

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 : 4

Q.4 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**

Comprehension:

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Mining	540	40	60

SubQuestion No : 5

Q.5 What is the respective ratio of the number of females in Mechanical Department to the number of females in Electronics Department?

- (1) 4 : 3 (2) 23 : 22
(3) 24 : 21 (4) 23 : 21

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 : **53622816504**

Status : **Marked For Review**

Chosen Option : **2**

Q.8 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**

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 : **1**

Q.9 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**

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 : **1**

Q.10 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

Option **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 : **4**

Q.11 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) Chhandas | (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**

- 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 : **Marked For Review**

Chosen Option : **3**

Q12

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

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 2 S W L R Q
 2 S W L R Q
 2 S W L R Q
 2 S W L R Q
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 & K R V H Q 2 S W L R Q

N

Q.13 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 : **Marked For Review**

Chosen Option : **4**

Q.14 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 : **3**

Q.15 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.16 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 : **Marked For Review**

Chosen Option : **4**

Q.17 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 : **Marked For Review**

Chosen Option : **3**

Q.18 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.19 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 : **Marked For Review**

Chosen Option : **2**

Q.20 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.21 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.22 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.23

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.24

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 : Marked For Review

Chosen Option : 3

Q.25

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 : 1

Q.26 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 : **2**

Q.27 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 : **1**

Q.28 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 : **1**

Q.29 Match List I with List II :

List I
(Medium)

- (A) Newspaper
- (B) Radio and television
- (C) Social Media
- (D) Multi-media

List II
(Example for description)

- (I) Networking
- (II) Audio, Video and graphics
- (III) Broadsheet
- (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.30 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 : **3**

Q.31 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 : **2**

Q.32 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 : **2**

Q.33 In a 100 meters race, A beat B by 10 meter or 2 second. What is the speed of A?

- (1) 5 Km/h
- (2) 10 Km/h
- (3) 15 Km/h
- (4) 20 Km/h

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **5362284260**

Option 1 ID : **53622816593**

Option 2 ID : **53622816594**

Option 3 ID : **53622816595**

Option 4 ID : **53622816596**

Status : **Marked For Review**

Chosen Option : **2**

Q.34 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 : **Marked For Review**

Chosen Option : **1**

Q.35 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 : **Marked For Review**

Chosen Option : **4**

Q.36 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 : **Marked For Review**

Chosen Option : 1

Q.37 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 : 4

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 : **Marked For Review**

Chosen Option : **2**

Q.39 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 : **2**

Q.40 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.41 Which one of the following pramānas has been accepted in Buddhism?

- | | |
|----------------|-----------------|
| (1) Arthāpatti | (2) Anupalabdhi |
| (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 : **4**

Q.42 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 : **3**

Q.43 Match List I with List II :

List I

(Philosophical doctrines)

- (A) Syādavāda
- (B) Anupalabdhi
- (C) Apoha
- (D) Abhāva

List II

(Philosophical schools)

- (I) Nyāya
- (II) Buddhism
- (III) Vedānta
- (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 : **Marked For Review**

Chosen Option : **2**

Q.44 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 : **2**

Q.45 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 : **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 : 46

- Q.46** 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 : **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 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 : **2**

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 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

Option 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 : 49

Q.49 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 : **3**

& R P S U H K H Q V L R Q

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.

6 X E 4 X H V W L R Q 1 R

- 4 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

2 S W L R Q V

4 X H V W L R Q & 7
 4 X H V W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 6 W D W V Z H U H G
 & K R V H Q 2 S W L R Q

6 H F W \$ R 5 0 7 , , & R P S X W H U 6 F L H Q F H D Q G \$ S S O L F D W L R Q V

4 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)

2 S W L R Q V

4 X H V W L R Q & 7
 4 X H V W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 6 W D W V Z H U H G
 & K R V H Q 2 S W L R Q

Q.2

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 : **1**

Q.3

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 : **1**

Q.4

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 : **1****Q.5**

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 : **1**

4

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?

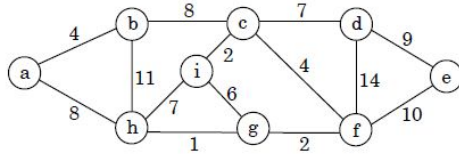
- (1) 240 milliseconds
- (2) 96 milliseconds
- (3) 120 milliseconds
- (4) 112 milliseconds

2 S W L R Q V

4 X H V W I S R H Q & 7
 4 X H V W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 6 W D W V Z H U H G
 & K R V H Q 2 S W L R Q

4

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)



2 S W L R Q V

Crave

4 X H V W I S R H Q & 7
 4 X H V W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 2 S W L R Q , ,
 6 W D W V Z H U H G
 & K R V H Q 2 S W L R Q

Q.8

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.

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 : **1****Q.9**

Consider the following languages:

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

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

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

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 : **4**

Q.10

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) $\lfloor \log_a^b \rfloor$ /* $\lfloor \quad \rfloor$ means floor */
- (4) $\lceil \log_a^b \rceil$ /* $\lceil \quad \rceil$ 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 : 1

Q.11

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 : Marked For Review

Chosen Option : 4

Q.14

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 : MCQQuestion ID : **5362284364**Option 1 ID : **53622817005**Option 2 ID : **53622817006**Option 3 ID : **53622817007**Option 4 ID : **53622817008**Status : **Answered**Chosen Option : **3****Q.15**

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 : MCQQuestion ID : **5362284341**Option 1 ID : **53622816913**Option 2 ID : **53622816914**Option 3 ID : **53622816915**Option 4 ID : **53622816916**Status : **Marked For Review**Chosen Option : **3**

Q.16

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 : **Marked For Review**Chosen Option : **2****Q.17**

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 : **2**

Q.18

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 : **Marked For Review**Chosen Option : **2****Q.19**

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 : **Marked For Review**Chosen Option : **1**

Q.20

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 : MCQQuestion ID : **5362284362**Option 1 ID : **53622816997**Option 2 ID : **53622816998**Option 3 ID : **53622816999**Option 4 ID : **53622817000**Status : **Answered**Chosen Option : **3****Q.21**

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 : MCQQuestion ID : **5362284376**Option 1 ID : **53622817053**Option 2 ID : **53622817054**Option 3 ID : **53622817055**Option 4 ID : **53622817056**Status : **Answered**Chosen Option : **1**

Q.22

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. 

Question Type : MCQ

Question ID : 5362284302

Option 1 ID : 53622816757

Option 2 ID : 53622816758

Option 3 ID : 53622816759

Option 4 ID : 53622816760

Status : Marked For Review

Chosen Option : 2

Q.23

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

List II

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

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. 
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 : 3

Q.24

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 : 2

Q.25

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

- (A) Equivalence Partitioning
(B) Graph-Based Teating Method
(C) Boundery 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 : Marked For Review

Chosen Option : 2

Q.26 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 : **2**

Q.27 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 : **2**

Q.28

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-accent 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 : **1****Q.29**

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 : **1**

Q.30

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

- 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 : **1****Q.31**

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

- 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.32

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.33**

Match List I with List II

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

List I

- (A) INITIAL
- (B) REPEATABLE
- (C) DEFINED
- (D) MANAGED

List II

- (I) Process measurement
- (II) Process definition
- (III) Project management
- (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.34

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 : MCQQuestion ID : **5362284323**Option 1 ID : **53622816841**Option 2 ID : **53622816842**Option 3 ID : **53622816843**Option 4 ID : **53622816844**Status : **Answered**Chosen Option : **2****Q.35**

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 : MCQQuestion ID : **5362284369**Option 1 ID : **53622817025**Option 2 ID : **53622817026**Option 3 ID : **53622817027**Option 4 ID : **53622817028**Status : **Answered**Chosen Option : **1**

Q.36

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:

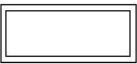


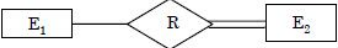
- (1) (C) only
- (2) (A) and (B) only
- (3) (A) only
- (4) (B) only

- 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 : **1**

Q.37

Match List I with List II.

List I (E-R symbols)	List II (Description)
(A) 	(I) Key Attribute Type
(B) 	(II) Weak Entity Type
(C) 	(III) Total Participation of Entity in a relation
(D) 	(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 : **3**

Q.38

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.39**

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 : **2**

Q.40

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 : **Marked For Review**Chosen Option : **1****Q.41**

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 : **1**

Q.42

Match List I with List II

List I

- (A) Greedy Best-First Search
- (B) A*
- (C) Recursive Best-First Search
- (D) SMA*

List II

- (I) Space complexity is $O(d)$ where d =depth of the deepest optimal solution
- (II) Incomplete even if the search space is finite.
- (III) Optimal if optimal solution is reachable; otherwise, returns the best reachable optimal solution.
- (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 : Marked For Review

Chosen Option : 2

Q.43

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:

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

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.44

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 : **Marked For Review**

Chosen Option : **1**

Q.45

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 : **Marked For Review**

Chosen Option : **4**

Q.46

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 : **Marked For Review**Chosen Option : **1****Q.47**

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.48

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)	List II (Transformation Diagram)
(A)	$\begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	(I)
(B)	$\begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 2 \\ 0 & 0 & 1 \end{bmatrix}$	(II)
(C)	$\begin{bmatrix} 0.5 & -0.866 & 0 \\ 0.866 & 0.5 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	(III)
(D)	$\begin{bmatrix} 1 & 2 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	(IV)

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.49

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) $L_1 \cap L_2 = \phi$ |

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 : 2

Q.50

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.51

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 : Not Attempted and
Marked For Review

Chosen Option : --

Q.52

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.53

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

(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) $(\forall xP(x)) \wedge (\forall xQ(x))$	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 : **Marked For Review**
 Chosen Option : **3**

Q.54

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 : **1**

Q.55

Match List I with List II

List I

- (A) Handshaking
- (B) Programmed I/O
- (C) Interrupt-initiated I/O
- (D) I/O processor

List II

- (I) I/O interface informs the CPU that device is ready for transfer
- (II) requires two control signals working in opposite directions
- (III) has local memory & control large set of I/O devices.
- (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 : **1**

Q.56

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 : Marked For Review

Chosen Option : 2

Q.57

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 : 1

Q.58

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 : MCQQuestion ID : **5362284336**Option 1 ID : **53622816893**Option 2 ID : **53622816894**Option 3 ID : **53622816895**Option 4 ID : **53622816896**Status : **Answered**Chosen Option : **4****Q.59**

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 : MCQQuestion ID : **5362284311**Option 1 ID : **53622816793**Option 2 ID : **53622816794**Option 3 ID : **53622816795**Option 4 ID : **53622816796**Status : **Answered**Chosen Option : **3**

Q.60

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

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 : 1

Q.61

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

List II

- | | |
|--------------------|--|
| (A) $R_1 \cup R_2$ | (I) $\{(1,1), (1,2), (1,3), (1,4), (2,2), (3,3)\}$ |
| (B) $R_1 - R_2$ | (II) $\{(1,1)\}$ |
| (C) $R_1 \cap R_2$ | (III) $\{(1,2), (1,3), (1,4)\}$ |
| (D) $R_2 - R_1$ | (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.62

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.63

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 0000001111 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.64

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. 4Question 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.65**

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 : **1**

Q.66

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 : 3

Q.67

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 6.10^6 (4) 2^{10^6} and 6.10^{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 : 1

Q.68

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 : 1

Q.69

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 : **2****Q.70**

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 : **Marked For Review**Chosen Option : **2**

Q.71 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 : **3**

Q.72

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. ($o = \text{small } o$)

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 : **1**

Q.73

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 : **4****Q.74**

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 : **3****Q.75**

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 : **1**

Q.76

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.77

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.78

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 : Marked For Review

Chosen Option : 1

Q.79

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.80

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 : 1

Q.81

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 : 1

Q.82

Match List I with List II

List I

List II

- | | |
|--|-----------------------|
| (A) Serial Line IP (SLIP) | (I) Application layer |
| (B) Border Gateway Protocol (BGP) | (II) Transport layer |
| (C) User Data Protocol (UDP) | (III) Data Link layer |
| (D) Simple Network Management Protocol | (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 : 2

Q.83

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.84

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 : MCQQuestion ID : **5362284328**Option 1 ID : **53622816861**Option 2 ID : **53622816862**Option 3 ID : **53622816863**Option 4 ID : **53622816864**Status : **Answered**Chosen Option : **1****Q.85**

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 : MCQQuestion ID : **5362284346**Option 1 ID : **53622816933**Option 2 ID : **53622816934**Option 3 ID : **53622816935**Option 4 ID : **53622816936**Status : **Answered**Chosen Option : **4**

Q.86

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 : **2****Q.87**

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 : **2**

Q.88 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 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.89

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 : **4**

Q.90

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 : MCQQuestion ID : **5362284377**Option 1 ID : **53622817057**Option 2 ID : **53622817058**Option 3 ID : **53622817059**Option 4 ID : **53622817060**Status : **Answered**Chosen Option : **1****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**

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 : MCQQuestion ID : **5362284380**Option 1 ID : **53622817065**Option 2 ID : **53622817066**Option 3 ID : **53622817067**Option 4 ID : **53622817068**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 : 92**Q.92**

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 : **2****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**

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 : **2**

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 : **2**

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 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. 2
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 : **2**

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 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 : **2**

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 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

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 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) (C) 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 : 1

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**

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 : **1**

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 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 : **1**