status : Answered

Chosen Option : 4

Q.64

A non-pipeline system takes 50ns to process a task. The same task can be processed in six-segment pipeline with a clockcycle of 10ns. Determine approximately the speedup ratio of the pipeline for 500 tasks.

- (1) 6
- (2) 4.95
- (3) 5.7
- (4) 5.5

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284294**

Option 1 ID : **53622816725**

Option 2 ID : **53622816726**

Option 3 ID : **53622816727**

Option 4 ID : **53622816728**

Status : **Answered**

Chosen Option : **1**

Q.65

In HTML, <map> tag is used for

- (1) defining a path between two nodes in an image
- (2) defining clickable region in an image
- (3) highlighting an area in an image
- (4) defining the site-map of a web-site

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284297**

Option 1 ID : **53622816737**

Option 2 ID : **53622816738**

Option 3 ID : **53622816739**

Option 4 ID : **53622816740**

Status : **Answered**

Chosen Option : **4**

Q.66 Consider the following linear programming (LP):

$$\text{Max. } z = 2x_1 + 3x_2$$

$$\text{Such that } 2x_1 + x_2 \leq 4$$

$$x_1 + 2x_2 \leq 5$$

$$x_1, x_2 \geq 0$$

The optimum value of the LP is

- (1) 23
- (2) 9.5
- (3) 13
- (4) 8

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284291

Option 1 ID : 53622816713

Option 2 ID : 53622816714

Option 3 ID : 53622816715

Option 4 ID : 53622816716

Status : Answered

Chosen Option : 4

Q.67

Which among the following statement(s) is (are) true?

- (A) A hash function takes a message of arbitrary length and generates a fixed length code.
- (B) A hash function takes a message of fixed length and generates a code of variable length.
- (C) A hash function may give same hash value for distinct messages.

Choose the correct answer from the options given below:

- (1) (A) only
- (2) (B) and (C) only
- (3) (A) and (C) only
- (4) (B) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284341

Option 1 ID : 53622816913

Option 2 ID : 53622816914

Option 3 ID : 53622816915

Option 4 ID : 53622816916

Status : Answered

Chosen Option : 2

Q.68

Which of the following are applications of symbol table?

- (A) Storage allocation
- (B) Checking type compatibility
- (C) Suppressing duplicate error messages

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (A) and (C) only |
| (3) (B) and (C) only | (4) (A), (B) and (C) |

Options

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

Question Type : MCQ
Question ID : 5362284328
Option 1 ID : 53622816861
Option 2 ID : 53622816862
Option 3 ID : 53622816863
Option 4 ID : 53622816864

Status : Answered

Chosen Option : 1

Q.69

Let G be a directed graph whose vertex set is the set of numbers from 1 to 100. There is an edge from a vertex i to a vertex j if and only if either $j = i + 1$ or $j = 3i$. The minimum number of edges in a path in G from vertex 1 to vertex 100 is _____.

- | | |
|--------|--------|
| (1) 23 | (2) 99 |
| (3) 4 | (4) 7 |

Options

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

Question Type : MCQ
Question ID : 5362284313
Option 1 ID : 53622816801
Option 2 ID : 53622816802
Option 3 ID : 53622816803
Option 4 ID : 53622816804

Status : Answered

Chosen Option : 1

Q.70

Consider a hypothetical machine with 3 pages of physical memory, 5 pages of virtual memory, and $\langle A, B, C, D, A, B, E, A, B, C, D, E, B, A, B \rangle$ as the stream of page references by an application. If P and Q are the number of page faults that the application would incur with FIFO and LRU page replacement algorithms respectively, then $(P, Q) = \underline{\hspace{2cm}}$. (Assuming enough space for storing 3 page frames)

- (1) (11, 10)
- (2) (12, 11)
- (3) (10, 11)
- (4) (11, 12)

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284302

Option 1 ID : 53622816757

Option 2 ID : 53622816758

Option 3 ID : 53622816759

Option 4 ID : 53622816760

Status : Answered

Chosen Option : 2

Q.71

Consider $L = L_1 \cap L_2$

Where $L_1 = \{0^m 1^m 20^n 1^n \mid m, n \geq 0\}$

$$L_2 = \{0^m 1^n 2^k \mid m, n, k \geq 0\}$$

Then, the language L is

- (1) Recursively enumerable but not context free
- (2) Regular
- (3) Context free but not regular
- (4) Not recursive

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284314

Option 1 ID : 53622816805

Option 2 ID : 53622816806

Option 3 ID : 53622816807

Option 4 ID : 53622816808

Status : Answered

Chosen Option : 3

Q.72 Let G be a simple undirected graph, T_D be a DFS tree on G , and T_B be the BFS tree on G . Consider the following statements.

Statement I : No edge of G is a cross with respect to T_D

Statement II : For every edge (u, v) of G , if u is at depth i and v is at depth j in T_B then $|i - j| = 1$.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284373

Option 1 ID : 53622817041

Option 2 ID : 53622817042

Option 3 ID : 53622817043

Option 4 ID : 53622817044

Status : Answered

Chosen Option : 3

Q.73

Which of the following pairs of propositions are not logically equivalent?

- (1) $((p \rightarrow r) \wedge (q \rightarrow r))$ and $((p \vee q) \rightarrow r)$
- (2) $p \leftrightarrow q$ and $(\neg p \leftrightarrow \neg q)$
- (3) $((p \wedge q) \vee (\neg p \wedge \neg q))$ and $p \leftrightarrow q$
- (4) $((p \wedge q) \rightarrow r)$ and $((p \rightarrow r) \wedge (q \rightarrow r))$

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284290

Option 1 ID : 53622816709

Option 2 ID : 53622816710

Option 3 ID : 53622816711

Option 4 ID : 53622816712

Status : Answered

Chosen Option : 4

Q.74

Which of the following statements is true?

- (1) The union of two context free languages is context free.
- (2) The intersection of two context free languages is context free.
- (3) The complement of a context free language is context free.
- (4) If a language is context free, it can always be accepted by a deterministic pushdown automaton.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284316

Option 1 ID : 53622816813

Option 2 ID : 53622816814

Option 3 ID : 53622816815

Option 4 ID : 53622816816

Status : Answered

Chosen Option : 4

Q.75

The running time of an algorithm is $O(g(n))$ if and only if

- (A) its worst-case running time is $O(g(n))$ and its best-case running time is $\Omega(g(n))$. ($O = \text{big } O$)
- (B) its worst-case running time is $\Omega(g(n))$ and its best-case running time is $O(g(n))$. ($O = \text{big } O$)
- (C) $O(g(n)) = \Omega(g(n))$ ($O = \text{big } O$)
- (D) $O(g(n)) \cap \omega(g(n))$ is non-empty set. ($\omega = \text{small } o$)

Choose the correct answer from the options given below:

- | | |
|--------------|--------------|
| (1) (A) only | (2) (B) only |
| (3) (C) only | (4) (D) only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284339

Option 1 ID : 53622816905

Option 2 ID : 53622816906

Option 3 ID : 53622816907

Option 4 ID : 53622816908

Status : Answered

Chosen Option : 2

Q.76

Given below are two statements:

Statement I : 5 divides $n^5 - n$ whenever n is a nonnegative integer.

Statement II : 6 divides $n^3 - n$ whenever n is a nonnegative integer.

In the light of the above statements, choose the correct 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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284367

Option 1 ID : 53622817017

Option 2 ID : 53622817018

Option 3 ID : 53622817019

Option 4 ID : 53622817020

Status : Answered

Chosen Option : 1

Q.77

Consider a relational schema $S = (U, V, W, X, Y, Z)$ on which the following functional dependencies hold:

$\{U \rightarrow V, VW \rightarrow X, Y \rightarrow W, X \rightarrow U\}$

Which are the candidate keys among following options?

- (1) UY, VY
- (2) UY, VY, XY
- (3) UYZ, VYZ, VWZ
- (4) UYZ, VYZ, XYZ

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284301

Option 1 ID : 53622816753

Option 2 ID : 53622816754

Option 3 ID : 53622816755

Option 4 ID : 53622816756

Status : Answered

Chosen Option : 4

Q.78

Which of the following is not an intermediate code form?

- (1) Syntax trees
- (2) Three address codes
- (3) Quadruples
- (4) Post fix Notation.

Options

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

Question Type : MCQ

Question ID : 5362284317

Option 1 ID : 53622816817

Option 2 ID : 53622816818

Option 3 ID : 53622816819

Option 4 ID : 53622816820

Status : Answered

Chosen Option : 4

Q.79

Consider a code with only four valid code words: 0000000000, 0000011111, 1111100000, and 1111111111. This code has distance 5. If the code word arrived is 0000000111 then the original code word must be _____.

- (1) 0000011111
- (2) 0000000000
- (3) 1111100000
- (4) 1111111111

Options

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

Question Type : MCQ

Question ID : 5362284318

Option 1 ID : 53622816821

Option 2 ID : 53622816822

Option 3 ID : 53622816823

Option 4 ID : 53622816824

Status : Answered

Chosen Option : 1

Q.80 Consider a machine with a byte addressable main memory of 2^{16} bytes and block size of 8 bytes. Assume that a direct mapped cache consisting of 32 lines used with this machine. How many bits will be there in Tag, line and word field of format of main memory addresses?

- (1) 8, 5, 3
- (2) 8, 6, 2
- (3) 7, 5, 4
- (4) 7, 6, 3

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284292

Option 1 ID : 53622816717

Option 2 ID : 53622816718

Option 3 ID : 53622816719

Option 4 ID : 53622816720

Status : Answered

Chosen Option : 1

Q.81

Consider the following languages:

$$L_1 = \{a^{\hat{z}^x} \mid \hat{z} \text{ is an integer}\}$$

$$L_2 = \{a^{\hat{z}^x} \mid \hat{z} \geq 0\}$$

$$L_3 = \{\omega\omega \mid \omega \in \{a, b\}^*\}$$

Which of the languages is (are) regular?

Choose the correct answer from the options given below:

- | | |
|--------------------------|--------------------------|
| (1) L_1 and L_2 only | (2) L_1 and L_3 only |
| (3) L_1 only | (4) L_2 only |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284343

Option 1 ID : 53622816921

Option 2 ID : 53622816922

Option 3 ID : 53622816923

Option 4 ID : 53622816924

Status : Answered

Chosen Option : 2

Q.82

In the context of 3D Computer graphics, which of the following statements is/are correct?

- (A) Under perspective projection, each set of parallel lines in the object do not stay parallel in the image (except those that are parallel to the viewplane to start with).
- (B) Applying a perspective transformation in the graphics pipeline to a vertex involves dividing by its 'z' coordinate.
- (C) Perspective transformation is a linear transformation.

Choose the correct answer from the options given below:

- | | |
|----------------------|----------------------|
| (1) (A) and (B) only | (2) (A) and (C) only |
| (3) (B) and (C) only | (4) (A), (B) and (C) |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284333

Option 1 ID : 53622816881

Option 2 ID : 53622816882

Option 3 ID : 53622816883

Option 4 ID : 53622816884

Status : Answered

Chosen Option : 4

Q.83

A complete n-ary tree is a tree in which each node has n children or no children. Let I be the number of internal nodes and L be the number of leaves in a complete n-ary tree. If L=41, and I=10. What is the value of n?

- | | |
|-------|-------|
| (1) 3 | (2) 4 |
| (3) 5 | (4) 6 |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284310

Option 1 ID : 53622816789

Option 2 ID : 53622816790

Option 3 ID : 53622816791

Option 4 ID : 53622816792

Status : Answered

Chosen Option : 3

Q.84

Suppose you are compiling on a machine with 1-byte chars, 2-byte shorts, 4-byte ints, and 8-byte doubles, and with alignment rules that require the address of every primitive data element to be an integer multiple of the element's size. Suppose further that the compiler is not permitted to reorder fields; padding is used to ensure alignment. How much space will be consumed by the following array?

```
struct {  
    short s;  
    char c;  
    short t;  
    char d;  
    double r;  
    int i;  
} A[10]; /*10-element array of structs*/  
  
(1) 150 bytes  
(2) 320 bytes  
(3) 240 bytes  
(4) 200 bytes
```

Options

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

Question Type : MCQ

Question ID : 5362284298

Option 1 ID : 53622816741

Option 2 ID : 53622816742

Option 3 ID : 53622816743

Option 4 ID : 53622816744

Status : Answered

Chosen Option : 1

Q.85

Consider a single-level page table system, with the page table stored in the memory. If the hit rate to TLB is 80%, and it takes 15 nanoseconds to search the TLB, and 150 nanoseconds to access the main memory, then what is the effective memory access time, in nanoseconds?

- | | |
|---------|---------|
| (1) 185 | (2) 195 |
| (3) 205 | (4) 175 |

Options

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

Question Type : MCQ

Question ID : 5362284305

Option 1 ID : 53622816769

Option 2 ID : 53622816770

Option 3 ID : 53622816771

Option 4 ID : 53622816772

Status : Answered

Chosen Option : 3

Q.86

Given below are two statements:

Statement I : A genetic algorithm is a stochastic hill-climbing search in which a large population of states is maintained.

Statement II : In nondeterministic environments, agents can apply AND-OR search to generate contingent plans that reach the goal regardless of which outcomes occur during execution.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284377

Option 1 ID : 53622817057

Option 2 ID : 53622817058

Option 3 ID : 53622817059

Option 4 ID : 53622817060

Status : Answered

Chosen Option : 3

Q.87

Match List I with List II

List I

- (A) Serial Line IP (SLIP)
- (B) Border Gateway Protocol (BGP)
- (C) User Data Protocol (UDP)
- (D) Simple Network Management Protocol

List II

- (I) Application layer
- (II) Transport layer
- (III) Data Link layer
- (IV) Network layer

Choose the correct answer from the options given below:

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284359

Option 1 ID : 53622816985

Option 2 ID : 53622816986

Option 3 ID : 53622816987

Option 4 ID : 53622816988

Status : Answered

Chosen Option : 1

- Q.88** Consider the following recursive Java function f that takes two long arguments and returns a float value:

```
public static float f(long m, long n) {
    float result = (float)m / (float)n;
    if (m < 0 || n < 0) return 0.0f;
    else result -= f(m * 2, n * 3);
    return result ;
}
```

Which of the following real values best approximates the value of $f(1,3)$?

- (1) 0.2
- (2) 0.4
- (3) 0.6
- (4) 0.8

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284299

Option 1 ID : 53622816745

Option 2 ID : 53622816746

Option 3 ID : 53622816747

Option 4 ID : 53622816748

Status : Answered

Chosen Option : 3

- Q.89**

Match List I with List II

Let $R_1 = \{(1,1), (2,2), (3,3)\}$ and $R_2 = \{(1,1), (1,2), (1,3), (1,4)\}$

List I

- (A) $R_1 \cup R_2$
- (B) $R_1 - R_2$
- (C) $R_1 \cap R_2$
- (D) $R_2 - R_1$

List II

- (I) $\{(1,1), (1,2), (1,3), (1,4), (2,2), (3,3)\}$
- (II) $\{(1,1)\}$
- (III) $\{(1,2), (1,3), (1,4)\}$
- (IV) $\{(2,2), (3,3)\}$

Choose the correct answer from the options given below:

- | | |
|----------------------------|----------------------------|
| (1) A-I, B-II, C-IV, D-III | (2) A-I, B-IV, C-III, D-II |
| (3) A-I, B-III, C-II, D-IV | (4) A-I, B-IV, C-II, D-III |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284351

Option 1 ID : 53622816953

Option 2 ID : 53622816954

Option 3 ID : 53622816955

Option 4 ID : 53622816956

Status : Answered

Chosen Option : 4

Q.90

What kind of clauses are available in conjunctive normal form?

- (1) Disjunction of literals
- (2) Disjunction of variables
- (3) Conjunction of literals
- (4) Conjunction of variables.

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284325

Option 1 ID : 53622816849

Option 2 ID : 53622816850

Option 3 ID : 53622816851

Option 4 ID : 53622816852

Status : Answered

Chosen Option : 4

Comprehension:

Questions 91-95 concern a disk with a sector size of 512 bytes, 2000 tracks per surface, 50 sectors per track, five double-sided platters, and average seek time of 10 milliseconds.

SubQuestion No : 91**Q.91**

If T is the capacity of a track in bytes, and S is the capacity of each surface in bytes, then $(T, S) = \underline{\hspace{2cm}}$.

- (1) (50 K, 50000 K)
- (2) (25 K, 25000 K)
- (3) (25 K, 50000 K)
- (4) (40 K, 36000 K)

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284379

Option 1 ID : 53622817061

Option 2 ID : 53622817062

Option 3 ID : 53622817063

Option 4 ID : 53622817064

Status : Answered

Chosen Option : 4

Comprehension:

Questions 91-95 concern a disk with a sector size of 512 bytes, 2000 tracks per surface, 50 sectors per track, five double-sided platters, and average seek time of 10 milliseconds.

SubQuestion No : 92**Q.92**

Given below are two statements:

Statement I: The disk has a total number of 2000 cylinders.

Statement II: 51200 bytes is not a valid block size for the disk.

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284381

Option 1 ID : 53622817069

Option 2 ID : 53622817070

Option 3 ID : 53622817071

Option 4 ID : 53622817072

Status : Answered

Chosen Option : 3

Comprehension:

Questions 91-95 concern a disk with a sector size of 512 bytes, 2000 tracks per surface, 50 sectors per track, five double-sided platters, and average seek time of 10 milliseconds.

SubQuestion No : 93**Q.93**

If the disk platters rotate at 5400 rpm (revolutions per minute), then approximately what is the maximum rotational delay?

- | | |
|--------------------|------------------|
| (1) 0.011 seconds | (2) 0.11 seconds |
| (3) 0.0011 seconds | (4) 1.1 seconds |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284382

Option 1 ID : 53622817073

Option 2 ID : 53622817074

Option 3 ID : 53622817075

Option 4 ID : 53622817076

Status : Answered

Chosen Option : 4

Comprehension:

Questions 91-95 concern a disk with a sector size of 512 bytes, 2000 tracks per surface, 50 sectors per track, five double-sided platters, and average seek time of 10 milliseconds.

SubQuestion No : 94

Q.94 If one track of data can be transferred per revolution, then what is the data transfer rate?

- | | |
|-------------------------|-------------------------|
| (1) 2,850 KBytes/second | (2) 4,500 KBytes/second |
| (3) 5,700 KBytes/second | (4) 2,250 KBytes/second |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284383
Option 1 ID : 53622817077
Option 2 ID : 53622817078
Option 3 ID : 53622817079
Option 4 ID : 53622817080
Status : Answered
Chosen Option : 3

Comprehension:

Questions 91-95 concern a disk with a sector size of 512 bytes, 2000 tracks per surface, 50 sectors per track, five double-sided platters, and average seek time of 10 milliseconds.

SubQuestion No : 95

Q.95 What is the capacity of the disk, in bytes?

- | | |
|---------------|---------------|
| (1) 25,000 K | (2) 500,000 K |
| (3) 250,000 K | (4) 50,000 K |

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ
Question ID : 5362284380
Option 1 ID : 53622817065
Option 2 ID : 53622817066
Option 3 ID : 53622817067
Option 4 ID : 53622817068
Status : Answered
Chosen Option : 3

Comprehension:

Consider the following table structures related to a university for Q96 to Q100:-

EMPLOYEE

NAME	VARCHAR (30)	NOT NULL,
EID	VARCHAR (10)	NOT NULL,
DEPTNO	INT (5)	NOT NULL,
HODEID	VARCHAR (10),	
SALARY	INT (10),	

PRIMARY KEY (EID),

FOREIGN KEY (HODEID) REFERENCES EMPLOYEE (EID),

FOREIGN KEY (DEPTNO) REFERENCES DEPARTMENT (DID);

DEPARTMENT

DID	INT (5)	NOT NULL,
DNAME	VARCHAR (30)	NOT NULL,
HODID	VARCHAR (10)	NOT NULL,
HODNAME	VARCHAR (30),	

PRIMARY KEY (DID),

UNIQUE (DNAME),

FOREIGN KEY (HODID) REFERENCES EMPLOYEE (EID);

PROJECT WORK:

EMPID	VARCHAR (10)	NOT NULL,
PROJNO	INT (5)	NOT NULL,
PROJECTLOC	VARCHAR (30)	NOT NULL,

PRIMARY KEY (EMPID, PROJNO),

FOREIGN KEY (EMPID) REFERENCES EMPLOYEE (EID),

SubQuestion No : 96

- Q.96** On the basis of above given table structures, retrieve the distinct employee ID (EMPID) of all employees of university who are working on project No.20, 30 and 40.

- (1) SELECT EMPID
FROM PROJECTWORK
WHERE PROJNO=(20,30,40);
- (2) SELECT EMPID
FROM PROJECTWORK
WHERE PROJNO IN (20,30,40);
- (3) SELECT DISTINCT EMPID
FROM PROJECTWORK
WHERE PROJNO IN (20,30,40);
- (4) SELECT DISTINCT EMPID
FROM PROJECTWORK
WHERE PROJNO=20,30,40;

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 5362284385

Option 1 ID : 53622817081

Option 2 ID : 53622817082

Option 3 ID : 53622817083

Option 4 ID : 53622817084

Status : Answered

Chosen Option : 3

Comprehension:

Consider the following table structures related to a university for Q96 to Q100:-

EMPLOYEE

NAME	VARCHAR (30)	NOT NULL,
EID	VARCHAR (10)	NOT NULL,
DEPTNO	INT (5)	NOT NULL,
HODEID	VARCHAR (10),	
SALARY	INT (10),	

PRIMARY KEY (EID),

FOREIGN KEY (HODEID) REFERENCES EMPLOYEE (EID),

FOREIGN KEY (DEPTNO) REFERENCES DEPARTMENT (DID);

DEPARTMENT

DID	INT (5)	NOT NULL,
DNAME	VARCHAR (30)	NOT NULL,
HODID	VARCHAR (10)	NOT NULL,
HODNAME	VARCHAR (30),	

PRIMARY KEY (DID),

UNIQUE (DNAME),

FOREIGN KEY (HODID) REFERENCES EMPLOYEE (EID);

PROJECT WORK:

EMPID	VARCHAR (10)	NOT NULL,
PROJNO	INT (5)	NOT NULL,
PROJECTLOC	VARCHAR (30)	NOT NULL,

PRIMARY KEY (EMPID, PROJNO),

FOREIGN KEY (EMPID) REFERENCES EMPLOYEE (EID),

SubQuestion No : 97**Q.97**

Given below are two statements to find the sum of salaries of all employees of the English department as well as the maximum, minimum and average salary in English department.

STATEMENT I : SELECT SUM (SALARY), MAX (SALARY), MIN (SALARY),
 AVG (SALARY) FROM EMPLOYEE, DEPARTMENT
 WHERE DEPTNO=DID
 AND DNAME='ENGLISH';

STATEMENT II : SELECT SUM (SALARY), MAX (SALARY), MIN (SALARY),
 AVG (SALARY) FROM EMPLOYEE, DEPARTMENT
 WHERE DNAME='ENGLISH';

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 correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **5362284386**

Option 1 ID : **53622817085**

Option 2 ID : **53622817086**

Option 3 ID : 53622817087

Option 4 ID : **53622817088**

Status : **Answered**

Chosen Option : 4

Comprehension:

Consider the following table structures related to a university for Q96 to Q100:-

EMPLOYEE

NAME	VARCHAR (30)	NOT NULL,
EID	VARCHAR (10)	NOT NULL,
DEPTNO	INT (5)	NOT NULL,
HODEID	VARCHAR (10),	
SALARY	INT (10),	

PRIMARY KEY (EID),

FOREIGN KEY (HODEID) REFERENCES EMPLOYEE (EID),

FOREIGN KEY (DEPTNO) REFERENCES DEPARTMENT (DID);

DEPARTMENT

DID	INT (5)	NOT NULL,
DNAME	VARCHAR (30)	NOT NULL,
HODID	VARCHAR (10)	NOT NULL,
HODNAME	VARCHAR (30),	

PRIMARY KEY (DID),

UNIQUE (DNAME),

FOREIGN KEY (HODID) REFERENCES EMPLOYEE (EID);

PROJECT WORK:

EMPID	VARCHAR (10)	NOT NULL,
PROJNO	INT (5)	NOT NULL,
PROJECTLOC	VARCHAR (30)	NOT NULL,

PRIMARY KEY (EMPID, PROJNO),

FOREIGN KEY (EMPID) REFERENCES EMPLOYEE (EID),

SubQuestion No : 98

- Q.98** Which of the following query/queries return the employee ID and name of employees whose salary is greater than the salary of all employees in department number 20 of university. Order result by employee ID (refer table structures given above).

- (A) SELECT EID, NAME
FROM EMPLOYEE
WHERE SALARY>(SELECT SALARY FROM EMPLOYEE WHERE DEPTNO=20)
ORDER BY EID;
- (B) SELECT EID, NAME
FROM EMPLOYEE WHERE SALARY>(SELECT SALARY FROM EMPLOYEE
WHERE DEPTNO=20);
- (C) SELECT EID, NAME
FROM EMPLOYEE
WHERE SALARY>ALL(SELECT SALARY FROM EMPLOYEE WHERE
DEPTNO=20)
ORDER BY EID

Choose the correct answer from the options given below:

- (1) (A) and (B) only
- (2) (A) and (C) only
- (3) (B) only
- (4) (C) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 5362284387

Option 1 ID : 53622817089

Option 2 ID : **53622817090**

Option 3 ID : **53622817091**

Option 4 ID : **53622817092**

Status : **Answered**

Chosen Option : **4**

Comprehension:

Consider the following table structures related to a university for Q96 to Q100:-

EMPLOYEE

NAME	VARCHAR (30)	NOT NULL,
EID	VARCHAR (10)	NOT NULL,
DEPTNO	INT (5)	NOT NULL,
HODEID	VARCHAR (10),	
SALARY	INT (10),	

PRIMARY KEY (EID),

FOREIGN KEY (HODEID) REFERENCES EMPLOYEE (EID),

FOREIGN KEY (DEPTNO) REFERENCES DEPARTMENT (DID);

DEPARTMENT

DID	INT (5)	NOT NULL,
DNAME	VARCHAR (30)	NOT NULL,
HODID	VARCHAR (10)	NOT NULL,
HODNAME	VARCHAR (30),	

PRIMARY KEY (DID),

UNIQUE (DNAME),

FOREIGN KEY (HODID) REFERENCES EMPLOYEE (EID);

PROJECT WORK:

EMPID	VARCHAR (10)	NOT NULL,
PROJNO	INT (5)	NOT NULL,
PROJECTLOC	VARCHAR (30)	NOT NULL,

PRIMARY KEY (EMPID, PROJNO),

FOREIGN KEY (EMPID) REFERENCES EMPLOYEE (EID),

SubQuestion No : 99

- Q.99** In reference to the above given table structures, which of the following query/queries will drop the 'SALARY' column from 'EMPLOYEE' table?

- (A) ALTER TABLE EMPLOYEE DROP SALARY CASCADE;
- (B) ALTER TABLE EMPLOYEE DROP SALARY RESTRICT;
- (C) ALTER EMPLOYEE DROP SALARY;

Choose the correct answer from the options given below:

- (1) (A) and (B) only
- (2) (A) and (C) only
- (3) (B) and (C) only
- (4) (A) only

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **5362284388**

Option 1 ID : **53622817093**

Option 2 ID : **53622817094**

Option 3 ID : **53622817095**

Option 4 ID : **53622817096**

Status : **Answered**

Chosen Option : **4**

Comprehension:

Consider the following table structures related to a university for Q96 to Q100:-

EMPLOYEE

NAME	VARCHAR (30)	NOT NULL,
EID	VARCHAR (10)	NOT NULL,
DEPTNO	INT (5)	NOT NULL,
HODEID	VARCHAR (10),	
SALARY	INT (10),	

PRIMARY KEY (EID),

FOREIGN KEY (HODEID) REFERENCES EMPLOYEE (EID),

FOREIGN KEY (DEPTNO) REFERENCES DEPARTMENT (DID);

DEPARTMENT

DID	INT (5)	NOT NULL,
DNAME	VARCHAR (30)	NOT NULL,
HODID	VARCHAR (10)	NOT NULL,
HODNAME	VARCHAR (30),	

PRIMARY KEY (DID),

UNIQUE (DNAME),

FOREIGN KEY (HODID) REFERENCES EMPLOYEE (EID);

PROJECT WORK:

EMPID	VARCHAR (10)	NOT NULL,
PROJNO	INT (5)	NOT NULL,
PROJECTLOC	VARCHAR (30)	NOT NULL,

PRIMARY KEY (EMPID, PROJNO),

FOREIGN KEY (EMPID) REFERENCES EMPLOYEE (EID),

SubQuestion No : 100

- Q.100** Refer table structures given above. University decided to give all employees in the 'SCIENCE' department a 20% rise in salary. Which of the following query / queries will compute the above results?

- (A) UPDATE EMPLOYEE
SET SALARY = SALARY*1.20
WHERE DEPT NO. IN (SELECT DID FROM DEPARTMENT WHERE DNAME='SCIENCE');
- (B) UPDATE TABLE EMPLOYEE
SET SALARY = SALARY*1.20
WHERE DNAME='SCIENCE';
- (C) ALTER TABLE EMPLOYEE
SET SALARY=SALARY*1.20
WHERE DEPTNO. IN (SELECT DNAME FROM DEPARTMENT WHERE DNAME ='SCIENCE')

Choose the correct answer from the options given below:

- (1) (A) and (B) only
- (2) (A) only
- (3) (B) and (C) only
- (4) (C) only

Options

1. 1

2. 2

3. 3

4. 4

Question Type : MCQ

Question ID : **5362284389**
Option 1 ID : **53622817097**
Option 2 ID : 53622817098
Option 3 ID : **53622817099**
Option 4 ID : **53622817100**
Status : **Answered**
Chosen Option : **1**