GOVT. OF NCT OF DELHI
Delhi Subordinate Services Selection Board
FC-18, Institutional Area, Karkardooma, Delhi – 110092.
www.dsssb.delhigovt.nic.in

Participant ID	PGT CS
Participant Name	PGT CS
Test Center Name	Titiksha public school
Test Date	11/07/2021
Test Time	9:00 AM - 12:00 PM
Subject	PGT-Computer Science (Female)

Section : **Mental Ability**

Q.1 **A + B means A is father of B. A – B means A is son of B. A × B means A is mother of B. A ÷ B means A is sister of B. Which of the following means N is grandson of Q?**

Ans
✗ 1. J ÷ N + M – Q
✓ 2. N – M – Q
✗ 3. P + J ÷ N – M ÷ Q
✗ 4. Q + M + N ÷ J

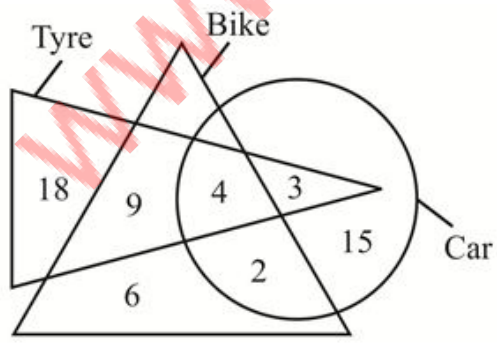
Question ID : **2752289**

Q.2 **In the following question, four number pairs are given. The number on left side of (–) is related to the number of the right side of (–) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.**

Ans
✓ 1. 79 – 172
✗ 2. 83 – 121
✗ 3. 47 – 121
✗ 4. 53 – 88

Question ID : **27522812**

Q.3 **How many tyre are bike and car both?**



Ans
✗ 1. 7
✗ 2. 9
✗ 3. 13
✓ 4. 4

Question ID : **27522814**

Q.4 In the following question, four letter pairs are given. The letters on left side of (–) is related to the letters on the right side of (–) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

Ans
1. RF – TH
2. TL – VN
3. KP – MN
4. AJ – CL

Question ID : **2752283**

Q.5 In a certain code language, 'GRASP' is written as '11826920', 'MONT' is written as '7131214'. What is the code for 'TRIPY' in that code language?

Ans
1. 2118197
2. 2118917
3. 2111897
4. 21111897

Question ID : **2752286**

Q.6 Shweta is facing towards north-east. She rotates by 45 degrees in anticlockwise direction. She again rotates by 135 degrees in clockwise direction. In which direction is she facing now?

Ans
1. West
2. South
3. South-east
4. South-west

Question ID : **27522817**

Q.7 In the following question, select the related letter pair from the given alternatives.

GRDP : YLYM :: ?

Ans
1. STRV : BBZY
2. MONT : CUVS
3. LNJP : YRUR
4. TRAP : WIYZ

Question ID : **2752285**

Q.8 A group of four teachers is to be formed from amongst seven teachers T1, T2, T3, T4, T5, T6 and T7. Either T1 or T2 should be selected with T5. T4 and T7 cannot be selected together. Either T3 or T6 should be selected with T2. Either T7 or T5 should be selected with T6. Who among the following may be selected?

Ans
1. T2, T4, T5 and T6
2. T1, T4, T5 and T7
3. T3, T1, T4 and T6
4. T2, T5, T6 and T7

Question ID : **2752288**

Q.9 Price of five cars A, L, J, M and T are compared. Price of A is the least. No two cars have the same price. Price of J is less than T, L and M. Price of neither T nor L is the highest. Price of T is less than L. Price of how many cars is less than the price of L?

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

Question ID : **2752287**

Q.10 Identify the letter-cluster that does NOT belong to the following series.

BCDE, CEGI, DGIM, EIMQ, FKPU

Ans
1. CEGI
2. DGIM
3. EIMQ
4. FKPU

Question ID : **27522815**

Q.11 A series is given with one term wrong. Select that wrong term from the given alternatives.

MORL, PKNI, SGJF, VCEC, YYBZ

Ans
1. MORL
2. VCEC
3. YYBZ
4. SGJF

Question ID : **2752282**

Q.12 Arrange the given words in the sequence in which they occur in the dictionary.

1. Creedal
2. Cremini
3. Cremate
4. Creator
5. Crested

Ans
1. 41352
2. 43125
3. 43152
4. 41325

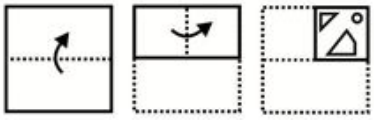
Question ID : **2752281**

Q.13 If 49 @ 13 # 26 = 98 and 57 # 13 @ 247 = 3, then 46 @ 23 # 3 = ?

Ans
1. 12
2. 8
3. 26
4. 6

Question ID : **27522813**

Q.14 A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?



Ans

✗ 1. 

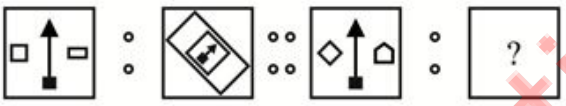
✓ 2. 

✗ 3. 

✗ 4. 

Question ID : **27522819**

Q.15 Two figures given on the left side of (::) are related with some logic/rule/relation. Select the missing figure on the right of (::) from the given alternatives based on the same logic/rule/relation.



Ans

✓ 1. 

✗ 2. 

✗ 3. 

✗ 4. 

Question ID : **27522818**

Q.16 Poonam walks 20 km towards north. She turns right and walks 12 km. She turns left and walks 24 km. She turns right and walks 36 km. She finally rotates by an angle of 90 degrees in clockwise direction and walks 24 km. How far and in which direction is her starting point from the finishing point?

Ans

✗ 1. 52 km, North-east

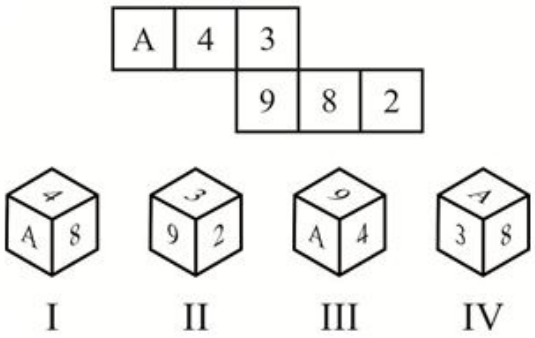
✗ 2. 46 km, North-east

✓ 3. 52 km, South-west

✗ 4. 46 km, South-west

Question ID : **27522816**

Q.17 By folding the given paper, which of the following cube(s) cannot be made?



Ans
1. I, II and IV
2. II and III
3. I, II and III
4. Only III

Question ID : **27522820**

Q.18 In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:
I. All cat are beautiful.
II. No peacock is cat.

Conclusions:
I. All beautiful are cat.
II. All peacock are beautiful.
III. All cat are peacock.

Ans
1. All conclusion follows
2. Both conclusions II and III follows
3. Neither conclusion follows
4. Only conclusion I follows

Question ID : **27522811**

Q.19 In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

Statements:
I. Some W are K.
II. No J are W.

Conclusions:
I. Some J are W.
II. Some K are not J.

Ans
1. Neither conclusion follows
2. Only conclusion II follows
3. Both conclusions I and II follows
4. Only conclusion I follows

Question ID : **27522810**

Q.20 In the following question, select the related words from the given alternatives.

Saw : Carpenter :: Knife : ?

Ans
✗ 1. Plate
✓ 2. Chef
✗ 3. Restaurant
✗ 4. Waiter

Question ID : **2752284**

Section : **General Awareness**

Q.1 Which amendment of Indian constitution abolished the election tribunals?

Ans
✓ 1. 19
✗ 2. 25
✗ 3. 11
✗ 4. 16

Question ID : **27522838**

Q.2 Which of the following pair of sportsperson – sports is correct?

I. Shabbir Ali – Football
II. Mohammad Abbas – Boxing

Ans
✓ 1. Only I
✗ 2. Neither I nor II
✗ 3. Both I and II
✗ 4. Only II

Question ID : **27522840**

Q.3 Which of the following pair is correct?

I. Amoeba – Protozoa
II. Bread Mold – Fungus

Ans
✗ 1. Neither I nor II
✗ 2. Only I
✗ 3. Only II
✓ 4. Both I and II

Question ID : **27522827**

Q.4 No medium is required for transfer of heat by _____.

Ans
✗ 1. conduction
✗ 2. both convection and radiation
✓ 3. radiation
✗ 4. convection

Question ID : **27522825**

Q.5 As the river enters the plain it twists and turns forming large bends known as _____.

Ans
✗ 1. Ox bow
✗ 2. Levees
✗ 3. U
✓ 4. Meander

Question ID : **27522828**

Q.6 Which of the following is NOT a Direct tax?

I. GST
II. Wealth tax
III. Gift tax

Ans
✓ 1. Only I
✗ 2. I and II
✗ 3. II and III
✗ 4. I, II and III

Question ID : **27522823**

Q.7 What type of missile is Phython 5 (developed by DRDO)?

Ans
✗ 1. Land to Air
✗ 2. Land to Land
✗ 3. Air to Land
✓ 4. Air to Air

Question ID : **27522836**

Q.8 Which of the following statement is correct?

I. Exosphere is the upper most layer of atmosphere.
II. Thermosphere extends between 80 – 400 km.

Ans
✗ 1. Neither I nor II
✗ 2. Only I
✗ 3. Only II
✓ 4. Both I and II

Question ID : **27522829**

Q.9 Which of the following is a tributary of Ganga?

I. Chambal
II. Betwa
III. Gandak

Ans
✗ 1. I and II
✗ 2. II and III
✓ 3. I, II and III
✗ 4. I and III

Question ID : **27522830**

Q.10 Which of the following statement(s) is/are NOT true regarding Marginal Standing Facility (MSF)?

I. The MSF rate plays no role in determining the corridor for the daily movement in the weighted average call money rate.
II. MSF rate has no effect on policy repo rate.

Ans
1. Only II
2. Only I
3. Both I and II
4. Neither I nor II

Question ID : **27522824**

Q.11 Which of the following monument(s) is/are located in Gujarat?

I. Dhoraji fort
II. Zinzuwada fort

Ans
1. Only II
2. Both I and II
3. Neither I nor II
4. Only I

Question ID : **27522822**

Q.12 Who was written the book "What Went Wrong and Why"?

Ans
1. MJ Akbar
2. Shashi Tharoor
3. Jaswant Singh
4. Kiran Bedi

Question ID : **27522835**

Q.13 _____ ruled in Delhi during 1206-1210.

Ans
1. Shamsuddin Iltutmish
2. Qutbuddin Aybak
3. Raziyya
4. Anangapal

Question ID : **27522833**

Q.14 Which of the following is an equation of uniform acceleration?

Ans
1. v = u + at
2. va = ut
3. v = ut + a
4. v + u = at

Question ID : **27522826**

Q.15 Which article of Indian constitution is related with bar to interference by courts in electoral matter?

Ans
1. 312
2. 335
3. 341
4. 329

Question ID : **27522837**

Q.16 Which of the following statement(s) is/are correct?

I. The Nawab of Awadh was forced to give over half of his territory to the Company in 1807.
II. Third Anglo-Maratha war was fought during 1817-19.

Ans
1. Both I and II
2. Only I
3. Only II
4. Neither I nor II

Question ID : **27522832**

Q.17 Mohiniattam belongs to which state?

Ans
1. Telangana
2. Goa
3. Odisha
4. Kerala

Question ID : **27522821**

Q.18 Where did the inscriptions were written?

Ans
1. Cloth
2. Stone
3. Paper
4. Palm leaf

Question ID : **27522831**

Q.19 Who has been named ICC Men's player of the month for March 2021?

Ans
1. Rishabh Pant
2. Bhuvaneshwar Kumar
3. Rohit Sharma
4. Virat Kohli

Question ID : **27522834**

Q.20 Who won the ICC Under19 World Cup 2020?

Ans
1. Australia
2. Bangladesh
3. England
4. India

Question ID : **27522839**

Section : **Arithmetic Ability**

Q.1 **If P : Q = 3 : 2, then what is the value of (P + Q) : (P – Q)?**

Ans

✗ 1. 6 : 1

✗ 2. 4 : 1

✓ 3. 5 : 1

✗ 4. 4 : 5

Question ID : **27522850**

Q.2 **A sum becomes Rs. 16000 in 6 years on simple interest at the rate of 25 percent per annum. What is the total interest for the 6 years?**

Ans

✗ 1. Rs. 8400

✗ 2. Rs. 9000

✗ 3. Rs. 6000

✓ 4. Rs. 9600

Question ID : **27522852**

Q.3 **What is the product of Least Common Multiple and Highest Common Factor of 3200 and 1250?**

Ans

✗ 1. $2^5 \times 5^3$

✗ 2. $2^1 \times 5^2$

✗ 3. $2^8 \times 5^4$

✓ 4. $2^8 \times 5^6$

Question ID : **27522843**

Q.4 **If K percent of K percent of 4000 = 90, then what is the value of K?**

Ans

✗ 1. 30

✗ 2. 7.5

✗ 3. 22.5

✓ 4. 15

Question ID : **27522847**

Q.5 **A bag contains 1 rupee, 50 paise and 25 paise coins. The value of 1 rupee, 50 paise and 25 paise coins are in the ratio of 5 : 2 : 3 respectively. If total number of coins is 420, then what will be the total value of all coins?**

Ans

✗ 1. Rs. 160

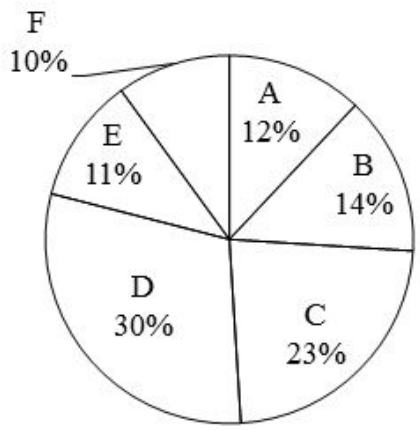
✗ 2. Rs. 180

✗ 3. Rs. 220

✓ 4. Rs. 200

Question ID : **27522851**

Q.6 The pie chart given below shows the amount spent by a family on 6 articles. Amount spent on a particular article is shown as a percentage amount spent on all these 6 articles.



Which of the following statement(s) is/are correct?
I. Total central angle formed by the sectors of A and C is 126 degrees.
II. If the amount spent on E is 13200, then the total amount spent on B and F is 28800.

Ans
✔ 1. Both I and II
✘ 2. Neither I nor II
✘ 3. Only I
✘ 4. Only II

Question ID : **27522858**

Q.7 An article is sold for Rs. 3000 at a loss of 25 percent. What should be the selling price to gain 15 percent?

Ans
✔ 1. 4600
✘ 2. 4400
✘ 3. 5000
✘ 4. 4100

Question ID : **27522849**

Q.8 If 1N3N is a four digit number and it is divisible by 11, then what is the value of N?

Ans
✘ 1. 0
✘ 2. 5
✘ 3. 9
✔ 4. 2

Question ID : **27522842**

Q.9 Surface area of a sphere is 5544 cm^2. What will be the diameter of sphere?

Ans
✘ 1. 21 cm
✔ 2. 42 cm
✘ 3. 28 cm
✘ 4. 35 cm

Question ID : **27522856**

Q.10 What is the value of 0.1 × 0.02 – 0.01 × 0.04?

Ans
✗ 1. 0.002
✗ 2. 0.016
✓ 3. 0.0016
✗ 4. 0.0002

Question ID : **27522841**

Q.11 Which of the following statement is correct?

I. If downstream and upstream of a boat are 12 km/hr and 6 km/hr respectively, then what is the speed of boat in still water is 9 km/hr.
II. Length of train is 1200 meters. If it can cross a stationary pole in 10 seconds, the speed of train of train is 43.2 km/hr.

Ans
✓ 1. Only I
✗ 2. Both I and II
✗ 3. Neither I nor II
✗ 4. Only II

Question ID : **27522854**

Q.12 A and B together can do a work in 10 days. B and C together can do the same work in 12 days. If C alone can do the same work in 60 days, then in how many days can A alone do the same work?

Ans
✗ 1. 60 days
✗ 2. 45 days
✗ 3. 20 days
✓ 4. 30 days

Question ID : **27522855**

Q.13 What is the average of 168, 234, 286, 112 and 280?

Ans
✗ 1. 206
✗ 2. 220
✗ 3. 210
✓ 4. 216

Question ID : **27522846**

Q.14 B walks at a speed of 9 km/hr and 9 hours after his start, C starts on his cycle after him at the speed of 18 km/hr. How far from the starting point will C catch B?

Ans
✗ 1. 144 km
✓ 2. 162 km
✗ 3. 198 km
✗ 4. 236 km

Question ID : **27522853**

Q.15 Among the following which is the smallest fraction?

$\frac{3}{4}, \frac{4}{5}, \frac{5}{12}$ and $\frac{6}{13}$

Ans

✗ 1. $\frac{6}{13}$

✗ 2. $\frac{3}{4}$

✗ 3. $\frac{4}{5}$

✓ 4. $\frac{5}{12}$

Question ID : **27522845**

Q.16 **Length, breadth and height of a cuboid are 30 cm, 30 cm and 15 cm respectively. What is the length of longest rod that can be placed in cuboid?**

Ans

✗ 1. 55 cm

✓ 2. 45 cm

✗ 3. 60 cm

✗ 4. 35 cm

Question ID : **27522857**

Q.17 **If 87.5 percent of A = 714, then what is the value of 37.5 percent of A?**

Ans

✗ 1. 312

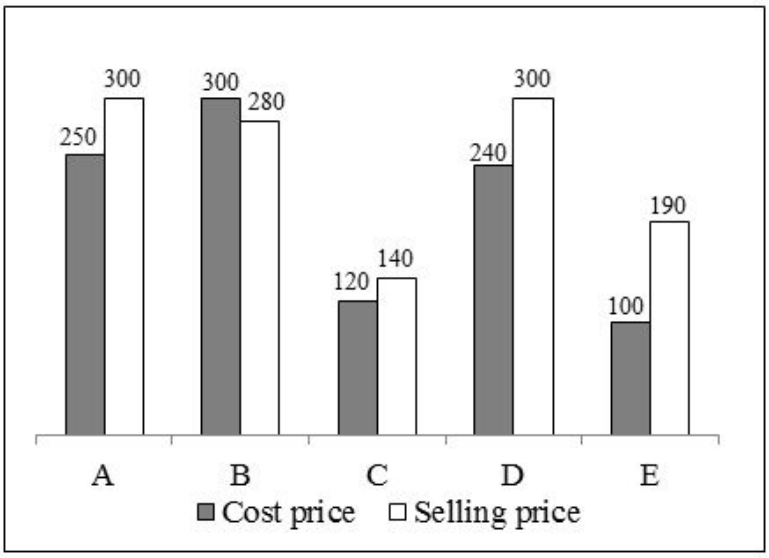
✓ 2. 306

✗ 3. 302

✗ 4. 300

Question ID : **27522848**

Q.18 The bar graph given below shows the cost price and selling price of 5 articles.



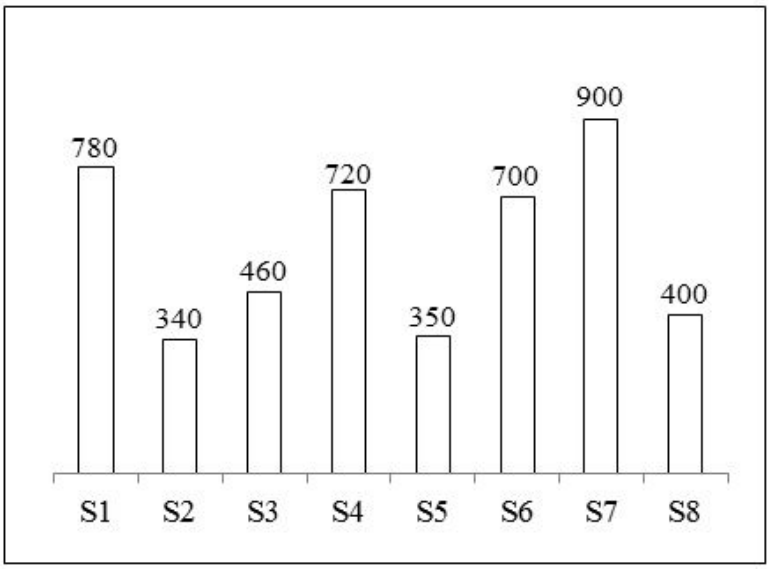
Profit amount = Selling price – Cost price
Loss amount = Cost price – Selling price
Profit percent/Loss percent = [(Profit/Loss)/Cost price] × 100
Which of the following statement(s) is/are not correct?

I. If the cost price of A and E gets interchanged, then there will be a loss of 24 percent on E.
II. Profit earned on D is 25 percent.

Ans
1. Only I
2. Both I and II
3. Neither I nor II
4. Only II

Question ID : **27522860**

Q.19 **The bar graph given below shows the number of shoes in 8 shops.**



R = Difference between the total number of shoes in S5 & S6 and the total number of shoes in S1 & S8.
T = Average number of shoes in S2, S4 and S5.
What is the value of R + T?

Ans

✗ 1. 540

✗ 2. 480

✗ 3. 720

✓ 4. 600

Question ID : **27522859**

Q.20 What is the value of $\frac{3700 \div 24 \times 12 + 17 \times 5 \div 34}{2500 \div 625 + 22 \div 5 \times 40}$?

Ans

✓ 1. $\frac{247}{24}$

✗ 2. $\frac{136}{12}$

✗ 3. $\frac{157}{12}$

✗ 4. $\frac{247}{12}$

Question ID : **27522844**

Section : **General English**

Q.1 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

The Indian team is expected to be selected <u>on</u> the end of this month.

Ans
✔ 1. by
✘ 2. to
✘ 3. in
✘ 4. No Improvement

Question ID : **27522863**

Q.2 A sentence has been given with a blank to be filled with an appropriate word/words. Choose the correct alternative.

_____ people face many issues with the advancement of technology.

Ans
✔ 1. Older
✘ 2. An old
✘ 3. Oldest
✘ 4. Old

Question ID : **27522866**

Q.3 Choose the word that means the same as the given word.

Precious

Ans
✔ 1. Valuable
✘ 2. Waste
✘ 3. Simple
✘ 4. Necessary

Question ID : **27522869**

Q.4 Rearrange the parts of the sentence in the correct order.

P: the Reformation and the ensuing wars of religion through
Q: based on contemporary political events
R: gave rise to many propagandistic and patriotic strips
S: the 17th century, particularly in Protestant Germany and the Netherlands,

Ans
✔ 1. PSRQ
✘ 2. QRSP
✘ 3. PRSQ
✘ 4. QRPS

Question ID : **27522868**

Q.5 Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

In the Mahabharata, even a distinguished (1)/ warrior like Arjuna became depressed (2)/ at the very thought of waging war (3)/. No error (4)

Ans
✘ 1. warrior like Arjuna became depressed
✔ 2. No error
✘ 3. at the very thought of waging war
✘ 4. In the Mahabharata, even a distinguished

Question ID : **27522862**

Q.6 **Rearrange the parts of the sentence in correct order.**

Two species
P: Coffea Arabica and
Q: C. canephora, supply almost
R: of the coffee plant,
S: all of the world's consumption

Ans
✗ 1. RPSQ
✗ 2. QPSR
✗ 3. QPRS
✓ 4. RPQS

Question ID : **27522867**

Q.7 **In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.**

To upset the apple cart

Ans
✗ 1. To be extremely enthusiastic over
✓ 2. To throw all plans in confusion
✗ 3. To harass somebody
✗ 4. A clumsy person

Question ID : **27522874**

Q.8 **In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.**

A bed of thorns

Ans
✗ 1. To rain heavily
✓ 2. A very uncomfortable situation
✗ 3. Unexpected misfortune
✗ 4. To weep heavily, suddenly

Question ID : **27522873**

Q.9 **In the given question, four words are given out of which one word is incorrectly spelt. Choose the incorrectly spelt word.**

Ans
✓ 1. Tampoline
✗ 2. Concussion
✗ 3. Creation
✗ 4. Mistaken

Question ID : **27522872**

Q.10 **A sentence has been given with a blank to be filled with an appropriate word. Choose the correct alternative.**

He was sorry for his _____ with the lady.

Ans
✗ 1. freak
✓ 2. misconduct
✗ 3. fortune
✗ 4. miscreant

Question ID : **27522865**

Q.11 Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

Learning to identify birds (1)/ by their songs is so(2)/ much fun as spotting them by sight (3)/.No error(4)

Ans
1. No error
2. Learning to identify birds
3. much fun as spotting them by sight
4. by their songs is so

Question ID : **27522861**

Q.12 In the given question, four words are given out of which one word is correctly spelt. Choose the correctly spelt word.

Ans
1. Retantion
2. Reteention
3. Reetention
4. Retention

Question ID : **27522871**

Q.13 Choose the word that is opposite in meaning to the given word.

Ascend

Ans
1. Infamy
2. Incline
3. Upthurst
4. Plunge

Question ID : **27522870**

Q.14 Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

The comfort the youngsters share with him will be an addition advantage.

Ans
1. No Improvement
2. additional
3. bonus
4. added

Question ID : **27522864**

Q.15 Choose the word that can substitute the given sentence.

A collection of poems

Ans
1. Entomology
2. Palaeology
3. Ethology
4. Anthology

Question ID : **27522875**

Comprehension:

Read the following information carefully and answer the given questions.

Bioluminescence, emission of light by an organism or by a laboratory biochemical system derived from an organism. It could be the ghostly glow of bacteria on decaying meat or fish, the shimmering radiance of protozoans in tropical seas, or the flickering signals of fireflies. The phenomenon occurs sporadically in a wide range of protists and animals, from bacteria and fungi to insects, marine invertebrates, and fish, but it is not known to exist naturally in true plants or in amphibians, reptiles, birds, or mammals.
Bioluminescence results from a chemical reaction (chemiluminescence) in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient; i.e., very little heat is given off in the process. For that reason, the emission is called cold light or luminescence.
The functional role of bioluminescence in lower organisms such as bacteria, dinoflagellates, and fungi is difficult to discern. Partly because the glow of luminous bacteria is extinguished when oxygen is removed, it has been suggested that the bioluminescent reaction was originally used to remove oxygen toxic to primitive types of bacteria that developed when oxygen was absent or very rare in Earth's atmosphere. The metabolic reaction that combines the oxygen with a reducing substance (luciferin) liberates sufficient energy to excite a molecule in the organism to emit visible radiation. Most of those luminous primitive organisms subsequently developed systems of using oxygen, but they have retained the luminescent capability as parts of related metabolic pathways or for some survival value that luminescence may confer on the organism.

SubQuestion No : 16

Q.16 What can be the suitable title for the passage?

Ans

✗ 1. Why Bioluminescence?

✓ 2. What is Bioluminescence?

✗ 3. Role of bioluminescence

✗ 4. Organisms and their light

Question ID : **27522877**

Comprehension:

Read the following information carefully and answer the given questions.

Bioluminescence, emission of light by an organism or by a laboratory biochemical system derived from an organism. It could be the ghostly glow of bacteria on decaying meat or fish, the shimmering radiance of protozoans in tropical seas, or the flickering signals of fireflies. The phenomenon occurs sporadically in a wide range of protists and animals, from bacteria and fungi to insects, marine invertebrates, and fish, but it is not known to exist naturally in true plants or in amphibians, reptiles, birds, or mammals.
Bioluminescence results from a chemical reaction (chemiluminescence) in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient; i.e., very little heat is given off in the process. For that reason, the emission is called cold light or luminescence.
The functional role of bioluminescence in lower organisms such as bacteria, dinoflagellates, and fungi is difficult to discern. Partly because the glow of luminous bacteria is extinguished when oxygen is removed, it has been suggested that the bioluminescent reaction was originally used to remove oxygen toxic to primitive types of bacteria that developed when oxygen was absent or very rare in Earth's atmosphere. The metabolic reaction that combines the oxygen with a reducing substance (luciferin) liberates sufficient energy to excite a molecule in the organism to emit visible radiation. Most of those luminous primitive organisms subsequently developed systems of using oxygen, but they have retained the luminescent capability as parts of related metabolic pathways or for some survival value that luminescence may confer on the organism.

SubQuestion No : 17

Q.17 Which process is responsible for the emission of bioluminescence?

Ans

✓ 1. Conversion of chemical energy to radiant energy directly with a release of a very little heat.

✗ 2. Conversion of radiant energy to chemical energy directly and virtually.

✗ 3. Conversion of radiant energy to chemical energy indirectly with a little heat release.

✗ 4. Conversion of chemical energy to radiant energy indirectly with a lots of heat release.

Question ID : **27522881**

Comprehension:

Read the following information carefully and answer the given questions.

Bioluminescence, emission of light by an organism or by a laboratory biochemical system derived from an organism. It could be the ghostly glow of bacteria on decaying meat or fish, the shimmering radiance of protozoans in tropical seas, or the flickering signals of fireflies. The phenomenon occurs sporadically in a wide range of protists and animals, from bacteria and fungi to insects, marine invertebrates, and fish, but it is not known to exist naturally in true plants or in amphibians, reptiles, birds, or mammals.
Bioluminescence results from a chemical reaction (chemiluminescence) in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient; i.e., very little heat is given off in the process. For that reason, the emission is called cold light or luminescence.
The functional role of bioluminescence in lower organisms such as bacteria, dinoflagellates, and fungi is difficult to discern. Partly because the glow of luminous bacteria is extinguished when oxygen is removed, it has been suggested that the bioluminescent reaction was originally used to remove oxygen toxic to primitive types of bacteria that developed when oxygen was absent or very rare in Earth's atmosphere. The metabolic reaction that combines the oxygen with a reducing substance (luciferin) liberates sufficient energy to excite a molecule in the organism to emit visible radiation. Most of those luminous primitive organisms subsequently developed systems of using oxygen, but they have retained the luminescent capability as parts of related metabolic pathways or for some survival value that luminescence may confer on the organism.

SubQuestion No : 18

Q.18 Which of the following words best expresses the true meaning of the word 'confer'?

Ans

✗ 1. Hold

✗ 2. Refuse

✓ 3. Consult

✗ 4. Withhold

Question ID : **27522879**

Comprehension:

Read the following information carefully and answer the given questions.

Bioluminescence, emission of light by an organism or by a laboratory biochemical system derived from an organism. It could be the ghostly glow of bacteria on decaying meat or fish, the shimmering radiance of protozoans in tropical seas, or the flickering signals of fireflies. The phenomenon occurs sporadically in a wide range of protists and animals, from bacteria and fungi to insects, marine invertebrates, and fish, but it is not known to exist naturally in true plants or in amphibians, reptiles, birds, or mammals.
Bioluminescence results from a chemical reaction (chemiluminescence) in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient; i.e., very little heat is given off in the process. For that reason, the emission is called cold light or luminescence.
The functional role of bioluminescence in lower organisms such as bacteria, dinoflagellates, and fungi is difficult to discern. Partly because the glow of luminous bacteria is extinguished when oxygen is removed, it has been suggested that the bioluminescent reaction was originally used to remove oxygen toxic to primitive types of bacteria that developed when oxygen was absent or very rare in Earth's atmosphere. The metabolic reaction that combines the oxygen with a reducing substance (luciferin) liberates sufficient energy to excite a molecule in the organism to emit visible radiation. Most of those luminous primitive organisms subsequently developed systems of using oxygen, but they have retained the luminescent capability as parts of related metabolic pathways or for some survival value that luminescence may confer on the organism.

SubQuestion No : 19

Q.19 In which living entity, the bioluminescence is not known to exist?

Ans

✗ 1. Bacteria

✓ 2. Birds

✗ 3. Fungi

✗ 4. Fish

Question ID : **27522880**

Comprehension:

Read the following information carefully and answer the given questions.

Bioluminescence, emission of light by an organism or by a laboratory biochemical system derived from an organism. It could be the ghostly glow of bacteria on decaying meat or fish, the shimmering radiance of protozoans in tropical seas, or the flickering signals of fireflies. The phenomenon occurs sporadically in a wide range of protists and animals, from bacteria and fungi to insects, marine invertebrates, and fish, but it is not known to exist naturally in true plants or in amphibians, reptiles, birds, or mammals.
Bioluminescence results from a chemical reaction (chemiluminescence) in which the conversion of chemical energy to radiant energy is direct and virtually 100 percent efficient; i.e., very little heat is given off in the process. For that reason, the emission is called cold light or luminescence.
The functional role of bioluminescence in lower organisms such as bacteria, dinoflagellates, and fungi is difficult to discern. Partly because the glow of luminous bacteria is extinguished when oxygen is removed, it has been suggested that the bioluminescent reaction was originally used to remove oxygen toxic to primitive types of bacteria that developed when oxygen was absent or very rare in Earth's atmosphere. The metabolic reaction that combines the oxygen with a reducing substance (luciferin) liberates sufficient energy to excite a molecule in the organism to emit visible radiation. Most of those luminous primitive organisms subsequently developed systems of using oxygen, but they have retained the luminescent capability as parts of related metabolic pathways or for some survival value that luminescence may confer on the organism.

SubQuestion No : 20

Q.20 Why the functional role of bioluminescence in lower organisms is difficult to recognize?

Ans

✔ 1. The glow of bacteria blows out as soon as the oxygen is removed.

✘ 2. Their luminescent capability wears off in the presence of oxygen.

✘ 3. When oxygen is removed the bacteria is 17unable to survive.

✘ 4. Bacteria couldn't find the sufficient energy in the absence of oxygen.

Question ID : **27522878**

Section : **General Hindi**

Q.1 'बिलाव' का स्त्रीलिंग होगा?

Ans

✘ 1. बिली

✘ 2. बिलावी

✘ 3. बिल्ला

✔ 4. बिल्ली

Question ID : **27522889**

Q.2 निम्नलिखित प्रश्न में, दिए गए चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे के अर्थ को सर्वश्रेष्ठ रूप से व्यक्त करता है।

अग्नि परीक्षा देना

Ans

✔ 1. कठिन जाँच

✘ 2. क्रोधित होना

✘ 3. परिश्रम करना

✘ 4. शांत करना

Question ID : **27522895**

Q.3 दिए गए शब्दों की संधि विच्छेद ज्ञात कीजिए।

पुनरावलोकन

Ans
✗ 1. पुनः + अवलकन
✗ 2. पुनः + रवलोकन
✓ 3. पुनः + अवलोकन
✗ 4. पुनः + अवलेकन

Question ID : **27522884**

Q.4 दिए गए शब्दों में शुद्ध वर्तनी का चयन कीजिए।

Ans
✗ 1. नोकरि
✗ 2. नोकरी
✓ 3. नौकरी
✗ 4. नौकारी

Question ID : **27522887**

Q.5 'भिखारी को रोटी दो' कौन सा कारक है?

Ans
✗ 1. कर्म
✓ 2. संप्रदान
✗ 3. कर्ता
✗ 4. अपादान

Question ID : **27522890**

Q.6 निम्नलिखित शब्द का पर्यायवाची नहीं हैं, ज्ञात कीजिए।

दीपक

Ans
✗ 1. दीया
✗ 2. दीप
✗ 3. प्रदीप
✓ 4. हर्ष

Question ID : **27522886**

Q.7 निम्नलिखित प्रश्न में, दिए गए चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे के अर्थ को सर्वश्रेष्ठ रूप से व्यक्त करता है।

उड़ती खबर

Ans
✗ 1. दुष्टों का नेता
✗ 2. अपना मत
✗ 3. बढ़-चढ़कर बातें करना
✓ 4. अफवाह

Question ID : **27522896**

Q.8 दिए गए वाक्य में उपयुक्त विराम चिह्न का चयन कीजिए।

मेरी अध्यापिका ने बीएड किया हुआ है।

Ans
✔ 1. लाघव
✘ 2. कोष्ठक
✘ 3. योजक
✘ 4. निर्देशक

Question ID : **27522894**

Q.9 निम्नलिखित वाक्यों में से शुद्ध वाक्य का चयन कीजिए।

Ans
✔ 1. वह भूख से तड़प रहा है।
✘ 2. वह भुक में तड़प रहा है।
✘ 3. वह भूख में तड़प रहा है।
✘ 4. वो भूख में तड़प रहा है।

Question ID : **27522891**

Q.10 दिए गए शब्द का उपसर्ग ज्ञात कीजिए।

दुबला

Ans
✔ 1. दु
✘ 2. दब
✘ 3. ला
✘ 4. दुब

Question ID : **27522882**

Q.11 दिए गए शब्द का प्रत्यय ज्ञात कीजिए।

तैराक

Ans
✘ 1. राक
✔ 2. आक
✘ 3. अक
✘ 4. तै

Question ID : **27522883**

Q.12 निम्नलिखित वाक्यों में से सरल वाक्य ज्ञात कीजिए।

Ans
✘ 1. जैसे ही बच्चे ने पानी बरसता हुआ देखा वैसे ही एक मकान में शरण ली।
✘ 2. बच्चे ने मकान में शरण ली क्योंकि वहाँ पानी बरस रहा था।
✔ 3. पानी बरसता हुआ देखकर बच्चे ने एक मकान में शरण ली।
✘ 4. बच्चे ने पानी बरसता हुआ देखा और एक मकान में शरण ली।

Question ID : **27522892**

Q.13 दिए गए वाक्यांश के लिए उचित शब्द का चयन कीजिए।

जिसके समान कोई दूसरा न हो।

Ans
1. अकल्पनीय
2. अद्वितीय
3. द्वितीय
4. चमत्कारी

Question ID : **27522885**

Q.14 दिए गए वाक्य में उपयुक्त विराम चिह्न का चयन कीजिए।

वह कौन सी पुस्तक है जो आपको बहुत पसंद है

Ans
1. , ।
2. ; ।
3. " " ।
4. :- ?

Question ID : **27522893**

Q.15 दिए गए शब्द युग्म का सही शब्द युग्म ज्ञात कीजिए।

अहम् : अहम

Ans
1. अहंकार : महत्वपूर्ण
2. ढेर : आकर
3. अहंकार : ढेर
4. महत्वपूर्ण : आकर

Question ID : **27522888**

Comprehension:

एक गद्यांश दिया गया है। गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न में चार विकल्पों में से सही विकल्प चुने।

हमारे देश में अनेक जटिल समस्याएँ हैं जो देश के विकास में अवरोध उत्पन्न करती हैं। जनसंख्या वृद्धि भी देश की इन्हीं जटिल समस्याओं में से एक है। संपूर्ण विश्व में चीन के पश्चात् भारत सबसे अधिक जनसंख्या वाला देश है। परंतु जिस गति से हमारे देश की जनसंख्या बढ़ रही है, वो दिन भी दूर नहीं जब हमारे देश की जनसंख्या चीन से भी अधिक हो जाएगी। हमारी जनसंख्या वृद्धि की दर का इसी से अनुमान लगाया जा सकता है कि स्वतंत्रता प्राप्ति के पश्चात् मात्र पाँच दशकों में यह 33 करोड़ से 100 करोड़ के आँकड़े को पार कर गई है। देश में जनसंख्या वृद्धि के अनेकों कारण हैं। इसके अतिरिक्त निर्धनता, अशिक्षा, रूढ़िवादिता तथा संकीर्ण विचार आदि जनसंख्या वृद्धि के प्रमुख कारण हैं। देश मे बाल-विवाह की परंपरा प्राचीन काल से थी, जिसके फलस्वरूप भी जनसंख्या में वृद्धि हुई थी। शिक्षा का अभाव भी जनसंख्या वृद्धि का एक प्रमुख कारण हैं। देश में जनसंख्या वृद्धि की समस्या आज अत्यंत भयावह स्थिति में है जिसके फलस्वरूप देश को अनेक प्रकार की कठिनाईयों का सामना करना पड़ रहा है। देश में उपलब्ध संसाधनों की तुलना में जनसंख्या अधिक होने का दुष्परिणाम यह है कि स्वतंत्रता के पाँच दशकों बाद भी लगभग 40 प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है। इन लोगों को अपनी आम भौतिक आवश्यकताओं की पूर्ति के लिए भी संघर्ष करना पड़ रहा है। देश में बहुत से बच्चे कुपोषण के शिकार हैं जिससे अनुमान लगाया जा सकता है कि एक स्वस्थ भारत की परिकल्पना को साकार रूप देना कितना दुष्कर कार्य है।

SubQuestion No : 16

Q.16 किसका अभाव जनसंख्या वृद्धि का प्रमुख कारण माना गया है?

Ans
1. भूखमरी
2. स्वस्थ
3. कुपोषण
4. अशिक्षा

Question ID : **275228101**

Comprehension:

एक गद्यांश दिया गया है। गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न में चार विकल्पों में से सही विकल्प चुने।

हमारे देश में अनेक जटिल समस्याएँ हैं जो देश के विकास में अवरोध उत्पन्न करती हैं। जनसंख्या वृद्धि भी देश की इन्हीं जटिल समस्याओं में से एक है। संपूर्ण विश्व में चीन के पश्चात् भारत सबसे अधिक जनसंख्या वाला देश है। परंतु जिस गति से हमारे देश की जनसंख्या बढ़ रही है, वो दिन भी दूर नहीं जब हमारे देश की जनसंख्या चीन से भी अधिक हो जाएगी। हमारी जनसंख्या वृद्धि की दर का इसी से अनुमान लगाया जा सकता है कि स्वतंत्रता प्राप्ति के पश्चात् मात्र पाँच दशकों में यह 33 करोड़ से 100 करोड़ के आँकड़े को पार कर गई है। देश में जनसंख्या वृद्धि के अनेकों कारण हैं। इसके अतिरिक्त निर्धनता, अशिक्षा, रूढ़िवादिता तथा संकीर्ण विचार आदि जनसंख्या वृद्धि के प्रमुख कारण हैं। देश मे बाल-विवाह की परंपरा प्राचीन काल से थी, जिसके फलस्वरूप भी जनसंख्या में वृद्धि हुई थी। शिक्षा का अभाव भी जनसंख्या वृद्धि का एक प्रमुख कारण हैं। देश में जनसंख्या वृद्धि की समस्या आज अत्यंत भयावह स्थिति में है जिसके फलस्वरूप देश को अनेक प्रकार की कठिनाईयों का सामना करना पड़ रहा है। देश में उपलब्ध संसाधनों की तुलना में जनसंख्या अधिक होने का दुष्परिणाम यह है कि स्वतंत्रता के पाँच दशकों बाद भी लगभग 40 प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है। इन लोगों को अपनी आम भौतिक आवश्यकताओं की पूर्ति के लिए भी संघर्ष करना पड़ रहा है। देश में बहुत से बच्चे कुपोषण के शिकार हैं जिससे अनुमान लगाया जा सकता है कि एक स्वस्थ भारत की परिकल्पना को साकार रूप देना कितना दुष्कर कार्य है।

SubQuestion No : 17

Q.17 उपर्युक्त गद्यांश का उपयुक्त शीर्षक क्या होगा?

Ans

✗ 1. जनसंख्या वृद्धि : एक लाभ

✓ 2. जनसंख्या वृद्धि : एक जटिल समस्या

✗ 3. जनसंख्या वृद्धि : भौतिक आवश्यकताओं की पूर्ति

✗ 4. जनसंख्या वृद्धि : शिक्षा का आभाव

Question ID : **275228102**

Comprehension:

एक गद्यांश दिया गया है। गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न में चार विकल्पों में से सही विकल्प चुने।

हमारे देश में अनेक जटिल समस्याएँ हैं जो देश के विकास में अवरोध उत्पन्न करती हैं। जनसंख्या वृद्धि भी देश की इन्हीं जटिल समस्याओं में से एक है। संपूर्ण विश्व में चीन के पश्चात् भारत सबसे अधिक जनसंख्या वाला देश है। परंतु जिस गति से हमारे देश की जनसंख्या बढ़ रही है, वो दिन भी दूर नहीं जब हमारे देश की जनसंख्या चीन से भी अधिक हो जाएगी। हमारी जनसंख्या वृद्धि की दर का इसी से अनुमान लगाया जा सकता है कि स्वतंत्रता प्राप्ति के पश्चात् मात्र पाँच दशकों में यह 33 करोड़ से 100 करोड़ के आँकड़े को पार कर गई है। देश में जनसंख्या वृद्धि के अनेकों कारण हैं। इसके अतिरिक्त निर्धनता, अशिक्षा, रूढ़िवादिता तथा संकीर्ण विचार आदि जनसंख्या वृद्धि के प्रमुख कारण हैं। देश मे बाल-विवाह की परंपरा प्राचीन काल से थी, जिसके फलस्वरूप भी जनसंख्या में वृद्धि हुई थी। शिक्षा का अभाव भी जनसंख्या वृद्धि का एक प्रमुख कारण हैं। देश में जनसंख्या वृद्धि की समस्या आज अत्यंत भयावह स्थिति में है जिसके फलस्वरूप देश को अनेक प्रकार की कठिनाईयों का सामना करना पड़ रहा है। देश में उपलब्ध संसाधनों की तुलना में जनसंख्या अधिक होने का दुष्परिणाम यह है कि स्वतंत्रता के पाँच दशकों बाद भी लगभग 40 प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है। इन लोगों को अपनी आम भौतिक आवश्यकताओं की पूर्ति के लिए भी संघर्ष करना पड़ रहा है। देश में बहुत से बच्चे कुपोषण के शिकार हैं जिससे अनुमान लगाया जा सकता है कि एक स्वस्थ भारत की परिकल्पना को साकार रूप देना कितना दुष्कर कार्य है।

SubQuestion No : 18

Q.18 संपूर्ण विश्व में किस देश की सर्वाधिक जनसंख्या है?

Ans

✗ 1. जापान

✗ 2. फ्रांस

✗ 3. भारत

✓ 4. चीन

Question ID : **27522899**

Comprehension:

एक गद्यांश दिया गया है। गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न में चार विकल्पों में से सही विकल्प चुने।

हमारे देश में अनेक जटिल समस्याएँ हैं जो देश के विकास में अवरोध उत्पन्न करती हैं। जनसंख्या वृद्धि भी देश की इन्हीं जटिल समस्याओं में से एक है। संपूर्ण विश्व में चीन के पश्चात् भारत सबसे अधिक जनसंख्या वाला देश है। परंतु जिस गति से हमारे देश की जनसंख्या बढ़ रही है, वो दिन भी दूर नहीं जब हमारे देश की जनसंख्या चीन से भी अधिक हो जाएगी। हमारी जनसंख्या वृद्धि की दर का इसी से अनुमान लगाया जा सकता है कि स्वतंत्रता प्राप्ति के पश्चात् मात्र पाँच दशकों में यह 33 करोड़ से 100 करोड़ के आँकड़े को पार कर गई है। देश में जनसंख्या वृद्धि के अनेकों कारण हैं। इसके अतिरिक्त निर्धनता, अशिक्षा, रूढ़िवादिता तथा संकीर्ण विचार आदि जनसंख्या वृद्धि के प्रमुख कारण हैं। देश मे बाल-विवाह की परंपरा प्राचीन काल से थी, जिसके फलस्वरूप भी जनसंख्या में वृद्धि हुई थी। शिक्षा का अभाव भी जनसंख्या वृद्धि का एक प्रमुख कारण हैं। देश में जनसंख्या वृद्धि की समस्या आज अत्यंत भयावह स्थिति में है जिसके फलस्वरूप देश को अनेक प्रकार की कठिनाईयों का सामना करना पड़ रहा है। देश में उपलब्ध संसाधनों की तुलना में जनसंख्या अधिक होने का दुष्परिणाम यह है कि स्वतंत्रता के पाँच दशकों बाद भी लगभग 40 प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है। इन लोगों को अपनी आम भौतिक आवश्यकताओं की पूर्ति के लिए भी संघर्ष करना पड़ रहा है। देश में बहुत से बच्चे कुपोषण के शिकार हैं जिससे अनुमान लगाया जा सकता है कि एक स्वस्थ भारत की परिकल्पना को साकार रूप देना कितना दुष्कर कार्य है।

SubQuestion No : 19

Q.19 कितनी प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है?

Ans

✗ 1. 30

✗ 2. 60

✗ 3. 50

✓ 4. 40

Question ID : **275228100**

Comprehension:

एक गद्यांश दिया गया है। गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न में चार विकल्पों में से सही विकल्प चुने।

हमारे देश में अनेक जटिल समस्याएँ हैं जो देश के विकास में अवरोध उत्पन्न करती हैं। जनसंख्या वृद्धि भी देश की इन्हीं जटिल समस्याओं में से एक है। संपूर्ण विश्व में चीन के पश्चात् भारत सबसे अधिक जनसंख्या वाला देश है। परंतु जिस गति से हमारे देश की जनसंख्या बढ़ रही है, वो दिन भी दूर नहीं जब हमारे देश की जनसंख्या चीन से भी अधिक हो जाएगी। हमारी जनसंख्या वृद्धि की दर का इसी से अनुमान लगाया जा सकता है कि स्वतंत्रता प्राप्ति के पश्चात् मात्र पाँच दशकों में यह 33 करोड़ से 100 करोड़ के आँकड़े को पार कर गई है। देश में जनसंख्या वृद्धि के अनेकों कारण हैं। इसके अतिरिक्त निर्धनता, अशिक्षा, रूढ़िवादिता तथा संकीर्ण विचार आदि जनसंख्या वृद्धि के प्रमुख कारण हैं। देश मे बाल-विवाह की परंपरा प्राचीन काल से थी, जिसके फलस्वरूप भी जनसंख्या में वृद्धि हुई थी। शिक्षा का अभाव भी जनसंख्या वृद्धि का एक प्रमुख कारण हैं। देश में जनसंख्या वृद्धि की समस्या आज अत्यंत भयावह स्थिति में है जिसके फलस्वरूप देश को अनेक प्रकार की कठिनाईयों का सामना करना पड़ रहा है। देश में उपलब्ध संसाधनों की तुलना में जनसंख्या अधिक होने का दुष्परिणाम यह है कि स्वतंत्रता के पाँच दशकों बाद भी लगभग 40 प्रतिशत जनसंख्या गरीबी रेखा के नीचे जीवन-यापन कर रही है। इन लोगों को अपनी आम भौतिक आवश्यकताओं की पूर्ति के लिए भी संघर्ष करना पड़ रहा है। देश में बहुत से बच्चे कुपोषण के शिकार हैं जिससे अनुमान लगाया जा सकता है कि एक स्वस्थ भारत की परिकल्पना को साकार रूप देना कितना दुष्कर कार्य है।

SubQuestion No : 20

Q.20 हमारे देश की जटिल समस्या क्या है, जो देश के विकास में अवरोध उत्पन्न करती है?

Ans

✗ 1. संघर्ष

✓ 2. जनसंख्या

✗ 3. गरीबी

✗ 4. शिक्षा

Question ID : **27522898**

Section : **Discipline1**

Q.1 What is the 2's complement of $(-28)_{10}$ in 16 bit representation?

Ans
✔ 1. 1111111111100100
✘ 2. 1000000000011100
✘ 3. 1111111111100011
✘ 4. 1111111111100101

Question ID : **275228115**

Q.2 Match the following.

i.	Batch Processing System	A	Meeting time constraint
ii.	Multi programming	B	Good response time
iii.	Time sharing	C	Resource utilization
iv	Real time	D	CPU idle time

Ans
✘ 1. i – B, ii – C, iii, D, iv – A
✔ 2. i – D, ii – C, iii, B, iv – A
✘ 3. i – A, ii – B, iii, C, iv – D
✘ 4. i – D, ii – A, iii, B, iv – C

Question ID : **275228118**

Q.3 Information about each process in operating system is maintained by _____.

Ans
✔ 1. process control block
✘ 2. scheduler
✘ 3. Central Processing Unit
✘ 4. Program Counter

Question ID : **275228117**

Q.4 Which component of the computer is used to resolve the difference between CPU and the peripheral device?

Ans
✘ 1. Arithmetic Logic Unit
✘ 2. Control unit
✔ 3. Interface unit
✘ 4. Memory unit

Question ID : **275228104**

Q.5 Which translator is used to convert assembly language to machine language?

Ans
✘ 1. Compiler
✘ 2. Interpreter
✔ 3. Assembler
✘ 4. Linker

Question ID : **275228111**

Q.6 What is Throughput in process scheduling?

Ans
✗ 1. Time required to complete a process
✗ 2. Time required by a process to respond
✓ 3. Number of processes completed per unit time
✗ 4. Time required to abort a process

Question ID : **275228119**

Q.7 When n bits are used to represent an operation (op) code, then how many different operations a computer can perform?

Ans
✓ 1. 2^n operations
✗ 2. 2 × n operations
✗ 3. n operations
✗ 4. 2/n operations

Question ID : **275228112**

Q.8 Arrange the following memory units in descending order.

Gigabyte, Megabyte, Exabyte, Zettabyte, Petabyte, Yottabyte

Ans
✗ 1. Zettabyte, Petabyte, Yottabyte, Exabyte, Gigabyte, Megabyte
✓ 2. Yottabyte, Zettabyte, Exabyte, Petabyte, Gigabyte, Megabyte
✗ 3. Zettabyte, Yottabyte, Petabyte, Exabyte, Megabyte, Gigabyte
✗ 4. Yottabyte, Exabyte, Petabyte, Zettabyte, Gigabyte, Megabyte

Question ID : **275228107**

Q.9 What is minuend value in the following?

subtract $(011100)_2$ from $(1011100)_2$?

Ans
✗ 1. $(100100)_2$
✗ 2. $(100101)_2$
✓ 3. $(1011100)_2$
✗ 4. $(111000)_2$

Question ID : **275228109**

Q.10 What is the function of the program counter register?

Ans
✗ 1. It holds the address of previous instruction
✗ 2. It holds the address of current instruction.
✗ 3. It holds the operand address
✓ 4. It holds the address of next instruction

Question ID : **275228103**

Q.11 Which component of computer act as nervous system?

Ans
✗ 1. Storage unit
✗ 2. Input unit
✗ 3. Arithmetic Logic Unit
✓ 4. Control unit

Question ID : **275228110**

Q.12 What is the function of data input command in I/O command?

Ans

✗ 1. It cause the interface to respond by transferring data from bus into one of its registers

✗ 2. To check status conditions in the interface and the peripheral

✓ 3. It cause the interface to respond by transferring data from one of its register to bus

✗ 4. Activate the peripheral and to inform it what to do

Question ID : **275228105**

Q.13 Which one of these is not a condition for Resource Deadlock?

Ans

✗ 1. Circular waits

✓ 2. Preemption

✗ 3. Non-sharable resources

✗ 4. Hold-and-wait

Question ID : **275228121**

Q.14 What is the value of $(3564)_8 + (323232)_4$.

Ans

✗ 1. $(1762)_{16}$

✗ 2. $(1562)_{16}$

✗ 3. $(1E62)_{16}$

✓ 4. $(1662)_{16}$

Question ID : **275228114**

Q.15 How many 16 K × 1 bit RAM chips are needed to provide a memory capacity of 128 K × 1 byte?

Ans

✗ 1. 32

✗ 2. 128

✗ 3. 8

✓ 4. 64

Question ID : **275228108**

Q.16 Match the following.

1	Disk scheduling	i	Shortest Job First
2	CPU scheduling	ii	Banker's Algorithm
3	Page replacement	iii	Shortest Seek Time
4	Deadlock	iv	Least Recently Used

Ans

✓ 1. 1 – iii, 2 – i, 3 – iv, 4 – ii

✗ 2. 1 – iv, 2 – i, 3 – ii, 4 – iii

✗ 3. 1 – iii, 2 – iv, 3 – i, 4 – ii

✗ 4. 1 – i, 2 – iv, 3 – ii, 4 – iii

Question ID : **275228122**

Q.17 Which of the following is a function of an operating system?

I. Memory allocation
II. Resource utilization

Ans
1. Neither I nor II
2. Only I
3. Only II
4. Both I and II

Question ID : **275228120**

Q.18 What is the value of product of $(10110)_2$ and $(10011)_2$?

Ans
1. $(110100100)_2$
2. $(110100001)_2$
3. $(110110101)_2$
4. $(110100010)_2$

Question ID : **275228113**

Q.19 When Bus Grant (BG) = 1 in direct memory access (DMA) transfer, then what function read line and write lines perform?

Ans
1. Read line act as input line and write line act as output line from DMA
2. Read line and write line act as output lines from DMA controller
3. Read line and write line act as input line allowing CPU to communicate with internal DMA register
4. Read line act as output line and write line act as input line from DMA controller

Question ID : **275228106**

Q.20 What is 6's complement of $(1543)_7$ of the computer?

Ans
1. $(5132)_7$
2. $(6132)_7$
3. $(5432)_7$
4. $(5123)_7$

Question ID : **275228116**

Section : **Discipline2**

Q.1 Which one of the following is not a condition for process state transition from running state to wait state?

Ans
1. If a process request an Input/Output operation
2. If a process waits for some action performed by another process
3. If a lower priority process arrived
4. If a higher priority process arrived

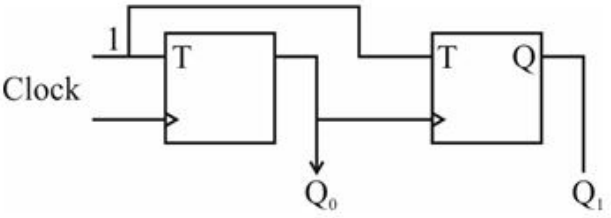
Question ID : **275228126**

Q.2 Consider a main memory with 3 page frames in the following sequence of page reference 3, 4, 2, 3, 9, 1, 6, 3, 4, 9. What is the number of page fault using FIFO page replacement algorithm?

Ans
- ✗ 1. 8
- ✗ 2. 7
- ✗ 3. 10
- ✓ 4. 9

Question ID : **275228125**

Q.3 In the given sequential circuit if the initial value of $Q_1Q_0 = 00$, then what are the next three values of Q_1Q_0?



Ans
- ✓ 1. 11, 10, 01
- ✗ 2. 10, 11, 01
- ✗ 3. 11, 10, 00
- ✗ 4. 10, 00, 01

Question ID : **275228142**

Q.4 A free list contains three memory areas of sizes 6 KB, 15 KB and 12 KB. The next three memory requests are for 10 KB, 2 KB and 14 KB. Which of the memory allocation strategy that would be able to accommodate all the three requests?

Ans
- ✓ 1. Best Fit
- ✗ 2. Worst Fit
- ✗ 3. Next Fit
- ✗ 4. First Fit

Question ID : **275228124**

Q.5 What is the representation of $(4589)_{10}$ in Binary coded Decimal (BCD) form?

Ans
- ✗ 1. 1001011000100100
- ✗ 2. 1011001000100100
- ✓ 3. 0100010110001001
- ✗ 4. 0100011010001001

Question ID : **275228131**

Q.6 Which of the following statement is true about semaphore?

I. It can be Implemented using software
II. It can be Implemented using hardware

Ans
✗ 1. Only II
✗ 2. Neither I nor II
✗ 3. Only I
✓ 4. Both I and II

Question ID : **275228123**

Q.7 What is the correct answer of the given statements in the given order?

I. Gate in which output of logical gate is high when all inputs are high is _____
II. Half of byte is known as _____
III. A flip-flop whose output follows the input when triggered is _____

Ans
✗ 1. NOR gate, byte, S – R flip-flop
✗ 2. NAND gate, bit, T – flip-flop
✗ 3. OR gate, nibble, T – flip-flop
✓ 4. AND gate, nibble, D – flip-flop

Question ID : **275228139**

Q.8 The Boolean expression

$$AB + \overline{A}C + BC = \_\_\_\_\_$$

Ans
✓ 1. $AB + \overline{A}C$
✗ 2. $A\overline{B} + A\overline{C}$
✗ 3. $AC + \overline{A}B$
✗ 4. AB

Question ID : **275228128**

Q.9 What is the full form of DCTL in logic family?

Ans
✗ 1. Direct – circuit transistor logic
✓ 2. Direct – coupled transistor logic
✗ 3. Diode – coupled transistor logic
✗ 4. Direct – circuit threshold logic

Question ID : **275228132**

Q.10 **Which of the logic equation is the represented canonical sum of product form for the given K-Map?**

CD \ AB	00	01	11	10
00	1		1	
01		1		1
11			1	
10				

Ans

✗ 1. $\overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}\,\overline{B}\,\overline{C}D + \overline{A}\,\overline{B}CD + AB\overline{C}\,\overline{D} + A\,\overline{B}\,\overline{C}D$

✗ 2. $\overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + AB\overline{C}\,\overline{D} + A\overline{B}\,\overline{C}\,\overline{D} + \overline{A}\,\overline{B}\,\overline{C}D + A\overline{B}\,\overline{C}D$

✓ 3. $\overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}\,\overline{B}\,\overline{C}D + AB\overline{C}\,\overline{D} + ABCD + A\overline{B}\,\overline{C}D$

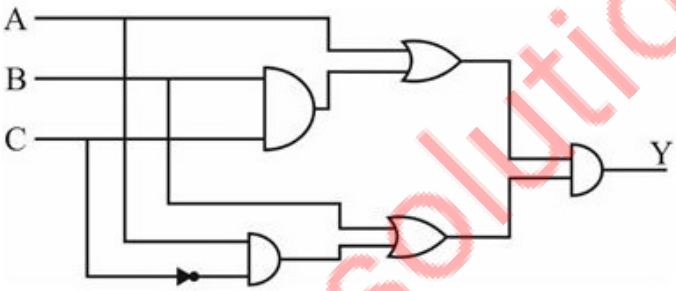
✗ 4. $\overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + A\overline{B}\,\overline{C}\,\overline{D} + A\,\overline{B}CD + ABCD + A\,\overline{B}\,\overline{C}D$

Question ID : **275228136**

Q.11 What is output of Y in the given circuit?

I. $BC + A\overline{C}$

II. $(A + C)(B + \overline{C})$



Ans

✗ 1. Only I

✗ 2. Only II

✗ 3. Neither I nor II

✓ 4. Both I and II

Question ID : **275228141**

Q.12 **A decimal to Binary Coded Encoder have _____ inputs and _____ outputs.**

Ans

✗ 1. 4; 10

✗ 2. 2; 10

✗ 3. 4; 4

✓ 4. 10; 4

Question ID : **275228134**

Q.13 Which logical gate is known as Universal gate?

Ans
1. Ex–OR
2. AND
3. NAND
4. NOT

Question ID : **275228129**

Q.14 A logic circuit that accepts one input and distributes it over several output is known as _____.

Ans
1. multiplexer
2. encoder
3. demultiplexer
4. flip flop

Question ID : **275228135**

Q.15 Gray code representation of $(27)_{10}$ is _____.

Ans
1. 11010
2. 10110
3. 11100
4. 11011

Question ID : **275228140**

Q.16 How many rows are there in a truth table having 'n' variables?

Ans
1. $\log_2 n$
2. n^2
3. 2^n
4. 2n

Question ID : **275228130**

Q.17 What is the relation between N select inputs and M inputs lines in a multiplexer?

Ans
1. $2^M = N$
2. $2N = M$
3. $2M = N$
4. $2^N = M$

Question ID : **275228138**

Q.18 A product of sum (POS) form of logic function consist of only _____ while a sum of product (SOP) form of logic function consist of only _____.

Ans
1. maxterms; miniterms
2. miniterms; maxterms
3. maxterms; maxterms
4. miniterms; minitersm

Question ID : **275228133**

Q.19 The binary equivalent of $(25.625)_{10}$ is _____.

Ans
✗ 1. $(11101.001)_2$
✓ 2. $(11001.101)_2$
✗ 3. $(10001.11)_2$
✗ 4. $(11011.100)_2$

Question ID : **275228137**

Q.20 In a disk system with 100 cylinders, the request to access the cylinder occur in following sequence: 34, 4, 7, 19, 10, 83, 2, 6, 20, 15
Assuming that the head is currently at cylinder 50, then what is the time taken to satisfy all requests if it takes 1 second to move from one cylinder to another?
(Shortest seek time first policy is used)

Ans
✗ 1. 139 seconds
✗ 2. 119 seconds
✗ 3. 109 seconds
✓ 4. 129 seconds

Question ID : **275228127**

Section : **Discipline3**

Q.1 The speed of supercomputer is measured in _____.

Ans
✓ 1. Floating – point operations per second
✗ 2. Floating – point operations per minute
✗ 3. Floating – point operations per hour
✗ 4. Floating – point operations per day

Question ID : **275228147**

Q.2 When the rules of the programing language are not followed it gives _____ errors.

Ans
✗ 1. run time
✗ 2. Printing
✗ 3. Logical
✓ 4. Syntax

Question ID : **275228146**

Q.3 Which of the following is NOT an object oriented feature?

Ans
✗ 1. Inheritance
✓ 2. Abduction
✗ 3. Abstraction
✗ 4. Polymorphism

Question ID : **275228160**

Q.4 **Match the following window of visual basic with their function.**

1	Immediate window	i	It Display the properties for the current object
2	Properties window	ii	It design the form
3	Project explorer windows	iii	It list the forms and modules for the current projects
4	Design window	iv	It give current values of variables

Ans

✗ 1. 1 –i, 2 – iii, 3 – ii, 4 – iv

✗ 2. 1 – ii, 2 – i, 3 – iii, 4 – iv

✓ 3. 1 – iv, 2 – i, 3 – iii, 4 – ii

✗ 4. 1 – iv, 2 – iii, 3 – ii, 4 – i

Question ID : **275228153**

Q.5 **What is the meaning of >>> in Python Language?**

Ans

✓ 1. Interpreter is ready to take instruction

✗ 2. Compiler is ready to take instruction

✗ 3. 3 right shift

✗ 4. 3 left shift

Question ID : **275228162**

Q.6 **Which of the following statement(s) is/are correct about modular programming approach?**

I. Ease of use
II. Reusability

Ans

✗ 1. Neither I nor II

✗ 2. Only II

✗ 3. Only I

✓ 4. Both I and II

Question ID : **275228156**

Q.7 **How the object interact with each other in object oriented programming?**

Ans

✗ 1. By transmitting signal

✗ 2. By ringing

✓ 3. By sending message

✗ 4. By text

Question ID : **275228157**

Q.8 What is the shortcut key of Step Over in Visual Basic?

Ans
1. F9
2. F10
3. F6
4. F11

Question ID : **275228152**

Q.9 What is the relation between object and class in an object oriented programming?

Ans
1. Object is scope of class
2. Object is type of class
3. Object is instance of class
4. Object is keyword of class

Question ID : **275228158**

Q.10 Which of the following is false regarding the machine language?

Ans
1. It is difficult to program
2. It is machine dependent
3. It is made up of 1's and 0's
4. It easier to modify

Question ID : **275228145**

Q.11 Which symbol is used to represent an input/output operation in the flow chart?

Ans
1. Rectangle
2. Oval
3. Circle
4. Parallelogram

Question ID : **275228144**

Q.12 Which of the following statement(s) is/are true about Break All Visual Basic toolbar buttons?

I. Delete the selected item
II. Pauses execution of your program

Ans
1. Neither I nor II
2. Only I
3. Only II
4. Both I and II

Question ID : **275228149**

Q.13 Which is not an acceptable control name in visual basic?

Ans
1. txtFirst + Last Name
2. btnCalc
3. txtAge
4. lblDistance

Question ID : **275228150**

Q.14 What does the Form.StartPosition property represent in Visual Basic?

Ans
- ✗ 1. It determines the next position of the form
- ✗ 2. It determines the current position of the form
- ✓ 3. It determines the initial position of the form
- ✗ 4. It determine the end position of the form

Question ID : **275228148**

Q.15 Which one is NOT a feature of Python language?

Ans
- ✗ 1. Interpreted language
- ✗ 2. Portable
- ✗ 3. High level language
- ✓ 4. Case insensitive

Question ID : **275228161**

Q.16 What is the full form of IDE in visual basic?

Ans
- ✗ 1. Integration development environment
- ✗ 2. Integrated development electronics
- ✓ 3. Integrated development environment
- ✗ 4. Integrated drive electronics

Question ID : **275228151**

Q.17 In a modular programming approach problem is further divided into _____.

Ans
- ✗ 1. object
- ✓ 2. modules
- ✗ 3. question
- ✗ 4. solution

Question ID : **275228155**

Q.18 In Object Oriented Programming, when a new class created from an existing class using principle of inheritance, then the new class is known as _____.

Ans
- ✗ 1. New class
- ✗ 2. Member class
- ✗ 3. Child class
- ✓ 4. Derived class

Question ID : **275228159**

Q.19 Which of the following is NOT an attribute of good programming languages?

Ans
- ✗ 1. Support for abstraction
- ✗ 2. Clarity, simplicity and unity
- ✗ 3. Ease of program verification
- ✓ 4. Non portability

Question ID : **275228143**

Q.20 **Which one of the following is correct regarding Programming Languages?**

Ans

✗ 1. Functional programming – Logical unit

✓ 2. Object-oriented programming – Objects

✗ 3. Logical Programming – Function

✗ 4. Procedural programming – Functions

Question ID : **275228154**

Section : **Discipline4**

Q.1 **Inorder and postorder traversal of a binary tree are given.**

In: E, I, C, F, B, G, D, J, H, K
Post: I, E, F, C, G, J, K, H, D, B

What is the preorder traversal of the binary tree?

Ans

✗ 1. B, F, I, E, C, D, G, H, J, K

✗ 2. B, C, E, F, G, H, K, D, J, I

✓ 3. B, C, E, I, F, D, G, H, J, K

✗ 4. B, C, E, I, F, D, G, H, K, J

Question ID : **275228182**

Q.2 **What is responsibility of event queue in event driven programming?**

Ans

✓ 1. Make a sequence in which event is executed

✗ 2. Delete the event

✗ 3. Change the event

✗ 4. Create new event

Question ID : **275228167**

Q.3 **Arrange the following complexity of the algorithm in ascending order.**

$O(2^n), O(n), O(\log_2 n), O(n\log_2 n), O(n^2)$

Ans

✓ 1. $O(\log_2 n), O(n), O(n\log_2 n), O(n^2), O(2^n)$

✗ 2. $O(\log_2 n), O(n\log_2 n), O(n), O(n^2), O(2^n)$

✗ 3. $O(n), O(n^2), O(\log_2 n), O(n\log_2 n), O(2^n)$

✗ 4. $O(n), O(\log_2 n), O(n\log_2 n), O(n^2), O(2^n)$

Question ID : **275228176**

Q.4 Consider a n × n tri-diagonal sparse matrix A. Suppose we want to store sparse A in a one-dimensional array. What is the index of the $(i.j)^{th}$ element of A in the one-dimensional array.

Ans
- ✗ 1. 2i + 2j
- ✗ 2. i + j – 1
- ✗ 3. i + j
- ✓ 4. 2i + j – 2

Question ID : **275228177**

Q.5 The numbers 70, 50, 10, 80, 30, 60, 100, 90, 40, 20 are inserted in the given order in to a binary search tree. What is the in-order traversal sequence of the resultant binary search tree?

Ans
- ✗ 1. 100, 90, 80, 70, 60, 50, 40, 30, 20, 10
- ✗ 2. 70, 50, 10, 80, 30, 60, 100, 90, 40, 20
- ✓ 3. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
- ✗ 4. 10, 30, 50, 70, 90, 20, 40, 60, 80, 100

Question ID : **275228173**

Q.6 What is the output of this code in Python Language:

```
>>> x = 125
>>> y = 13
>>> x // = y
>>> x
```

Ans
- ✗ 1. 125/13
- ✗ 2. 10
- ✓ 3. 9
- ✗ 4. 9.62

Question ID : **275228165**

Q.7 What is balance factor of an AVL tree?

Ans
- ✗ 1. $|h(T^L) + h(T^R)| \leq 1$
- ✗ 2. $|h(T^R)| \leq 1$
- ✗ 3. $|h(T^L)| \leq 1$
- ✓ 4. $|h(T^L) - h(T^R)| \leq 1$

Question ID : **275228174**

Q.8 Which statement is true about condition of overflow in the circular Queue?

I. Front = 1 and Rear = N
II. Front = Rear + 1

Ans
- ✗ 1. Only II
- ✗ 2. Neither I nor II
- ✓ 3. Both I and II
- ✗ 4. Only I

Question ID : **275228172**

Q.9 What is output of the code in Python Language:

>>> str1 = 'All the Best'
>>> str1[–3]

Ans
✗ 1. 'l'
✓ 2. 'e'
✗ 3. 'B'
✗ 4. 'h'

Question ID : **275228169**

Q.10 Which statement(s) is/are NOT true about the variables in Python Language:

I. Values of every variable can be changed once a variable has been created and assigned value.
II. Assignment statement is used to create a new variable and assign value.

Ans
✓ 1. Only I
✗ 2. Both I and II
✗ 3. Neither I nor II
✗ 4. Only II

Question ID : **275228164**

Q.11 What is the average number of comparisons required in sequential search to find an element?

Ans
✗ 1. $\frac{n(n+1)}{2}$
✗ 2. n^2
✓ 3. $\frac{(n+1)}{2}$
✗ 4. n

Question ID : **275228175**

Q.12 The given declaration statement in Python Language belongs to which data type?

>>>Student ={'SUBJECT' : 'Compiler', 'Marks' : '50', 'Grade' : 'C'}

Ans
✓ 1. Dictionary
✗ 2. Sequence
✗ 3. Sets
✗ 4. Numbers

Question ID : **275228163**

Q.13 A complete binary tree T have n leaf nodes. What is the number of nodes with degree of 2 in tree T?

Ans
✗ 1. n/2
✗ 2. n
✗ 3. 2n
✓ 4. n – 1

Question ID : **275228170**

Q.14 How many different binary search trees can be constructed with 6 different nodes?

Ans
✗ 1. 64
✗ 2. 128
✗ 3. 32
✓ 4. 132

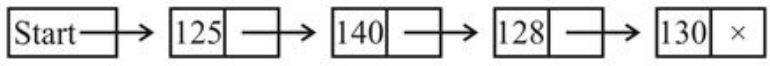
Question ID : **275228178**

Q.15 Consider an array A[2 : 8, –4 : 1, 6 : 10]. Base address of array A is = 400 and size of each element = 2 word per memory cell. What is the address of A[5, –1, 8] in row major form?

Ans
✓ 1. 628
✗ 2. 630
✗ 3. 626
✗ 4. 614

Question ID : **275228181**

Q.16 What is the value of the ((Start → Next) → Next) → Info in the given list?



Ans
✗ 1. 140
✗ 2. 130
✗ 3. 125
✓ 4. 128

Question ID : **275228171**

Q.17 Consider a sorted array of 10,00,000 elements. What is the maximum number of comparison required to find the location an item using binary search?

Ans
✗ 1. 21
✗ 2. 6
✗ 3. 7
✓ 4. 20

Question ID : **275228179**

Q.18 Using division method [n(k) = k mod m)], at which position 177 and 197 key values are stored in hash table when the size of hash table is 57?

Ans
✗ 1. 26, 6
✗ 2. 27, 7
✓ 3. 6, 26
✗ 4. 7, 27

Question ID : **275228180**

Q.19 What is the output of the code in Python Language:

```
for num in range (3):
if num > 0:
print (num*100)
```

Ans
✗ 1. 300, 300, 300
✗ 2. 100, 100, 100
✓ 3. 100, 200, 300
✗ 4. 300, 200, 100

Question ID : **275228168**

Q.20 Match the following with respect to Event Driven Programming.

i	Event	a	Perform said event
ii	Event listener	b	User interaction
iii	Event handler	c	Event monitored by code

Ans
✗ 1. i-a, ii-b, iii-c
✗ 2. i-b, ii-c, iii-a
✗ 3. i-c, ii-a, iii-b
✓ 4. i-b, ii-a, iii-c

Question ID : **275228166**

Section : **Discipline5**

Q.1 What is output of the given code?

```
void main ()
{
int a = 3, b, *p,**q;
p = &a;
q = &p;
b = 2 *(** q + *p);
cout << b;
}
```

Ans
✗ 1. 18
✓ 2. 12
✗ 3. 3
✗ 4. 24

Question ID : **275228198**

Q.2 **Which statement is correct about static member function in C++?**

I. It can access to only other static members declared in the same class.
II. It cannot be called using the class name (instead of its objects)

Ans
1. Both I and II
2. Neither I nor II
3. Only I
4. Only II

Question ID : **275228192**

Q.3 **What is the symbol and associativity of the assignment operator in C++?**

Ans
1. = =, left to right
2. =, left to right
3. ®, right to left
4. =, right to left

Question ID : **275228191**

Q.4 **By default in C++, the member of a class are _____, while, by default the member of structure are _____.**

Ans
1. public; private
2. private; public
3. public; public
4. private; private

Question ID : **275228194**

Q.5 **Match the following.**

(i)	Overriding	1	Allows a function or operator to be given more than one definition
(ii)	Over loading	2	A function that is called to deallocate memory
(iii)	Destructor	3	The ability to change the definition of an inherited method

Ans
1. i – 3, ii – 1, iii – 2
2. i – 3, ii – 2, iii – 1
3. i – 1, ii – 3, iii – 2
4. i – 2, ii – 3, iii – 1

Question ID : **275228195**

Q.6 Which of the following is specified by function prototype in C++?

I. Return Type
II. Function name
III. Number and types of argument

Ans
1. I and III
2. II and III
3. I, II and III
4. I and II

Question ID : **275228190**

Q.7 Which statement is NOT correct regarding ternary operator in C++?

Ans
1. It is also known as conditional operator
2. It is similar to if else
3. Operator overloading is possible in it
4. Its symbol is ?:

Question ID : **275228193**

Q.8 Two way merge sort algorithm is used to sort the following elements in ascending order.
200, 470, 150, 80, 90, 40, 400, 300, 120, 70.
What is the order of these elements after second pass of the merge sort algorithm?

Ans
1. 40, 80, 90, 150, 200, 300, 400, 470, 70, 120
2. 80, 150, 200, 470, 40, 90, 300, 400, 70, 120
3. 40, 70, 80, 90, 120, 150, 200, 300, 400, 470
4. 200, 470, 80, 150, 40, 90, 300, 400, 70, 120

Question ID : **275228183**

Q.9 What is the complexity of selection sort algorithms?

Ans
1. O(n)
2. $O(n^2)$
3. O(2n)
4. $O(n\log_2 n)$

Question ID : **275228184**

Q.10 In C++, namespace defines a _____ for the identifiers that are used in a program.

Ans
1. scope
2. standard
3. syntax
4. size

Question ID : **275228186**

Q.11 Which of the following statement(s) is/are correct regarding void keyword in C++?

I. To specify the return type of a function when it is not returning any value.
II. To indicate an empty argument list to a function.

Ans
✗ 1. Only I
✓ 2. Both I and II
✗ 3. Only II
✗ 4. Neither I nor II

Question ID : **275228188**

Q.12 What is the output of code?

```
void main ()
{
 int x = 33, y, z;
 z = x + + + 17;
 y = + + z - + + x;
 cout << "x" << x << "y" << y << "z" << z;
}
```

Ans
✗ 1. x = 35 y = 17 z = 51
✗ 2. x = 34 y = 16 z = 50
✗ 3. x = 34 y = 17 z = 51
✓ 4. x = 35 y = 16 z = 51

Question ID : **275228199**

Q.13 In C++, operator '>>' is used along with object cin for reading input is known as _____.

Ans
✗ 1. put to
✗ 2. get in
✓ 3. extraction
✗ 4. output

Question ID : **275228187**

Q.14 Which of the following statement is NOT correct regarding Virtual function in C++?

I. It must be a member of some class.
II. It is accessed by using object points.

Ans
✗ 1. Both I and II
✗ 2. Only I
✗ 3. Only II
✓ 4. Neither I nor II

Question ID : **275228200**

Q.15 What is join operation in Structure Query Language (SQL)?

Ans

✔ 1. Join is an operation used to combine rows from two or more tables based on one or more common fields between them.

✘ 2. Join is an operation which work on a single row of a table and return a single value.

✘ 3. Join is an operation which is used to combine two different data keys.

✘ 4. Join is an operation used to select group rows of a table that contains the same values in a specific column.

Question ID : **275228201**

Q.16 Which of the following is NOT a part of Data Definitions Language in Relational Database Management System?

Ans

✔ 1. Insert table

✘ 2. Alter table

✘ 3. Create table

✘ 4. Drop table

Question ID : **275228202**

Q.17 To convert the case of letters, which header file in C++ is to be included in the program?

Ans

✘ 1. <assert.h>

✔ 2. <ctype.h>

✘ 3. <iostream.h>

✘ 4. <string.h>

Question ID : **275228185**

Q.18 In C++, "Out-of-range-index" belong to _____ type exception while keyboard interrupts are called _____ exceptions.

Ans

✘ 1. asynchronous; asynchronous

✘ 2. asynchronous; synchronous

✘ 3. synchronous; synchronous

✔ 4. synchronous; asynchronous

Question ID : **275228197**

Q.19 In C++, bool data type is used to hold how many values?

Ans

✘ 1. 2n

✘ 2. 2^n

✘ 3. n^2

✔ 4. 2

Question ID : **275228189**

Q.20 Match the following file stream classes in C++ with its functions.

1	fstream base	(i)	Provides support for simultaneous input and output operation
2	ifstream	(ii)	Provides output operation
3	ofstream	(iii)	Provides operations common to file streams
4	fstream	(iv)	Provides input operation

Ans
✗ 1. 1 – iv, 2 – iii, 3 – i, 4 – ii
✗ 2. 1 – i, 2 – iii, 3 – iv, 4 – ii
✓ 3. 1 – iii, 2 – iv, 3 – ii, 4 – i
✗ 4. 1 – i, 2 – ii, 3 – iv, 4 – iii

Question ID : **275228196**

Section : **Discipline6**

Q.1 Which of the following statement is a part of Data Manipulative Language in Structured Query Language?

Ans
✓ 1. Delete
✗ 2. Alter table
✗ 3. Paste
✗ 4. Copy

Question ID : **275228208**

Q.2 Which of the following statement(s) is/are correct regarding COUNT functions in Structured Query Language of Relational Database Management System?

I. COUNT(*) is used to count the number of values in a column.
II. COUNT() is used to count the number of rows of the query result.

Ans
✓ 1. Neither I nor II
✗ 2. Only II
✗ 3. Only I
✗ 4. Both I and II

Question ID : **275228210**

Q.3 What is the cardinality and degree of relation having 50 Tuples and 20 Attributes?

Ans
✓ 1. Cardinality – 50 Degree – 20
✗ 2. Cardinality – 20 Degree – 50
✗ 3. Cardinality – 70 Degree – 30
✗ 4. Cardinality – 50 Degree – 50

Question ID : **275228209**

Q.4 **Which of the following is incorrect regarding user-friendly website?**

Ans

✗ 1. It should have faster loading time

✗ 2. It should have browser consistency

✗ 3. It should be easily accessible

✓ 4. It should be Cluttered

Question ID : **275228219**

Q.5 **What is Denormalization in Relational Database Management System?**

Ans

✗ 1. Denormalization is used to develop a new schema in database.

✓ 2. Denormalization is the process of increasing redundancy to improve performance.

✗ 3. Denormalization is used to decrease the dependence on normal forms.

✗ 4. Denormalization is used to decrease rredundancy in database.

Question ID : **275228206**

Q.6 **Write the name of the relational algebra operation as per the given order of their notation.**

Π, X , s

Ans

✗ 1. Projection, outer join, select

✗ 2. projection, Cartesian product, division

✗ 3. Intersection join, outer join, select

✓ 4. Projection, Cartesian product, select

Question ID : **275228204**

Q.7 **Consider the following relation schema of students.**

STUDENT (Rollno, Name, DOB, Marks, Gender)
Which of the given query is equivalent to this query in English? "Find the tuples of student having marks above 80".

Ans

✓ 1. $s_{Marks>80}$ (STUDENT)

✗ 2. $\Pi_{Marks<80}$ (STUDENT)

✗ 3. $s_{Marks<80}$ (STUDENT)

✗ 4. $\Pi_{Marks>80}$ (STUDENT)

Question ID : **275228205**

Q.8 **A collection of web pages is known as _____.**

Ans

✗ 1. web server

✗ 2. Web world

✓ 3. website

✗ 4. Web tool

Question ID : **275228218**

Q.9 Each Microsoft Excel file is also known as _____.

Ans
✔ 1. Workbook
✘ 2. Document
✘ 3. Sheet
✘ 4. Slide

Question ID : **275228212**

Q.10 Microsoft PowerPoint helps to enhance our presentation with _____.

I. Pictures and charts
II. Sound effect
III. Tables

Ans
✘ 1. II and III
✔ 2. I, II and III
✘ 3. I and III
✘ 4. I and II

Question ID : **275228214**

Q.11 What is the shortcut key for right alignment of the paragraph in a Microsoft Word document?

Ans
✘ 1. Ctrl + L
✘ 2. Ctrl + J
✔ 3. Ctrl + R
✘ 4. Ctrl + E

Question ID : **275228211**

Q.12 Which key open a Goto window in Microsoft Excel?

Ans
✔ 1. Ctrl + G
✘ 2. Tab + G
✘ 3. Shift + G
✘ 4. Alt + G

Question ID : **275228216**

Q.13 The selected text's font in Microsoft Word document will _____ on pressing "Ctrl +]" keys.

Ans
✔ 1. Increase by 1 points
✘ 2. Decrease by 1 points
✘ 3. Decrease by 2 points
✘ 4. Increase by 2 points

Question ID : **275228215**

Q.14 **Which of the following is the way to break a page in Microsoft Word?**

Ans

✗ 1. Double Clicking at the beginning of the page

✗ 2. Double Clicking at the end of the page

✗ 3. Pressing "Ctrl + Page Down"

✓ 4. Pressing "Ctrl + Enter"

Question ID : **275228213**

Q.15 **What is tag in HTML?**

Ans

✓ 1. It contains information about the webpage.

✗ 2. It contains the address of the webpage.

✗ 3. It contains the number of nested tags in the page.

✗ 4. It contains the number of tags in the web page.

Question ID : **275228222**

Q.16 **Which of the following statement(s) is/are correct regarding Structured Query Language(SQL)?**

I. The datatype FLOAT can hold numbers with decimal points.
II. The datatype BIGINT occupies I6 bytes.

Ans

✓ 1. Only I

✗ 2. Only II

✗ 3. Both I and II

✗ 4. Neither I nor II

Question ID : **275228207**

Q.17 **Match the following formal relational term with informal equivalents.**

i	Relation	1	Row
ii	Tuple	2	Value
iii	Attribute	3	Table
iv	Domain	4	Column

Ans

✓ 1. i-3, ii-1, iii-4, iv-2

✗ 2. i-4, ii-3, iii-2, iv-1

✗ 3. i-1, ii-3, iii-2, iv-4

✗ 4. i-3, ii-4, iii-1, iv-2

Question ID : **275228203**

Q.18 Which of the following statement(s) is/are correct regarding <title> tag in HTML?

I. This tag always goes outside to the <head> tag.
II. This tag is used to indicate the title of the webpage.
III. It is also used by search engines.

Ans

✓ 1. II and III

✗ 2. Only II

✗ 3. I, II and III

✗ 4. I and II

Question ID : **275228221**

Q.19 In Microsoft PowerPoint, background image can be added for all the slides by editing which slide?

Ans
✗ 1. Last Slide
✗ 2. Any slide
✗ 3. First Slide
✓ 4. Slide Master

Question ID : **275228217**

Q.20 Which of the following is false with reference to static website?

Ans
✓ 1. Content change at runtime
✗ 2. No interaction
✗ 3. Same content is loaded everytime the page is loaded
✗ 4. It is loaded at a faster speed

Question ID : **275228220**

Section : **Discipline7**

Q.1 If the system have resolution of 640 × 480, then what is the size of the refresh buffer (in Kilo bytes) if the system store 14 bits per pixel?

Ans
✗ 1. 5400 Kilo bytes (approximately)
✗ 2. 6400 Kilo bytes (approximately)
✗ 3. 7400 Kilo bytes (approximately)
✓ 4. 4400 Kilo bytes (approximately)

Question ID : **275228231**

Q.2 Which of the following is Not a NP Complete problem?

Ans
✗ 1. The Clique problem
✓ 2. Shortest Path Problem
✗ 3. The Travelling Salesman Problem
✗ 4. Hamiltonian-Cycle problem

Question ID : **275228240**

Q.3 Which of the following statement(s) is/are correct about red-black binary tree?

I. Every node is either red or black.
II. Every leaf node is red.
III. When a node is red and both its children are black.

Ans
✗ 1. I and II
✗ 2. I, II and III
✗ 3. III and II
✓ 4. I and III

Question ID : **275228241**

Q.4 If an image has a height of 4 inches and an aspect ratio of 3 : 2, then what will be the width of the image?

Ans
✗ 1. 4 inches
✗ 2. 5.5 inches
✓ 3. 6 inches
✗ 4. 3 inches

Question ID : **275228227**

Q.5 Which of the following statement is false about a B-tree of order M?

Ans
✗ 1. A node is full if it has (M – 1) keys.
✗ 2. The internal nodes except the root have atleast $\left\lceil \frac{M}{2} \right\rceil$ child nodes.
✗ 3. The root has at least two child nodes and at most M child nodes.
✓ 4. Leaf nodes are not at the same level.

Question ID : **275228238**

Q.6 Which of the following is not a type of Network topology?

Ans
✗ 1. Star Network
✗ 2. Ring Network
✓ 3. Singleton Network
✗ 4. Hybrid Network

Question ID : **275228232**

Q.7 The number of vertices in undirected graph with odd degree is always _____.

Ans
✗ 1. prime number
✗ 2. odd number
✗ 3. zero
✓ 4. even number

Question ID : **275228239**

Q.8 Memory buffer which stores the image definition is known as _____.

Ans
✗ 1. Picture Buffer
✓ 2. Frame Buffer
✗ 3. Pixel Buffer
✗ 4. Graphic Buffer

Question ID : **275228229**

Q.9 Which of the following is not the file formats of graphics?

Ans
✗ 1. JPG
✗ 2. PNG
✓ 3. WAV
✗ 4. GIF

Question ID : **275228225**

Q.10 Which of the following statement(s) is/are true regarding Data Communication?

I. Half duplex communication is multidirectional communication.
II. Full duplex communication is bidirectional communication.

Ans
1. Neither I nor II
2. Both I and II
3. Only I
4. Only II

Question ID : **275228234**

Q.11 What is the resolution of 2 inch × 2 inch image which has 512 × 512 pixels?

Ans
1. 2048 pixels per inch
2. 128 pixels per inch
3. 512 pixels per inch
4. 256 pixels per inch

Question ID : **275228228**

Q.12 Aspect ratio is the ratio of _____ to _____.

Ans
1. height; width
2. diagonal; height
3. height; diagonal
4. width; height

Question ID : **275228230**

Q.13 How many forms can we have on a webpage at the maximum?

Ans
1. 1
2. 5
3. 10
4. No limit

Question ID : **275228223**

Q.14 Which of the following statement(s) is/are true regarding OSI layers in computer networks?

I. The session layer provides means of establishing, maintaining and terminating a session between two end users.
II. Data Link layer sets up a logical path between the source and destination computer of the network.

Ans
1. Neither I nor II
2. Only II
3. Only I
4. Both I and II

Question ID : **275228233**

Q.15 Consider a max heap, represented by the array:

23, 17, 14, 6, 13, 10, 1, 5

If a value 20 is inserted into this heap, then what will be the new max heap

Ans
1. 23, 20, 17, 14, 13, 10, 6, 5, 1
2. 23, 17, 4, 6, 13, 10, 1, 5, 20
3. 23, 20, 14, 17, 13, 10, 1, 5, 6
4. 23, 17, 20, 14, 13, 10, 6, 51

Question ID : **275228242**

Q.16 Which of the following statement(s) is/are true regarding switching techniques in Data communication?

I. In circuit switching a dedicated path is identified between the sender and the receiver.
II. In packet switching each information to be transmitted between sender and receiver is broken down into smaller packets.

Ans
1. Neither I nor II
2. Both I and II
3. Only I
4. Only II

Question ID : **275228235**

Q.17 If Multiple bits per pixel are used to store an image, then the frame buffer is known as _____.

Ans
1. binary map
2. bit map
3. pix map
4. Image map

Question ID : **275228226**

Q.18 If complete graph have 'n' nodes, then it will have how many edges?

Ans
1. $\frac{n(n-1)}{2}$
2. $\frac{(n-1)}{2}$
3. $\frac{n(n-1)}{4}$
4. $\frac{n}{2}$

Question ID : **275228236**

Q.19 Quicksort algorithm is based on which algorithm design technique?

Ans
✗ 1. Greedy Algorithm
✗ 2. Dynamic programing
✓ 3. Divide and Conquer
✗ 4. Brute – Force

Question ID : **275228237**

Q.20 What is image map in HTML?

Ans
✓ 1. It is a special image in which different area point to different locators on the web.
✗ 2. It contains the properties of the image.
✗ 3. It contains the number of pixels in the image.
✗ 4. It is the backup copy of the image.

Question ID : **275228224**

Section : **Discipline8**

Q.1 What is the other name of software updates?

Ans
✓ 1. Patching
✗ 2. Sandboxing
✗ 3. Dropping
✗ 4. Gaining

Question ID : **275228251**

Q.2 What are Honeypot systems?

Ans
✗ 1. It is the other name of distributed systems
✗ 2. They are antivirus programs and act as a firewall
✗ 3. They are computer hardware having pre installed antivirus programs
✓ 4. They are decoy system to attract attackers in order to learn their tactics

Question ID : **275228252**

Q.3 Which of the following statement(s) is/are correct regarding Data Dictionary in Database Management System?

I. Data Dictionary is a collection of definitions, rules and advisories of data designed to be used as a reference with the data warehouse.
II. Data Dictionary is the area of memory allocated for data storage.

Ans
✗ 1. Only II
✗ 2. Both I and II
✓ 3. Only I
✗ 4. Neither I nor II

Question ID : **275228260**

Q.4 Which one of the following is NOT a part of the ACID properties of database transaction?

Ans
✗ 1. Atomicity
✗ 2. Consistency
✓ 3. Instance
✗ 4. Durability

Question ID : **275228257**

Q.5 _____ is a way of providing control execution environment for extracted programs.

Ans
✗ 1. Paycods
✗ 2. Honeypot
✓ 3. Sandboxing
✗ 4. Spoofing

Question ID : **275228250**

Q.6 Which of the following statement(s) is/are correct regarding single row functions in structured query language?

I. INSERT() is a numeric function.
II. ROUND() is a numeric function.
III. LENGTH() is a character function.

Ans
✗ 1. Only III
✗ 2. Both I and III
✗ 3. Both I and II
✓ 4. Both II and III

Question ID : **275228254**

Q.7 In Structured Query Language, what is the GROUP BY clause?

Ans
✗ 1. It groups the table with same name in the database.
✓ 2. It groups the rows together that contain the same values in a specific column.
✗ 3. It groups the columns together that contains the same values in a specific rows.
✗ 4. It combines data from two tables on specific conditions.

Question ID : **275228258**

Q.8 What is the full form of FOPL in aritficial intelligence?

Ans
✗ 1. File open predicate logic
✗ 2. File operator perforate logic
✗ 3. First operator performance logic
✓ 4. First order predicate logic

Question ID : **275228245**

Q.9 **Which of the following is NOT an element of Database?**

Ans
- ✗ 1. Relationships
- ✗ 2. Constraints
- ✓ 3. FRONTEND
- ✗ 4. Schema

Question ID : **275228253**

Q.10 **How many entities are associated in the quaternary relationship in E – R modelling?**

Ans
- ✓ 1. 4
- ✗ 2. 2
- ✗ 3. 3
- ✗ 4. 5

Question ID : **275228256**

Q.11 **What is Customer Relationship Management?**

Ans
- ✓ 1. Customer relationship management includes the methodologies, technology and capabilities that help an enterprise to manage customer relationships.
- ✗ 2. Customer relationship management is a corporate level strategy which focuses on creating new customers.
- ✗ 3. Customer relationship management is the process of planning, implementation and controlling the operations of the supply chain.
- ✗ 4. Customer relationship management is the process of daily production and distribution.

Question ID : **275228262**

Q.12 **_____ is an act of disguising a communication from an unknown source as being a trusted source.**

Ans
- ✗ 1. Bullying
- ✗ 2. Sandboxing
- ✓ 3. Spoofing
- ✗ 4. Stealing

Question ID : **275228249**

Q.13 **_____ act as a interface between a domain expert and an expert system.**

Ans
- ✗ 1. K editor
- ✗ 2. Knowledge Editor
- ✗ 3. Language Editor
- ✓ 4. Intelligent editor

Question ID : **275228246**

Q.14 **What is self join in Database Management System?**

Ans
- ✓ 1. In a self-join, a table is joined to itself
- ✗ 2. In a self join, a table is joined to a number
- ✗ 3. In a self join, a table is joined with a query
- ✗ 4. In a self-join, two databases are joined

Question ID : **275228255**

Q.15 Which of the following is Not a database model?

Ans

✔ 1. Inheritence model

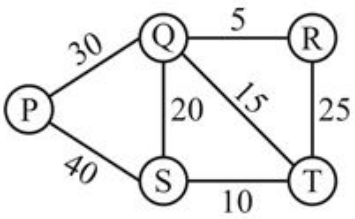
✘ 2. Object-oriented

✘ 3. Network

✘ 4. Relational

Question ID : **275228259**

Q.16 Consider the following graph.



What is the weight of minimum spanning tree?

Ans

✘ 1. 50

✘ 2. 70

✘ 3. 80

✔ 4. 60

Question ID : **275228243**

Q.17 What is the full form of SSL in web development?

Ans

✔ 1. Secure Sockets Layer

✘ 2. Security Socket Layout

✘ 3. Secure Server Layout

✘ 4. Secure Server Layer

Question ID : **275228261**

Q.18 Express the given statement in FOPL?

Statement: Any two numbers can be added together.

Ans

✘ 1. $(\forall x)(\exists y)(\forall z)(x + y = z)$

✔ 2. $(\forall x)(\forall y)(\exists z)(x + y = z)$

✘ 3. $(\exists x)(\forall y)(\exists z)(x + y = z)$

✘ 4. $(\exists x)(\exists y)(\forall z)(x + y = z)$

Question ID : **275228247**

Q.19 What is the full form of LISP Programming Language?

Ans

✘ 1. Language Processing

✘ 2. Limited Processing

✔ 3. List Processing

✘ 4. Least Processing

Question ID : **275228244**

Q.20 Which of the following is the correct sequence in Pattern Recognition process?

Ans
✗ 1. Matching, Data Acquisition, Feature Extraction, Classification
✗ 2. Data Acquisition, Feature Extraction, Classification, Matching
✗ 3. Feature Extraction, Data Acquisition, Matching, Classification
✓ 4. Data Acquisition, Feature Extraction, Matching, Classification

Question ID : **275228248**

Section : **Discipline9**

Q.1 The frequency which is used for transmission of signal from the satellite to earth station receive is known as _____.

Ans
✗ 1. forward link frequency
✓ 2. downlink frequency
✗ 3. uplink frequency
✗ 4. backlink frequency

Question ID : **275228276**

Q.2 Newton – Raphson method is used to compute a root of the equation $x^2 + 4x - 9 = 0$ with 1 as the initial value. The approximate value after one iteration is _____.

Ans
✗ 1. 1.528
✗ 2. 0.429
✓ 3. 1.571
✗ 4. 1.429

Question ID : **275228279**

Q.3 An image may be defined as a 2-dimmensional function f(x, y) where x and y are _____ and the amplitude of the function is called _____ of the image at the point (x, y)

Ans
✗ 1. intensity; brightness
✗ 2. intensity; coordinates
✓ 3. coordinates; intensity
✗ 4. brightness; coordinates

Question ID : **275228281**

Q.4 _____ computing is a model in which components of a software system are shared among multiple computers.

Ans
✓ 1. Distributed
✗ 2. Simulation
✗ 3. Abstraction
✗ 4. Private

Question ID : **275228265**

Q.5 What is the full form of MISD?

Ans

✗ 1. Multiple Interrupt stream and Single Data stream

✗ 2. Many Interrupt stream and single digital stream

✗ 3. Many Instruction stream and Single Digital stream

✓ 4. Multiple Instruction stream and single Data stream

Question ID : **275228272**

Q.6 _____ is loosely coupled system and _____ is tightly coupled system.

Ans

✓ 1. Distributed processing; Parallel processing

✗ 2. Uniprocessing; Real Processing

✗ 3. Distributed processing; Uniprocessing

✗ 4. Batch processing; Parallel processing

Question ID : **275228271**

Q.7 Runge – Kutta method is used for _____.

Ans

✓ 1. ordinary differential equation

✗ 2. integration

✗ 3. solution of system of linear equation

✗ 4. root finding

Question ID : **275228278**

Q.8 Which of the following is not a example of Distributive computing?

Ans

✓ 1. Parallel computing

✗ 2. Internet

✗ 3. Mobile network

✗ 4. LAN network

Question ID : **275228266**

Q.9 What is axon in Neural Networks?

Ans

✗ 1. It is a collection of neurons.

✗ 2. It is a small cell which contain electric signal.

✗ 3. It is a small cell used to perform basic logical operations.

✓ 4. It is a long cylindrical connection that carries impulses from the neurons.

Question ID : **275228270**

Q.10 _____ is an imitation of the dynamics of a real world process or system over time.

Ans

✗ 1. Copying

✓ 2. Simulation

✗ 3. Cryptography

✗ 4. Designing

Question ID : **275228268**

Q.11 Which of the following is not a Cipher mode in Cryptography?

Ans

✔ 1. Stem Cipher Mode

✘ 2. Cipher Feedback Mode

✘ 3. Cipher Block Chaining Mode

✘ 4. Electronic Code Book Mode

Question ID : **275228264**

Q.12 What is a neuron in Neural Networks?

Ans

✘ 1. A neuron is a small cell that sends electric impulses to ions.

✘ 2. A neuron is a cell that send electromagnetic signals to axons.

✘ 3. A neuron is a cell which has the capability to predict the situation from past trends.

✔ 4. A neuron is a small cell that receives electrochemical signals from various sources and transmit electrical impulses to other neurons.

Question ID : **275228269**

Q.13 Routing algorithm which do not base their routing decisions on measurements or estimates of the current traffic and topology belongs to which category?

Ans

✘ 1. Adaptive algorithm

✘ 2. Back propagation algorithm

✔ 3. Non-adaptive algorithm

✘ 4. Greedy algorithm

Question ID : **275228277**

Q.14 Which of the following is not an example of Simulation and Modeling?

Ans

✔ 1. Computer table

✘ 2. Video game

✘ 3. Flight simulator

✘ 4. Logical gates

Question ID : **275228267**

Q.15 Sending incoming packet to every outgoing line except the one it arrived is known as _____.

Ans

✘ 1. message calling

✔ 2. flooding

✘ 3. scratching

✘ 4. congestion

Question ID : **275228275**

Q.16 The process which digitized amplitude value of the image during digital conversion of an image is known as _____.

Ans

✘ 1. extraction

✔ 2. Quantization

✘ 3. filtering

✘ 4. sampling

Question ID : **275228282**

Q.17 Which of the following is NOT a Data MINING Language?

Ans
1. R. Language
2. Python
3. Weka
4. BASIC

Question ID : **275228274**

Q.18 _____ is the science of computers dealing with languages?

Ans
1. Distributed computing
2. Computational linguistics
3. Assembly Language
4. Machine language

Question ID : **275228280**

Q.19 Which of the following statement(s) is/are true regarding cryptography?

I. Cipher text is encrypted text transformed from plain text using an encryption algorithm.
II. According to Kerchoff's principle, all algorithms must be private and only the keys are secret.

Ans
1. Only II
2. Both I and II
3. Only I
4. Neither I nor II

Question ID : **275228263**

Q.20 Which of the following is NOT a Data MINING technique?

Ans
1. Evaluation
2. Predictive Modeling
3. Database Segmentation
4. Link Analysis

Question ID : **275228273**

Section : **Teaching Methodology**

Q.1 If a teacher is teaching topic 'Forts' to the students, then a teacher can perform introductory activities by making documentation cards indicating which of the following?

I. Name of Historical buildings.
II. Drawing of unique architectural features of the building such as pillars/domes etc.

Ans
1. Only I
2. Only II
3. Neither I nor II
4. Both I and II

Question ID : **275228289**

Q.2 Which of the following can help a teacher to make teaching – learning process participatory in social science?

I. By arranging debate, discussions on emerging social issues for example: dowry, population growth etc.
II. By teaching students that how to cooperate with each other.

Ans
✗ 1. Only II
✓ 2. Both I and II
✗ 3. Only I
✗ 4. Neither I nor II

Question ID : **275228298**

Q.3 Which of the following is/are the instructional objective(s) of mathematics?

I. To apply addition of two digit numbers in solving problems of daily life.
II. To apply formula of direct variable to solve simple problems of day to day life.

Ans
✗ 1. Only I
✓ 2. Both I and II
✗ 3. Neither I nor II
✗ 4. Only II

Question ID : **275228302**

Q.4 In which stage of cognitive development of Piaget's theory, a child understands and carry out calculations involving proportions?

Ans
✗ 1. Concrete Operation Period
✗ 2. Sensory Motor Period
✓ 3. Formal Operation Period
✗ 4. Pre – operation Period

Question ID : **275228296**

Q.5 While teaching a children how to read, which of the following things need to be kept in mind?

I. The material used must be meaningful and of the level of the child.
II. The material should be in a language that the child is familiar with.

Ans
✗ 1. Only I
✗ 2. Neither I nor II
✗ 3. Only II
✓ 4. Both I and II

Question ID : **275228292**

Q.6 Which of the following is/are the role(s) of teachers in the Theme Based Integrated Early Childhood and Care Education Programme?

I. Observe children to identify their interests, needs and capabilities and the pace of their development.
II. Create nurturing and positive relationships in the classroom.

Ans
✗ 1. Only I
✓ 2. Both I and II
✗ 3. Neither I nor II
✗ 4. Only II

Question ID : **275228293**

Q.7 Which of the following statement(s) is/are not correct?

I. Conditioning of elicited behaviours defines classical conditioning.
II. Conditioning of emitted behaviours defines operant conditioning.

Ans
1. Only II
2. Only I
3. Neither I nor II
4. Both I and II

Question ID : **275228284**

Q.8 Which of the following is/are those medium(s) by which value education can be provided to the students?

I. Skits and Dramas
II. Morning Assembly
III. Compulsory Subject

Ans
1. II and III
2. I and II
3. Only III
4. I, II and III

Question ID : **275228285**

Q.9 Which of the following is not a assistive device used for children with Visual Impairment?

Ans
1. Hearing aid
2. Braille
3. Abacus
4. Arithmetic Frames

Question ID : **275228287**

Q.10 'When we study history, then we study the history of many other social science subjects like economic history, political history, history of psychology etc'. This statement given above shows that social science subjects are _____ in nature.

I. independent
II. interdisciplinary
III. interrelated

Ans
1. II and III
2. Only III
3. Only II
4. I and III

Question ID : **275228297**

Q.11 Which of the following is/are the major type(s) of play for a child?

I. Constructive play
II. Functional play
III. Dramatic or pretend play

Ans
1. II and III
2. I and III
3. Only III
4. I, II and III

Question ID : **275228294**

Q.12 The syllabus of Environment studies for class III to V is woven around the 6 interconnected themes. Which of the following is/are among those themes?

I. Shelter
II. Water
III. Food

Ans
1. I, II and III
2. II and III
3. I and III
4. Only III

Question ID : **275228301**

Q.13 Which of the following Pre – number concept(s) can be developed in children during the pre school years?

I. Matching
II. Sorting
III. Comparing

Ans
1. Only I
2. I, II and III
3. I and III
4. I and II

Question ID : **275228295**

Q.14 Which of the following is/are not the method(s) of assessment in Language Learning?

I. Oral Test
II. Written Test

Ans
1. Both I and II
2. Neither I nor II
3. Only I
4. Only II

Question ID : **275228291**

Q.15 Scientific argument involves three components. Which of the following are these components?

I. Hypothesis
II. Predictions
III. The evidence

Ans
1. I and III
2. I and II
3. I, II and III
4. II and III

Question ID : **275228299**

Q.16 'Preparing any project in science/mathematics may give pleasure to the pupil as result of which he/she is motivated to undertake similar activities on his/her own.' This given statement describes which of the following type(s) of motivation?

I. Intrinsic Motivation
II. Extrinsic Motivation

Ans
1. Only II
2. Both I and II
3. Only I
4. Neither I nor II

Question ID : **275228283**

Q.17 _____ addresses to the principle that knowledge arises from experience and evidence gathered specifically using senses.

I. Skepticism
II. Empiricism

Ans
1. Both I and II
2. Neither I nor II
3. Only II
4. Only I

Question ID : **275228300**

Q.18 Which of the following statement(s) is/are not correct about 'Facilitation' in art education?

I. Helping the child by giving free access to handling musical instruments with a caution for care.
II. Providing lot of art material for helping the child to choose and pick and innovate.

Ans
1. Only I
2. Neither I nor II
3. Both I and II
4. Only II

Question ID : **275228290**

Q.19 _____ and _____ are planned and organized for improving the power of thinking.

Ans
1. Curriculum; instructions
2. Charts; teaching
3. Evaluation; instructions
4. Teaching; instruction

Question ID : **275228286**

Q.20 Ideas for dramas may come from which of the following sources?

I. The imagination
II. The environment
III. History/Literature
IV. Movies

Ans
1. I and IV
2. III and IV
3. II, III and IV
4. I, II, III and IV

Question ID : **275228288**