कोल इण्डिया लिमिटेड
Coal India Limited
एक महारत्न कंपनी A Maharatna Company

ONLINE APPLICATION FOR MANAGEMENT TRAINEES 2016-17

Roll No:	170177190002
Participant Name:	MAHTO DASHRATH
Test Center Name:	Ram Tahal Choudhary Institute of Technology RTCIT
Test Date:	26/03/2017
Test Time:	12:30 PM - 3:30 PM

Section : **General Knowledge/Awareness**

Q.1 Who among the following won the Dronacharya Award in Gymnastics for the year 2016?

Question ID : **2391303332**
Status : **Answered**
Chosen Option : **3**

Ans
✔ 1. Bishweshwar Nandi
✘ 2. Lalita Babar
✘ 3. Deepa Karmakar
✘ 4. Rajendra Pralhad Shelke

Q.2 What type of Energy does "a batsman hitting a ball" use?

Question ID : **2391303328**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. Gravitational Energy
✘ 2. Frictional Energy
✔ 3. Kinetic Energy
✘ 4. Potential Energy

Q.3 Which of the following is NOT an example of Biomass Material?

Question ID : **2391303330**
Status : **Answered**
Chosen Option : **1**

Ans
✘ 1. Wood
✘ 2. Animal Waste
✘ 3. Garbage
✔ 4. Coal

Q.4 Who has been awarded the 2016 IAAF World Athlete of the Year Award in male category for sixth time?

Question ID : **2391303333**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Michael Phelps
✘ 2. Patrik Sjöberg
✔ 3. Usain Bolt
✘ 4. Andre De Grasse

Q.5 Mr. Reddy is running for the Vice-President's post. Which of the following qualities of Mr. Reddy make him an ineligible candidate to contest election for the post of Vice-President of India?

Question ID : **2391303318**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Mr. Reddy is qualified for election as a member of the Council of States.
✘ 2. Mr. Reddy has completed the age of thirty-five years.
✔ 3. Mr. Reddy is the District Commissioner of Guntur, which is an office of profit under the Government of Andhra Pradesh.
✘ 4. Mr. Reddy is a citizen of India.

Q.6 Who became the first woman to win the Jnanpith Award in 1976 for her 1965-novel Pratham Pratisruti (The First Promise)?

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Ans
✗ 1. Amrita Pritam
✗ 2. Mahasweta Devi
✗ 3. Lily Ray
✓ 4. Ashapoorna Devi

Question ID : **2391303335**
Status : **Answered**
Chosen Option : **2**

Q.7 Who is the Chief Executive Officer (CEO) of the Wipro Group?

Ans
✗ 1. Rishad Premji
✗ 2. Azim H. Premji
✗ 3. Vishal Sikka
✓ 4. Abidali Z. Neemuchwala

Question ID : **2391303327**
Status : **Answered**
Chosen Option : **2**

Q.8 A physical balance is an example of:

Ans
✗ 1. Composite machine
✗ 2. Inclined plane
✓ 3. Lever
✗ 4. Wedge

Question ID : **2391303329**
Status : **Answered**
Chosen Option : **3**

Q.9 _____ has the largest coal reserves in India.

Ans
✗ 1. Odisha
✗ 2. West Bengal
✓ 3. Jharkhand
✗ 4. Chhattisgarh

Question ID : **2391303323**
Status : **Answered**
Chosen Option : **3**

Q.10 Which of the following does the 7th Schedule of the Constitution of India comprise?
i. State List
ii. Union List
iii. Concurrent List

Ans
✓ 1. All (i), (ii) and (iii)
✗ 2. Both (i) and (ii)
✗ 3. Only (i)
✗ 4. Both (ii) and (iii)

Question ID : **2391303317**
Status : **Answered**
Chosen Option : **2**

Q.11 Who is the current Speaker of Lok Sabha?

Ans
✗ 1. Meira Kumar
✗ 2. S. M. Krishna
✓ 3. Sumitra Mahajan
✗ 4. Mohammad Hamid Ansari

Question ID : **2391303341**
Status : **Answered**
Chosen Option : **3**

Q.12 Whom did Chandragupta Maurya overthrow to take over the reins of the Magadha Empire?

Ans
✗ 1. Ajatshatru
✓ 2. Dhana Nanda
✗ 3. Bimbisara
✗ 4. Mahapadma Nanda

Question ID : **2391303320**
Status : **Answered**
Chosen Option : **3**

Q.13 Which country is the world leader in the population of bovine animals?

Ans
✓ 1. India
✗ 2. USA

Question ID : **2391303325**
Status : **Answered**
Chosen Option : **3**

✗ 3. Denmark
✗ 4. Spain

Q.14 Asia's first and longest cycle highway runs between:

Question ID : **2391303337**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Mumbai and Pune in Maharashtra
✓ 2. Etawah and Agra in Uttar Pradesh
✗ 3. Hyderabad and Secunderabad in Telangana
✗ 4. Bengaluru and Mysuru in Karnataka

Q.15 Which of the following countries first invented the idea of "Gross National Happiness" to use happiness as a measure of good governance?

Question ID : **2391303324**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Great Britain
✗ 2. Taiwan
✗ 3. Norway
✓ 4. Bhutan

Q.16 Who wrote the medieval-era epic poem "Padmavat"?

Question ID : **2391303322**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Mulla Daud
✗ 2. Abu'l-Fazl ibn Mubarak
✓ 3. Malik Muhammad "Jayasi"
✗ 4. Amir Khusro

Q.17 What does IDBI in IDBI Bank stand for?

Question ID : **2391303326**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Investment Development Board of India
✓ 2. Industrial Development Bank of India
✗ 3. Infrastructure and Development Board of India
✗ 4. Industrial Divestment Board of India

Q.18 Which film won the 70th British Academy of Film and Television Arts (BAFTA) Award in the Best Special Visual Effects category?

Question ID : **2391303336**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Manchester by the Sea
✗ 2. Lion
✓ 3. The Jungle Book
✗ 4. La La Land

Q.19 Which statement about the Gobi Desert is NOT correct?

Question ID : **2391303334**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Gobi is a cold desert.
✗ 2. Gobi desert is the most expansive arid region in Asia.
✗ 3. Most of Gobi's rain is blocked by the Himalayas.
✓ 4. It never rains in the Gobi desert.

Q.20 What does RAM in a computer stands for?

Question ID : **2391303331**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Random Access Memory
✗ 2. Rapid Action Machine
✗ 3. Random Application Mapping

✗ 4. Rapid Applied Memory

Q.21 Whom among the following stepped down as the Chairman of International Cricket Council (ICC) on 15th March 2017?

Question ID : **2391303338**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Zaheer Abbas
✗ 2. David Richardson
✓ 3. Shashank Manohar
✗ 4. N. Srinivasan

Q.22 Which of the following Governor Generals of India earned the title, "Maker of the Modern India"?

Question ID : **2391303321**
Status : **Answered**
Chosen Option : **4**

Ans
✓ 1. Lord Dalhousie
✗ 2. Lord Bentick
✗ 3. Lord Canning
✗ 4. Lord Mountbatten

Q.23 Who is the Chief Justice of India as of February 2017?

Question ID : **2391303340**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. Justice T. S. Thakur
✗ 2. Justice C. S. Karnan
✗ 3. Justice H. L. Dattu
✓ 4. Justice Jagdish Singh Khehar

Q.24 Who won the Men's Final Australian OpenTennis Championship 2017?

Question ID : **2391303339**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Stanislas Wawrinka
✗ 2. Novak Djokovic
✓ 3. Roger Federer
✗ 4. Rafael Nadal

Q.25 All executive action of the Government of India is taken in the name of the _____.

Question ID : **2391303319**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Speaker of Lok Sabha
✓ 2. President of India
✗ 3. Prime Minister of India
✗ 4. Vice President of India

Section : **Numerical Ability**

Q.1 Mr. Shiva invested equal amount of money in two private firms which gives 15% simple interest per annum for 3.5 years and 5 years respectively. If the difference in their interests is Rs. 270. The amount invested by Mr. Shiva is:

Question ID : **2391303350**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✗ 1. Rs. 1500
✓ 2. Rs. 1200
✗ 3. Rs. 1250
✗ 4. Rs. 1205

Q.2 Pipe A can fill the tank 2 times faster than pipe B. If pipe A and B together fill the tank in 24 minutes, then pipe B alone can fill the tank in:

Question ID : **2391303356**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 75 minutes
✗ 2. 70 minutes
✓ 3. 72 minutes
✗ 4. 71 minutes

Q.3 Find x, given $5(\sqrt{5})^{x+5} = (\sqrt{5})^{2x+7}$:

Question ID : **2391303358**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $x = -1$

✔ 2. $x = 0$
✘ 3. $x = 1$
✘ 4. $x = -2$

Q.4 A flight has to travel between 2 cities A and B, 3000 km apart. The flight was slowed down due to bad weather. Its average speed for the trip reduced by 200 km/hr and the time of flight increased by 30 min. The duration of the flight with original speed is:

Question ID : **2391303354**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✘ 1. 2.6 hrs
✘ 2. 2.75 hrs
✘ 3. 2.25 hrs
✔ 4. 2.5 hrs

Q.5 A train 130 meters long travelling at 36 km/hr crosses the bridge in 30 sec. Then the length of the bridge is:

Question ID : **2391303361**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✘ 1. 196 meters
✔ 2. 170 meters
✘ 3. 125 meters
✘ 4. 175 meters

Q.6 If two is added to the denominator of a rational number it becomes $\frac{1}{3}$ and if 4 is added to the numerator it becomes $\frac{1}{2}$. Then the sum of the numerator and the denominator of the rational number is:

Question ID : **2391303347**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✘ 1. -38
✔ 2. 38
✘ 3. -18
✘ 4. 18

Q.7 Ms. Shivangi invests Rs. 4000 for six months at 20% per annum compounded quarterly. The total amount she gets after 6 months is:

Question ID : **2391303352**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✘ 1. Rs. 4401
✔ 2. Rs. 4410
✘ 3. Rs. 4411
✘ 4. Rs. 4440

Q.8 For a positive integer n, $3^{6n} - 6^{3n}$ is divisible by:

Question ID : **2391303344**
Status : **Answered**
Chosen Option : **3**

Ans
✔ 1. 3
✘ 2. 513
✘ 3. 500
✘ 4. 6

Q.9 Due to economic surges the price of eggs suddenly reduced to 40%. This enabled a woman to buy 64 more eggs for $ 50. Then the reduced price per dozen is:

Question ID : **2391303353**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. $ 3.5
✔ 2. $ 3.75
✘ 3. $ 3.25
✘ 4. $ 4

Q.10 If x_1 and x_2 are the roots of the equation $x^2 + 2x - 15 = 0$ then the quadratic equation which has the roots $\frac{1}{x_1}$ and $\frac{1}{x_2}$ is:

Question ID : **2391303359**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. $-15x^2 - 2x - 1 = 0$
✔ 2. $15x^2 - 2x - 1 = 0$
✘ 3. $15x^2 - 2x + 1 = 0$
✘ 4. $15x^2 + 2x - 1 = 0$

Q.11 The curved surface area of a hemisphere is $8\pi\,cm^2$, then its radius is:

Question ID : **2391303363**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 1 cm

2. 3 cm
3. 2.5 cm
4. 2 cm

Q.12 If three sides of the triangle are given as 32 cm, 34 cm and 34 cm,then the area of the triangle is:

Ans
1. $500\ cm^2$
2. $480\ cm^2$
3. $450\ cm^2$
4. $475\ cm^2$

Question ID : **2391303360**
Status : **Answered**
Chosen Option : **2**

Q.13 If the sum of 2 numbers is 175, their LCM is 300 and HCF is 25. Then the difference between 2 numbers is:

Ans
1. 10
2. 25
3. 20
4. 15

Question ID : **2391303343**
Status : **Answered**
Chosen Option : **2**

Q.14 The total number of odd factors of $2^5 \times 3^3 \times 5^2$ is:

Ans
1. 12
2. 10
3. 6
4. 15

Question ID : **2391303342**
Status : **Answered**
Chosen Option : **3**

Q.15 Mr. Vijay rows a boat with the stream in 8 km/hr and against the stream in 4 km/hr. In still water, his rate of rowing in km/hr is:

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

Question ID : **2391303362**
Status : **Answered**
Chosen Option : **3**

Q.16 If y exceeds x by 10% then x is less than y by what percent?

Ans
1. $9\frac{1}{12}$
2. $9\frac{1}{13}$
3. $9\frac{1}{14}$
4. $9\frac{1}{11}$

Question ID : **2391303364**
Status : **Answered**
Chosen Option : **4**

Q.17 In a chemistry lab two beakers A and B contain 62% and 84% of spirit respectively. If two liters from A is mixed with 4 liters of B, the ratio of sprit and water in the resulting mixture is:

Ans
1. 58 : 19
2. 17 : 19
3. 23 : 7
4. 17 : 21

Question ID : **2391303357**
Status : **Answered**
Chosen Option : **3**

Q.18 If $-5 \leq x \leq 1$ and $-1 \leq y \leq 5$, then the minimum value of $2y - 3x$ is:

Ans
1. -5
2. -9
3. -8
4. -10

Question ID : **2391303345**
Status : **Answered**
Chosen Option : **2**

Q.19 The number of terms in the sequence 20, 25, 30, ……., 150 is:

Question ID : **2391303365**

Ans
✗ 1. 23
✗ 2. 22
✓ 3. 27
✗ 4. 26

Status : **Answered**
Chosen Option : **3**

Q.20 An army post with1800 men has provision of food for 50 days. After 10 days, some of the men go back to the base camp due to injuries. The remaining food is now enough for the next 50 days for the remaining men. What is the number of men who went back to the base camp?

Ans
✗ 1. 350 Men
✓ 2. 360 Men
✗ 3. 250 Men
✗ 4. 310 Men

Question ID : **2391303349**
Status : **Answered**
Chosen Option : **2**

Q.21 The number of terms in the sequence 5, 20, 80, 320, ……., 81920 is:

Ans
✗ 1. 6
✗ 2. 7
✗ 3. 9
✓ 4. 8

Question ID : **2391303366**
Status : **Answered**
Chosen Option : **3**

Q.22 Mr. Deep divides Rs. 1833 such that 4 times the 1st share, thrice the 2nd share and twice the third share amount to the same. Then the value of the 2nd share is:

Ans
✗ 1. Rs. 546
✓ 2. Rs. 564
✗ 3. Rs. 560
✗ 4. Rs. 654

Question ID : **2391303348**
Status : **Answered**
Chosen Option : **3**

Q.23 A can finish the work in 25 days and B in 25 days. They both work together for 5 days and then B leaves. How many days will A take to complete the remaining work?

Ans
✗ 1. 18 days
✗ 2. 20 days
✗ 3. 17 days
✓ 4. 15 days

Question ID : **2391303355**
Status : **Answered**
Chosen Option : **2**

Q.24 In a bio gas plant the population of yeast bacteria increases at a rate of 9% per annum, but there is an additional annual increase of 1% in population due to various other inputs in the system. The percentage increase in the yeast population after 2 yrs is:

Ans
✗ 1. 20%
✓ 2. 21%
✗ 3. 25%
✗ 4. 22%

Question ID : **2391303351**
Status : **Answered**
Chosen Option : **3**

Q.25 The average of 7 numbers is 29. The average of first three of them is 23 and the last three of them is 42. Then the fourth number is:

Ans
✓ 1. 8
✗ 2. 9
✗ 3. 10
✗ 4. 12

Question ID : **2391303346**
Status : **Answered**
Chosen Option : **4**

Section : **Reasoning**

Q.1 Select the one which is different from other three.

Ans
✓ 1. GHST
✗ 2. EVFU
✗ 3. KPLO
✗ 4. IRJQ

Question ID : **2391303371**
Status : **Answered**
Chosen Option : **1**

Q.2 What is related to 'Courage' in the same way as 'Kindness' is related to 'Cruelty'?

Question ID : **2391303367**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Cowardice
✘ 2. Bravery
✘ 3. Fear
✘ 4. Valour

Q.3 In a certain code language CARPET is written as FDUSHW. How will MOTHER be coded in that code language?

Question ID : **2391303380**
Status : **Answered**
Chosen Option : **2**

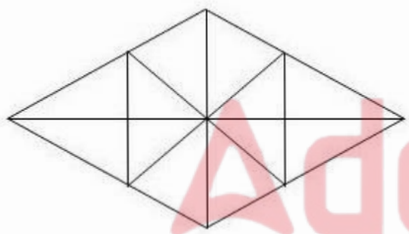
Ans
✘ 1. PRWHUK
✔ 2. PRWKHU
✘ 3. OPUIFS
✘ 4. REHTOM

Q.4 Four sets of three statements each are given below. Take these statements to be true even if they look factually absurd. Select one alternative in which third statement is implied by the first two statements.

Question ID : **2391303386**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1.
All tables are chairs. All cupboards are tables. So, all chairs are cupboards.
✘ 2.
All J's are K's. All K's are M's. So, all M's are J's.
✔ 3.
All apples are red. All bananas are apples. So, all bananas are red.
✘ 4.
All locks are keys. Some ball are keys. So, all locks are balls.

Q.5 How many triangles are there in the following figure?



Question ID : **2391303391**
Status : **Answered**
Chosen Option : **1**

Ans
✘ 1. 20
✔ 2. 28
✘ 3. 24
✘ 4. 12

Q.6 Choose the correct alternative that will complete the given number series.

9, 17, 31, 57, ?, 205

Question ID : **2391303374**
Status : **Answered**
Chosen Option : **3**

Ans
✔ 1. 107
✘ 2. 102
✘ 3. 104
✘ 4. 109

Q.7 Find the odd number pair from the given alternative.

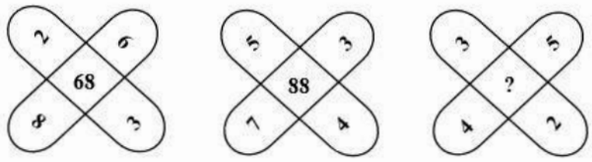
Question ID : **2391303372**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. 46 – 10
✘ 2. 42 – 33
✘ 3. 25 – 43
✔ 4. 12 – 91

Q.8

Question ID : **2391303383**
Status : **Answered**
Chosen Option : **2**

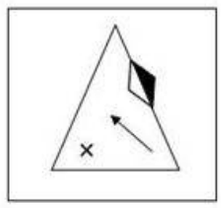
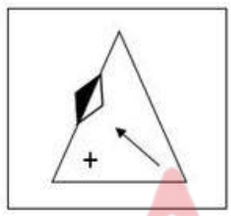
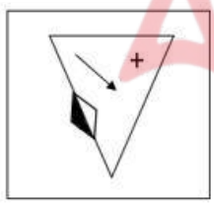
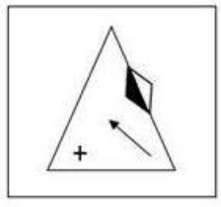
Find the missing number from the given alternatives.



Ans
1. 42
2. 43
3. 41
4. 45

Q.9 Which of the answer figure is exactly the mirror image of the question figure, when the mirror is held on the line X Y?

Question ID : **2391303390**
Status : **Answered**
Chosen Option : **4**

Ans
1. 
2. 
3. 
4. 

Q.10 'R' is the paternal uncle of 'P', who is the daughter of 'N' and 'N' is the daughter-in-law of 'M'. How is 'R' related to 'M'?

Question ID : **2391303376**
Status : **Answered**
Chosen Option : **4**

Ans
1. Brother
2. Cousin
3. Son-in-law
4. Son

Q.11 Mother's age is twice her daughter's age. The son is older than daughter by one year and father is five years older than mother. If son has completed 18 years, find father's age.

Question ID : **2391303378**
Status : **Answered**
Chosen Option : **2**

Ans
1. 40 years
2. 39 years
3. 41 years

✗ 4. 42 years

Q.12 Select the related number from the given alternatives.

23 : 34 :: 47 : ?

Question ID : **2391303369**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 72
✗ 2. 65
✓ 3. 62
✗ 4. 69

Q.13 Three positions of a cube are shown below. Which number will be opposite to the face containing 3?

Question ID : **2391303388**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. 1
✗ 2. 4
✗ 3. 6
✗ 4. 5

Q.14 If '÷' means '×', '−' means '÷', '×' means '−' and '+' means '+', then what will be the value of $16 \div 36 - 6 \times 2 + 3 = ?$

Question ID : **2391303381**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 26
✗ 2. 20
✓ 3. 16
✗ 4. 14

Q.15 In a row of boys, Vivek stands thirteenth from the left and Ravi is thirteenth from the right. If they interchange their places, Ravi would be eighteenth from the right. How many boys are there in the row?

Question ID : **2391303385**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 29
✗ 2. 31
✓ 3. 30
✗ 4. 32

Q.16 From the given alternatives select the word which cannot be formed using the letters of the given word.

ORGANISATION

Question ID : **2391303379**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. GRANT
✓ 2. REASON
✗ 3. ORGAN
✗ 4. STRONG

Q.17 In the given letter series, which one set of letters when sequentially placed in the gaps shall complete it?

p _ n n m _ p m n _ m p _ m n _ m p

Question ID : **2391303373**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. n p m p n
✓ 2. m p n p n
✗ 3. m n p n p
✗ 4. n m n p p

Q.18 Shyam walked 20 metres towards south. Then he turned to his left and walked 15 metres. He again turned to his left and walked 20 metres. He then turned to his right and walked 10 metres. How far and in which direction is Shyam from the starting point?

Question ID : **2391303384**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 35 Metres, East
✓ 2. 25 Metres, East
✗ 3. 35 Metres, West
✗ 4. 25 Metres, North

Q.19

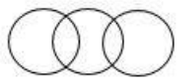
Question ID : **2391303387**

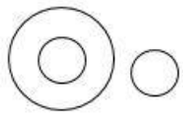
Identify the diagram that best represents the relationship among classes given below.

Boys, Students, Athletes

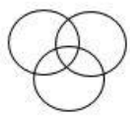
Status : **Answered**
Chosen Option : **1**

Ans

✗ 1. 

✗ 2. 

✗ 3. 

✓ 4. 

Q.20 Seven friends – A, B, C, D, E, F and G are sitting in a circle facing at the centre. 'E' is neighbour of A and D. 'G' is not between 'F' and 'C'. 'F' is to the immediate right of 'A'. Who is sitting to the right of 'G'?

Question ID : **2391303377**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. C

✗ 2. F

✓ 3. D

✗ 4. A

Q.21 Alok is older than Malvika. Gyan is older than Malvika but younger than Alok. Kamal is younger than Rashmi and Malvika. Malvika is older than Rashmi. Whose age is exactly in the middle of the five?

Question ID : **2391303375**
Status : **Answered**
Chosen Option : **2**

Ans

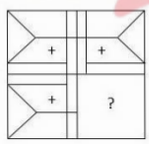
✗ 1. Gyan

✓ 2. Malvika

✗ 3. Alok

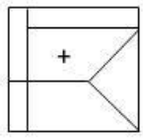
✗ 4. Rashmi

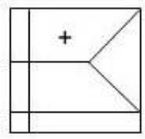
Q.22 Select the figure from the alternatives which will complete the pattern in given question figure.

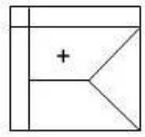


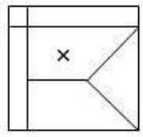
Question ID : **2391303389**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 

✗ 2. 

✗ 3. 

✗ 4. 

Q.23

Question ID : **2391303370**

Identify the word which belongs to the class of given words.

Grams, Kilograms, Quintal

Status : **Answered**
Chosen Option : **2**

Ans
1. Yard ✗
2. Tonnes ✓
3. Litre ✗
4. Kilometer ✗

Q.24 Some equations are solved on the basis of a certain system. Find the correct value for '?' on that basis.

8 * 6 = 28
11 * 5 = 96
15 * 7 = ?

Question ID : **2391303382**
Status : **Answered**
Chosen Option : **4**

Ans
1. 208 ✗
2. 105 ✗
3. 147 ✗
4. 176 ✓

Q.25 Select the related letter from the given alternatives.

CXFU : AZBY :: GTNM : ?

Question ID : **2391303368**
Status : **Answered**
Chosen Option : **1**

Ans
1. EVJQ ✓
2. RIIP ✗
3. IRRD ✗
4. EROP ✗

Section : **General English**

Q.1 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

You can be exempted from games only while you produce a medical certificate.

Question ID : **2391303394**
Status : **Answered**
Chosen Option : **2**

Ans
1. only while ✓
2. produce ✗
3. from ✗
4. can be ✗

Q.2 Select the word that best expresses the meaning of the given word.

COMPLIMENT

Question ID : **2391303400**
Status : **Answered**
Chosen Option : **2**

Ans
1. Agree ✗
2. Admire ✓
3. Please ✗
4. Criticize ✗

Q.3 Select the ANTONYM of the given word.

PRECIOUS

Question ID : **2391303403**
Status : **Answered**
Chosen Option : **2**

Ans
1. Valued ✗
2. Worthless ✓
3. Loved ✗
4. Costly ✗

Q.4 Select the word that is spelt INCORRECTLY.

Question ID : **2391303408**
Status : **Answered**
Chosen Option : **1**

Ans
1. favaur ✓

✗ 2. fauna
✗ 3. faucet
✗ 4. fault

Q.5 Select the phrase that best expresses the meaning of the underlined word.

I am grateful to my teacher who persistently scolded me for poor spelling.

Question ID : **2391303410**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. pulled me through
✓ 2. pulled me up
✗ 3. pulled me out
✗ 4. pulled me off

Q.6 Select the option that completes the sentence CORRECTLY.

My cousin felt annoyed with _____ when he saw what had happened due to his ignorance.

Question ID : **2391303396**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. himself
✗ 2. oneself
✗ 3. myself
✗ 4. itself

Q.7 Select the phrase that best expresses the meaning of the underline word.

It was a serious offence but he was allowed to go with a warning.

Question ID : **2391303409**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. let down
✓ 2. let off
✗ 3. let out
✗ 4. let aside

Q.8 Find the appropriate meaning of the underlined idiom.

A true friend will stand by you through thick and thin.

Question ID : **2391303411**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. at the last moment
✗ 2. in difficult times
✓ 3. under all circumstances
✗ 4. during summer time

Q.9 Select the option that completes the sentence CORRECTLY.

Next week I _____ to visit my cousin.

Question ID : **2391303399**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. will intend
✗ 2. intended
✗ 3. intending
✓ 4. intend

Q.10 Select the word that is spelt INCORRECTLY.

Question ID : **2391303406**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Excel
✗ 2. Excess
✗ 3. Access
✓ 4. Expell

Q.11

Question ID : **2391303404**

Select the ANTONYM of the given word.

STRAIGHT

Status : **Answered**
Chosen Option : **3**

Ans
1. Weak ✗
2. Long ✗
3. Crooked ✓
4. Short ✗

Q.12 Select the option that completes the sentence CORRECTLY.

If you have any queries to raise _____ please let me know now.

Question ID : **2391303398**
Status : **Answered**
Chosen Option : **3**

Ans
1. about ✗
2. up ✗
3. no word required ✓
4. along ✗

Q.13 Select the word that best expresses the meaning of the given word.

CONCEAL

Question ID : **2391303402**
Status : **Answered**
Chosen Option : **2**

Ans
1. Deceive ✗
2. Hide ✓
3. Free ✗
4. Detest ✗

Q.14 Select the word that best expresses the meaning of the given word.

TRANQUIL

Question ID : **2391303401**
Status : **Answered**
Chosen Option : **4**

Ans
1. Calm ✓
2. Silent ✗
3. Active ✗
4. Tired ✗

Q.15 Select the ANTONYM of the given word.

DESPAIR

Question ID : **2391303405**
Status : **Answered**
Chosen Option : **4**

Ans
1. Detest ✗
2. Abandon ✗
3. Reject ✗
4. Hope ✓

Q.16 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

A time came when Gautam Buddha began to feel weary with the luxuries surrounding him.

Question ID : **2391303393**
Status : **Answered**
Chosen Option : **4**

Ans
1. came ✗
2. when ✗
3. began to ✗
4. with ✓

Q.17 Select the word that is spelt INCORRECTLY.

Question ID : **2391303407**
Status : **Answered**
Chosen Option : **1**

Ans
1. moltan ✓
2. molecule ✗

3. moist
4. molest

Q.18 Select the option that completes the sentence CORRECTLY.

I don't think you will have _____ difficulty in obtaining your driving license.

Question ID : **2391303397**
Status : **Answered**
Chosen Option : **4**

Ans
1. some
2. a great deal
3. many
4. any

Q.19 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

This is one of the five books that was launched yesterday at the Vigyan Bhawan.

Question ID : **2391303392**
Status : **Answered**
Chosen Option : **3**

Ans
1. one of the
2. This
3. that was
4. at

Q.20 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

If Antarctica has a very cold climate a variety of sea birds is found there.

Question ID : **2391303395**
Status : **Answered**
Chosen Option : **3**

Ans
1. has
2. a variety
3. is found
4. If

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

Every continent has deserts. Much of the western United States is a desert. A desert region called The Outback covers Central Australia. The southern tip of South America is largely desert. Northern Africa is covered by the Sahara, a desert as big as the mainland United States. The Arabian Peninsula, between the Persian Gulf and the Red Sea, is almost entirely desert. A large part of central Asia, from China to the Caspian Sea, is mostly desert. Deserts cover 1/8 of our planet.

The popular belief is that a desert is dry, hot, waterless and without shelter. But this is not entirely correct. For those who have studied it, the desert can be a beautiful place. It is home to a variety of people, animals and plants that have learnt to live under hot and dry conditions. A desert is not always a flat, unchanging wasteland of dry sand. It may have mountains and hills. It may have an oasis, big or small. An oasis is like a green island in the middle of a desert where a spring of a well gives plants and trees a better chance to grow.

All living things need water in order to survive. The few plants and animals that live in deserts have developed the ability to require less water than most plants and animals. Desert plants have adapted to heat and dryness of the desert. Plants such as cacti have special means of storing and conserving water. They often have few or no leaves. Some plants have gotten used to arid environments by growing extremely long roots, allowing them to acquire moisture at or by the water table.

The desert animals also have found a way to solve the heat and water problems the dessert environment creates. Camels can drink a lot of water at one time. They can live without water for days together. The reason is they sweat very little. We sweat because we must keep our body temperature constant. We sweat when it gets hot, and this cools the body. Camels can stand a high body temperature. They don't need to sweat and can therefore retain the water they drink for long periods of time.

SubQuestion No : 21

Q. 21 What is the popular belief about the climatic conditions of a desert?

Question ID : **2391303413**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1.
It is a region surrounded by mountains and hills.

✓ 2.
It is sandy where no rain falls and no vegetation grow.

✗ 3.
It has vast land which is used for cultivation of flowers.

✗ 4. A variety of animals and plants live there.

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

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The desert animals also have found a way to solve the heat and water problems the dessert environment creates. Camels can drink a lot of water at one time. They can live without water for days together. The reason is they sweat very little. We sweat because we must keep our body temperature constant. We sweat when it gets hot, and this cools the body. Camels can stand a high body temperature. They don't need to sweat and can therefore retain the water they drink for long periods of time.

SubQuestion No : 22

Q. 22 The desert region called 'The Outback' is located in:

Question ID : **2391303414**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Central Asia
✗ 2. South America
✗ 3. North Africa
✓ 4. Central Australia

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

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SubQuestion No : 23

Q. 23 Why has an oasis been called 'green' island?

Question ID : **2391303415**
Status : **Answered**
Chosen Option : **3**

Ans

✔ 1. It has a source of water that supports vegetation.

✗ 2. It is surrounded by green hills and mountains.

✗ 3. The sand here is conducive for the vegetation.

✗ 4. It is in the middle of a vast desert.

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 24

Q. 24 Certain plants are able to survive in deserts because they:

Question ID : **2391303416**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. have thick stems and few leaves.

✗ 2. require less water than animals.

✓ 3. have adapted to survive in hot and dry climate.

✗ 4. develop especially long roots.

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 25

Q. 25 Which of the following statements is not true according to the passage?

Question ID : **2391303417**
Status : **Answered**
Chosen Option : **2**

Ans

✔ 1.
The Arabian Peninsula between the Persian Gulf and Caspian Sea is entirely desert.

✘ 2.
In a desert region there is little moisture and poor soil.

✗ 3.
Camels can retain water for a long time because they do not sweat.

✗ 4.
About 1/8 area of the earth is covered by deserts.

Section : **Professional Knowledge**

Q.1 Which of the following statements is TRUE?

Question ID : **2391303427**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. The cardinality ratio for a binary relationship specifies the maximum number of relationship instances that an entity can participate in.

✗ 2. The cardinality ratio for a binary relationship specifies the minimum number of relationship instances that an entity can participate in.

✗ 3. The partial participation constraint is also called existence dependency.

✗ 4. The cardinality ratio for a binary relationship specifies the average number of relationship instances that an entity can participate in.

Q.2 Which of the following represents the function of a Multiplexer?

Question ID : **2391303477**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $Y = A + B$
✗ 2. $Y = A \mid B$
✗ 3. $Y = A \,\&\, B$
✓ 4. $Y = S\ ?\ A : B$

Q.3 The prefix equivalent of the following infix expression is:

$a / b - c + d * e - a * c$

Question ID : **2391303441**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. $- + - / a\ b\ c * d\ e * a\ c$
✗ 2. $+ - - / a\ b\ c * d\ e * a\ c$
✗ 3. $- + / a\ b\ c - * d\ e * a\ c$
✗ 4. $- - + / a\ b\ c * d\ e * a\ c$

Q.4 Which of the following file-type arguments is used in fopen () library function to open a new file for both reading and writing, and destroys the file if a file with the specified file-name already exists in the current directory?

Question ID : **2391303507**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. "w"
✓ 2. "w+"
✗ 3. "a+"
✗ 4. "r+"

Q.5 Which of the following statements about IPv6 is FALSE?

Question ID : **2391303509**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. IPSec support is an integral part of IPv6.

✓ 2. IPv6 has no way to distinguish delay-sensitive packets from bulk data transfers.

✗ 3. In comparison to IPv4, IPv6 has improved header structure with less processing overhead.

✗ 4. IPv6 routers no longer have to fragment packets.

Q.6 Which of the following does not represent the total number of multiplications for multiplying four matrices of orders 20×2, 2×30, 30×12 and 12×8?

Question ID : **2391303450**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 1232
✗ 2. 3680

✗ 3. 10320
✓ 4. 8850

Q.7 Two schedules are said to be _____, if the order of any two conflicting operations is same in both the schedules.

Ans
✓ 1. conflict equivalent
✗ 2. schema equivalent
✗ 3. result equivalent
✗ 4. view equivalent

Question ID : **2391303485**
Status : **Answered**
Chosen Option : **4**

Q.8 Which of the following data structures allows both addition and deletion of items from either end?

Ans
✓ 1. Double Ended Queue
✗ 2. Queue
✗ 3. Priority Queue
✗ 4. Stack

Question ID : **2391303488**
Status : **Answered**
Chosen Option : **1**

Q.9 Considering the relation schemas R (A, B, C, D) and S (C, D, E, F), what will be the degree of the resultant relation of the following Relational Algebra expression, where "*" represents the "natural join" operation?

$(\sigma_{c1}(\Pi_{A,B,C}(R)))*(\sigma_{c2}(\Pi_{C,D,E}(S)))$

Ans
✗ 1. 3
✗ 2. 4
✗ 3. 6
✓ 4. 5

Question ID : **2391303487**
Status : **Answered**
Chosen Option : **3**

Q.10 Which of the following will be the encoding of string "aabaabaca" using Huffman's coding?

Ans
✓ 1. 110111011001
✗ 2. 110111011111
✗ 3. 110111111001
✗ 4. 110011011011

Question ID : **2391303449**
Status : **Answered**
Chosen Option : **2**

Q.11 Which of the following is the time complexity of dynamic programming algorithm to compute the Binomial coefficient ${}^{n}C_{k}$?

Ans
✓ 1. $\Theta(nk)$
✗ 2. $\Theta(k^n)$
✗ 3. $\Theta(n^k)$
✗ 4. $\Theta(n+k)$

Question ID : **2391303444**
Status : **Answered**
Chosen Option : **3**

Q.12 Which of the following constraints enforces that the value of the primary key cannot be Null?

Ans
✗ 1. Key constraint
✗ 2. Foreign key constraint
✓ 3. Entity integrity constraint
✗ 4. Domain constraint

Question ID : **2391303430**
Status : **Answered**
Chosen Option : **1**

Q.13 Two concurrent processes P and Q execute the following code.

```
Process P:
while(True){
W:_____
print('0'); print('0');
X:_____
}

Process Q:
while(True){
Y:_____
print('1'); print('1');
Z:_____
}
```

Given S and T are binary semaphore variables, and P() and V() as standard "wait" and "signal" functions respectively. What should be the semaphore operations W, X, Y, and Z for the output string: 11001100…?

Ans

Question ID : **2391303515**
Status : **Answered**
Chosen Option : **4**

1. W=P(T), X=V(S), Y=P(S), Z=V(T), S=1, T=0

2. W=P(T), X=V(S), Y=P(S), Z=V(T), S=T=1

3. W=P(T), X=V(T), Y=P(S), Z=V(S), S=T=1

4. W=P(T), X=V(T), Y=P(S), Z=V(S), S=1, T=0

Q.14 The output of the following 'C' language code is:

```
void main(){
  int x=1, i , y=2;
  for (i=0;i<10;i++)
  {
        x << 1;
        y=x+i;
  }
  printf("%d,%d",x,y);
}
```

Question ID : **2391303462**
Status : **Answered**
Chosen Option : **3**

Ans

1. 10,11

2. 1,1

3. 10,1

4. 1,10

Q.15 Which of the following protocols is built on client-server architecture and uses separate control and data connections between the client and the server?

Question ID : **2391303511**
Status : **Answered**
Chosen Option : **1**

Ans

1. FTP

2. SMTP

3. POP

4. TELNET

Q.16 An organization has a Class B Network and wishes to form subnets for 60 departments. The subnet mask would be:

Question ID : **2391303464**
Status : **Answered**
Chosen Option : **2**

Ans

1. 255.255.64.0

2. 255.255.0.0

3. 255.255.252.0

4. 255.255.255.0

Q.17 Which of the following is an NP-complete problem?

Question ID : **2391303448**
Status : **Answered**
Chosen Option : **4**

Ans

1. Turing's Halting problem

2. CNF-Satisfiability problem

3. Presburger Arithmetic problem

4. Number of Hamiltonian circuits in a complete graph of 'n' vertices with n > 2

Q.18 Which of the following is/are FALSE?

I) Operator precedence parser works on ambiguous grammar
II) Top-down parser works on left recursive, unambiguous and deterministic grammar
III) LL(1) is a non-recursive descent parser
CLR(1) is the most powerful parser

Question ID : **2391303456**
Status : **Answered**
Chosen Option : **3**

Ans

1. Only II

2. I, II, III and IV

3. II and IV

✗ 4. I, III and IV

Q.19 The data type of the variable "var1" declared in the following 'C' language statement is:
unsigned var1;

Question ID : **2391303501**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. int
✗ 2. double
✗ 3. char
✗ 4. float

Q.20 Which of the following problem cannot be solved using greedy approach?

Question ID : **2391303447**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. 0-1 knapsack
✗ 2. Job scheduling
✗ 3. Minimum spanning tree
✗ 4. Huffman code

Q.21 The decimal number 395, when converted into binary occupies _____ binary digits, whereas when it is represented using BCD codes, occupies _____ binary digits.

Question ID : **2391303420**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 12; 9
✗ 2. 7; 12
✓ 3. 9; 12
✗ 4. 12; 7

Q.22 Match the following.

Question ID : **2391303467**
Status : **Answered**
Chosen Option : **3**

	List I	List II
I)	Attenuation	P) Loss of energy
II)	Shannon capacity	Q) Changes in shape of the signal
III)	Nyquist bit rate	R) Noisy channel
IV)	Distortion	S) Noiseless channel

Ans
✗ 1. I – P, II – Q, III – R, IV – S
✓ 2. I – P, II – R, III – S, IV – Q
✗ 3. I – S, II – R, III – Q, IV – P
✗ 4. I – Q, II – P, III – S, IV – R

Q.23 Which of the following relation schema is always in BCNF?

Question ID : **2391303429**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. R(A, B, C, D)
✗ 2. R(A, B, C)
✗ 3. R(A, B, C, D, E)
✓ 4. R(A, B)

Q.24 Let $K_{2,2}$ be a complete bipartite graph given below. Which of the following is the total number of paths of length 3 from vertex 1 to vertex 4?

Question ID : **2391303499**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 2
✗ 2. 3
✓ 3. 4
✗ 4. 1

Q.25

Question ID : **2391303500**
Status : **Answered**
Chosen Option : **2**

Consider the list of numbers 1, 2, 3, …, 1000 is stored in a[0..999]. What will be the total number of comparisons to search x = 501 using the following binary search () function?

```
int binary search(int a[], int n, int x){ int low=0, high=n-1;
  while(low <= high){int  m = (low + high) / 2;
    if(x > a[m])   low = m + 1;
    else if(x < a[m]) high = m – 1;
    else return m;
  }
  return -1;
      }
```

Ans
1. 2
2. 15
3. 17
4. 1

Q.26 Match the following.

List-1	List-2
A. Moves suspended process to secondary storage	I. Short-Term Schedular
B. Loads the processes into memory for execution	II. Dispatcher
C. Moves one of the processes to Running state	III. Medium- Term Scheduler
D. Allocates CPU to a process	IV. Long-Term Scheduler

Question ID : **2391303514**
Status : **Answered**
Chosen Option : **1**

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

Q.27 Which of the following is the Postorder traversal of the binary tree whose Inorder and Preorder traversals are as follows?

In-order : OLCHJBEKNGMADFI
Preorder : KHLOCBJEAGNMFDI

Question ID : **2391303437**
Status : **Not Attempted**
Chosen Option : **--**

Ans
1. ADFLIBNCJEMGHOK
2. OCLJEBGDIAFNMHK
3. ADFLIBNMGJCEHOK
4. OCLJEBHNMGDIFAK

Q.28 If P is a two-dimensional array having 10 rows and 20 columns, then which of the following cannot be used to access the element in row 2 and column 5?

Question ID : **2391303504**
Status : **Answered**
Chosen Option : **4**

Ans
1. P[2][5]
2. *(*(P + 2) + 5)
3. *(P[2] + 5)
4. *(P + 2 + 5)

Q.29 Given total number of instances of a resource to be 18, three processes (P1, P2, and P3) and the resource requirement and allocation table are given below. Which of the following orders of process execution forms a safe (deadlock free) sequence?

Process	Max. Need	Current Allocation
P1	12	7
P2	10	5
P3	5	4

Question ID : **2391303471**
Status : **Answered**
Chosen Option : **2**

Ans
1. <P1, P2, P3>
2. <P3, P1, P2>
3. <P1, P3, P2>
4. <P2, P1, P3>

Q.30 What will be the "First" and "Follow" of E and F for the following grammar?
E->TE'
E'->+TE'/ε
T->FT'
T'->*FT'/ε
F->id/(E)

Question ID : **2391303458**
Status : **Answered**
Chosen Option : **2**

Ans
1.
First(E)={id, (, ε}, Follow(E)={ε,)}, First(F)={id,), $}, Follow(F)={*, $, (}
2.
First(E)={id, (}, Follow(E)={$,)}, First(F)={id, (}, Follow(F)={*, $,), +}

✗ 3.
First(E)={id,), ε}, Follow(E)={ε,)}, First(F)={id,)}, Follow(F)={*, $, (, +}

✗ 4.
First(E)={id,)}, Follow(E)={$,)}, First(F)={id, (, $}, Follow(F)={*, $,), +}

Q.31 Which of the following recurrence relation can be solved using Master theorem?

Question ID : **2391303443**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $T(n) = 64T(n/8) - n$
✗ 2. $T(n) = 2T(n/2) + n/(\log n)$
✗ 3. $T(n) = 2^nT(n/2) + n$
✓ 4. $T(n) = 2T(n/2) + 1$

Q.32 Which of the following statements is TRUE for the grammar given below?
S->(L)/a
L->L,S/S

Question ID : **2391303457**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. The grammar can be parsed by LR(0) parser only
✓ 2. The grammar can be parsed by LR(0) and SLR(1) parsers
✗ 3. The grammar can be parsed by LL(1) parser only
✗ 4. The grammar can be parsed by LL(1) and LR(0) parsers

Q.33 Match the following.

	List-1	List-2
I)	Class-A IP address	A) 8 bit host id and 24 bit network id
II)	Class-B IP address	B) 16 bit host id and 16 bit network id
III)	Class-C IP address	C) 24 bit host id and 8 bit network id

Question ID : **2391303510**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. I – C, II – A, III – B
✓ 2. I – C, II – B, III – A
✗ 3. I – A, II – B, III – C
✗ 4. I – B, II – C, III – A

Q.34 The number of tokens in the following 'C' language statement is:

printf("The number of tokens are %d", &tcount);

Question ID : **2391303455**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 8
✗ 2. 9
✗ 3. 10
✗ 4. 11

Q.35 Suppose that we have an ordered file with r = 30000 records stored on a disk with block size B = 1024 bytes. If file records are of fixed size and are unspanned with record length R = 100 bytes, the blocking factor for the file and the number of blocks needed for the file are _____ and _____ respectively.

Question ID : **2391303435**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 110, 3000
✓ 2. 10, 3000
✗ 3. 110, 30000
✗ 4. 10, 300

Q.36 If L = {ab, c} is a language over the set A = {a, b, c}, then L^3 is:

Question ID : **2391303453**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. {ababc, abcab, abc^2, cabab, cabc, c^2ab, c^3}

✗ 2.

{ababab, ababc, abcab, abc^2, cabab, c^{2}ab, c^3}

✗ 3.

{ababab, ababc, abcab, abc^{2}abab, cabab, cabc, c^{2}ab, c^3}

✓ 4.

{ababab, ababc, abcab, abc^2, cabab, cabc, c^{2}ab, c^3}

Q.37 Consider the following Adjacency matrix corresponding to some weighted Graph 'G'.

Vertex	1	2	3	4	5
1	0	5	0	10	2
2	5	0	4	6	2
3	0	4	0	1	0
4	10	6	1	0	7
5	2	2	0	7	0

What is the weight of the minimum spanning tree for the graph 'G'?

Question ID : **2391303442**
Status : **Answered**
Chosen Option : **1**

Ans

✗ 1. 11

✓ 2. 9

✗ 3. 10

✗ 4. 8

Q.38 Which of the following is used to specify whether the existence of an entity depends on its being related to another entity via the relationship type?

Question ID : **2391303483**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. Entity integrity constraint

✗ 2. Foreign key constraint

✗ 3. Cardinality ratio

✓ 4. Participation constraint

Q.39 Logical data independence is the ability to change _____ schema without having to change _____ schema.

Question ID : **2391303484**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. internal; external

✗ 2. conceptual; internal

✓ 3. conceptual; external

✗ 4. internal; conceptual

Q.40 Which of the following addressing modes is more appropriate for accessing elements of an array?

Question ID : **2391303474**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. Index mode

✗ 2. Auto increment mode

✗ 3. Displacement mode

✗ 4. Register mode

Q.41 Which of the following 'C' language arithmetic expressions has logical error?

Question ID : **2391303502**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. -13 % -5 + 3;

✓ 2. 4 / (-10 % -2) / 3;

✗ 3. 3 / (-13 % -5) / 3;

✗ 4. -5 % 3 / 13;

Q.42

Question ID : **2391303424**
Status : **Answered**
Chosen Option : **3**

Match the following.

	List-1	List-2
(I)	(X')'	(A) De Morgan law
(II)	(X + Y)' = X'.Y'	(B) Involution
(III)	X(X + Y) = X	(C) Distributive
(IV)	X + YZ = (X + Y)(X + Z)	(D) Absorption

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

Q.43 Which of the following statements is FALSE?

Question ID : **2391303423**
Status : **Answered**
Chosen Option : **4**

Ans
1. Johnson counter is a synchronous counter.
2. Ripple counter is an asynchronous counter.
3. Asynchronous counters are slower than synchronous counters.
4. A counter may count up or count down, but cannot count both up and down.

Q.44 Consider the following relation schema R and S along with their tuple sets.

R(A, B) = {<a1, b1>, <a2, b1>, <a3, b1>, <a4, b1>, <a1, b2>, <a3, b2>, <a2, b3>, <a3, b3>, <a4, b3>, <a1, b4>, <a2, b4>, <a3, b4>}
S(A) = {a1, a2, a3}

What is the value of T ← R / S, where "/" represents the Relational Algebra "division" operation?

Question ID : **2391303433**
Status : **Answered**
Chosen Option : **2**

Ans
1. T(B) = {b1, b3}
2. T(B) = {b1, b2, b4}
3. T(B) = {b1, b4}
4. T(B) = {b1, b3, b4}

Q.45 Considering the following key using a block of five characters, encryption of the message "NETWORKING" using the Transposition Cipher is:

Plaintext : 5 4 3 2 1
Ciphertext : 1 2 3 4 5

Question ID : **2391303465**
Status : **Answered**
Chosen Option : **1**

Ans
1. GNIKROWTEN
2. OGWNTIEKNR
3. OWTENGNIKR
4. NREKTIWNOG

Q.46 If every production is of the form $\alpha \rightarrow \beta$ where $|\alpha| \leq |\beta|$ or of the form $\alpha \rightarrow \lambda$, then the grammar is said to be of:

Question ID : **2391303452**
Status : **Answered**
Chosen Option : **2**

Ans
1. Type 3
2. Type 1
3. Type 0
4. Type 2

Q.47 Assume that source S and destination D are connected through five intermediate routers R1, R2, R3, R4 and R5. Determine how many times each packet has to visit the Network layer and the Data Link layer during transmission from S to D?

Question ID : **2391303463**
Status : **Answered**
Chosen Option : **4**

Ans
1. Network Layer: 7 times, Data Link Layer: 12 times
2. Network Layer: 5 times, Data Link Layer: 12 times
3. Network Layer: 12 times, Data Link Layer: 12 times

✗ 4.
Network Layer: 7 times, Data Link Layer: 7 times

Q.48 Which of the following statements about the "DELETE" command is FALSE?

Question ID : **2391303431**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. It removes tuples from a relation (table).
✓ 2. It removes tuples as well as the relation (table).
✗ 3. A missing WHERE clause specifies that all tuples in the relation are to be deleted.
✗ 4. Depending on the number of tuples selected by the condition in the WHERE clause, zero, one or several tuples can be deleted by a single DELETE command.

Q.49 Given the Burst Time (BT) of 4 processes P1, P2, P3 and P4 as BT(t1, t2, t3, t4) = (4, 8, 6, 7), smoothening factor(α) = 0.5, and T1=10, what will be the burst time of process P5 for Shortest Job First scheduling, using the technique of exponential averaging?

Question ID : **2391303472**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. 6.875 unit time
✗ 2. 6.25 unit time
✗ 3. 5.785 unit time
✗ 4. 5.5 unit time

Q.50 In order to sort list of numbers using radix sort algorithm, we need to get the individual digits of each number 'n' of the list. If n is a positive decimal integer, then i^{th} digit, from right, of the number n is:

Question ID : **2391303498**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. $\left\lfloor \frac{n}{10^{i-1}} \right\rfloor \%10$
✗ 2. $\left\lceil \frac{n}{10^{i}} \right\rceil \%10$
✗ 3. $\left\lceil \frac{n}{10^{i-1}} \right\rceil \%10$
✗ 4. $\left\lfloor \frac{n}{10^{i}} \right\rfloor \%10$

Q.51 Which of the following statements about "total specialization" constraint is TRUE?

Question ID : **2391303428**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Every entity in the subclass must be a member of the superclass.
✓ 2. Every entity in the superclass must be a member of at least one subclass in the specialization.
✗ 3. At least one entity in the superclass must be a member of at least one subclass in the specialization.
✗ 4. Every entity in the superclass must be a member of all subclasses in the specialization.

Q.52 In a B-Tree of order m (m>1), every non-leaf node (except root node) has the number of children between:

Question ID : **2391303496**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $m/2$ and m
✓ 2. $\lfloor m/2 \rfloor$ and m
✗ 3. $\lceil m/2 \rceil$ and m
✗ 4. $\lceil m/2 \rceil$ and $\lfloor m/2 \rfloor$

Q.53 Which of the following statements about Secure Shell Protocol (SSH) is FALSE?

Question ID : **2391303512**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. SSH cannot be used for file transfer and e-mail tasks.
✗ 2. SSH provides a secure client/server communication.
✗ 3. SSH runs on top of the TCP/IP layer.
✗ 4. SSH is a network protocol.

Q.54

Which of the following statements is INCORRECT with respect to pointers declared in the following 'C' language code?

```
void main(){
    int a[10], *p, *q;
    p=&a[5];
    q=&a[7];
    }
```

Question ID : **2391303460**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✗ q-p
2. ✗ P+1
3. ✗ q-3
4. ✓ P+q

Q.55 Considering the process details given in the following table, what will be the completion order of the processes under the policies FCFS and RR (with CPU quantum of 2 time units)?

Process ID	CPU Burst	Arrival Time
P1	5	3
P2	7	2
P3	5	0

Question ID : **2391303516**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✗ FCFS: P1, P2, P3 and RR: P1, P2, P3
2. ✓ FCFS: P3, P2, P1 and RR: P3, P1, P2
3. ✗ FCFS: P3, P2, P1 and RR: P3, P2, P1
4. ✗ FCFS: P1, P3, P2 and RR: P1, P2, P3

Q.56 Which of the following represents the language over the set A = {a, b} consisting of all words beginning with one or more a's and followed by the same number of b's?

Question ID : **2391303451**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ $L = \{a, ab, ab^2, \ldots\}$
2. ✗ $L = \{a^m b^n : m > 0, n > 0\}$
3. ✓ $L = \{a^m b^m : m > 0\}$
4. ✗ $L = \{b^m ab^n : m \geq 0, n \geq 0\}$

Q.57 Which of the following is the every-case time complexity of dynamic programming algorithm for "traversing salesperson" problem to traverse 'n' cities?

Question ID : **2391303446**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✗ $\Theta(log\ n2^n)$
2. ✓ $\Theta(n2^n)$
3. ✗ $\Theta(2^n)$
4. ✗ $\Theta(n^2 2^n)$

Q.58 Which of the following statements related to Cache memory organization is FALSE?

Question ID : **2391303478**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✓
In "write through" approach, main memory content is always invalid.
2. ✗
In "write back" approach, updates are made only in the cache and it minimizes memory writes.
3. ✗
Least Recently Used (LRU) replacement algorithm can be used in associative and set associative mappings.
4. ✗
For direct mapping, no replacement algorithm is needed.

Q.59 If D = {R1, R2} is a decomposition of R, and F is the set of functional dependencies on R, then which of the following ensures that the decomposition D is lossless (nonadditive)?

Question ID : **2391303434**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✓ $((R1 \cap R2) \rightarrow (R1 - R2)) \in F^+$
2. ✗ $((R1 \cap R2) \rightarrow (R1 - R2)) \notin F^+$
3. ✗ $((R1 \cup R2) \rightarrow (R1 - R2)) \in F^+$
4. ✗ $((R1 \cap R2) \rightarrow R1) \in F^+$

Q.60 The 9's compliment of the decimal number 139452 is:

Question ID : **2391303418**
Status : **Answered**

Ans
1. ✗ 971658

2. 971659
3. 860547
4. 860548

Chosen Option : **3**

Q.61 A flip-flop has a 20-nano second delay from the time its CP input goes from 1 to 0 to the time the output is complimented. What is the maximum delay in a 16-bit binary ripple counter that uses these flip-flops?

Question ID : **2391303422**
Status : **Answered**
Chosen Option : **2**

Ans
1. 20 ns
2. 320 ns
3. 36 ns
4. 16 ns

Q.62 Let L be the language on A = {a, b, c} which consists of all words of the form $w = a^r b^s c^t$ where r, s, t > 0. Which of the following is the valid regular expression 'r' such that L = L(r)?

Question ID : **2391303454**
Status : **Answered**
Chosen Option : **2**

Ans
1. $r = a^*b^*c^*$
2. $r = aa^*bb^*c^*$
3. $r = aa^*b^*cc^*$
4. $r = aa^*bb^*cc^*$

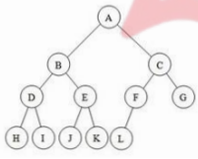
Q.63 Match the following.

	List-I	List-II
I)	Dijkstra's Algorithm	P) Divide and Conquer Approach
II)	Tower of Hanoi	Q) Greedy Approach
III)	Floydd-Warshall Algorithm	R) Dynamic Approach
IV)	Merge Sort	S) Recursion

Question ID : **2391303440**
Status : **Answered**
Chosen Option : **1**

Ans
1. I – Q, II – S, III – R, IV – P
2. I – S, II – Q, III – P, IV – R
3. I – S, II – Q, III – R, IV – P
4. I – Q, II – S, III – P, IV – R

Q.64 The listing of nodes after applying the preorder traversal over the following binary tree is:



Question ID : **2391303494**
Status : **Answered**
Chosen Option : **4**

Ans
1. A, B, D, H, I, E, J, K, C, F, G, L
2. H, D, I, B, J, E, K, A, L, F, C, G
3. H, I, D, J, K, E, B, L, F, G, C, A
4. A, B, D, H, I, E, J, K, C, F, L, G

Q.65 Consider the following relation schema R along with the tuples.

Employee(name, salary) = {<e1, 10000>, <e2, 5000>, <e3, 2500>, <e4, 7500>, <e5, 8900>, <e6, 9800>}

What is the output of following SQL query?

SELECT name, MAX(salary) FROM Employee WHERE salary < (SELECT MAX(salary) FROM Employee);

Question ID : **2391303486**
Status : **Answered**
Chosen Option : **3**

Ans
1. <e3, 2500>
2. <e5, 8900>
3. <e6, 9800>
4. <e1, 10000>

Q.66 Maximum number of edges in a simple graph with 'n' vertices and 'k' components is:

Question ID : **2391303438**
Status : **Answered**
Chosen Option : **1**

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

✔ 2. $\frac{(n-k)(n-k+1)}{2}$

✘ 3. n^2

✘ 4. $\frac{(n)(n-1)}{2}$

Q.67 The number of elements in a one-dimensional array with lowest and highest index values as -1024 and 1024 is:

Question ID : **2391303436**
Status : **Answered**
Chosen Option : **1**

Ans
✘ 1. 2048
✘ 2. 0
✘ 3. 1024
✔ 4. 2049

Q.68 Total number of spanning tree of a complete graph of 4 vertices K_4 is:

Question ID : **2391303497**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 15
✔ 2. 16
✘ 3. 3
✘ 4. 17

Q.69 Which of the following relationships holds for non-random-access memory, where T_n = average time to read or write n bits, T_a = average access time, n = number of bits and r = transfer rate in bits per second?

Question ID : **2391303481**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. $T_a = T_n + n/r$
✔ 2. $T_n = T_a + n/r$
✘ 3. $T_a = T_n + r/n$
✘ 4. $T_n = T_a + r/n$

Q.70 Match the following.

	List-1	List-2
I)	Independent access	A) RAID 0
II)	Parallel access	B) RAID 3
III)	Mirroring	C) RAID 5
IV)	Striping	D) RAID 1

Question ID : **2391303480**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. I – B, II – C, III – D, IV – A
✔ 2. I – C, II – B, III – D, IV – A
✘ 3. I – A, II – D, III – B, IV – C
✘ 4. I – B, II – A, III – D, IV – C

Q.71 Consider an information exchange scenario where *Anthony* is the sender and *Bond* is the intended recipient of the data. Match the following appropriately.

List I		List II
I)	Message authentication	A) Anthony must not be able to deny sending a message that he or she, in fact, did send
II)	Message confidentiality	B) The message must arrive at the Bond's side exactly as it was sent
III)	Message integrity	C) Bond needs to be sure of Anthony's identity and that an imposter has not sent the message
IV)	Message non-repudiation	D) The transmitted message must make sense to only Bond, and to all others it must be garbage

Question ID : **2391303470**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. I – C, II – B, III – D, IV – A
✘ 2. I – C, II – D, III – A, IV – B
✔ 3. I – C, II – D, III – B, IV – A
✘ 4. I – A, II – D, III – B, IV – C

Q.72 If the address of the operand is embedded in the instruction code itself, then the addressing mode is termed as:

Question ID : **2391303475**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Register mode

✔ 2. Direct mode

✘ 3. Displacement mode

✘ 4. Immediate mode

Q.73 Consider the process details given in the following table.

Process ID	CPU Burst	Arrival Time	Priority
P0	3	0	1
P1	9	2	4
P2	7	4	3
P3	6	3	2

A new pre-emptive scheduling algorithm is proposed, i.e., the Longest Remaining Time Next (LRTN), wherein ties are broken by giving priority to the process with the highest priority. Calculate the following.

i. Turnaround time for Process P2
ii Response time for Process P3

Question ID : **2391303517**
Status : **Answered**
Chosen Option : **2**

Ans

✔ 1. (i) 20, (ii) 6

✘ 2. (i) 19, (ii) 3

✘ 3. (i) 19, (ii) 8

✘ 4. (i) 20, (ii) 7

Q.74 Under normal circumstances, the cardinality ratio of the binary relationship "Write" relating "Author" and "Book" entities is:

Question ID : **2391303482**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. 1 : N

✘ 2. N : 1

✘ 3. 1 : 1

✔ 4. M : N

Q.75 If T is a binary tree with N nodes, then the number of levels is at least:

Question ID : **2391303489**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. $\lfloor log_2(N+1) \rfloor$

✘ 2. N-1

✘ 3. N

✘ 4. $\lfloor log_2(N+1) \rfloor$

Q.76 Which of the following declares 'pf' as a pointer to a function, which returns an integer quantity and requires two integer arguments?

Question ID : **2391303505**
Status : **Answered**
Chosen Option : **2**

Ans

✘ 1. int *pf(int, int);

✔ 2. int (*pf) (int, int);

✘ 3. (int *) pf(int, int);

✘ 4. int (int *pf(int, int));

Q.77 The output of the following 'C' language code is:

```
void main(){
        char arr[10];
        arr = "world";
        printf("%s", arr);
}
```

Question ID : **2391303461**
Status : **Answered**
Chosen Option : **1**

Ans

✘ 1. world

✘ 2. world5

✘ 3. world10

✔ 4. L-value required error

Q.78 Interrupt generated due to which of the following operations does not belong to program-related interrupt category?

Question ID : **2391303476**
Status : **Answered**
Chosen Option : **2**

Ans

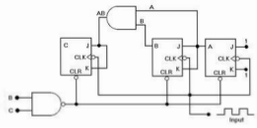
✘ 1. Division by zero

✗ 2. Attempt to execute an illegal machine instruction

✓ 3. Memory parity error

✗ 4. Reference outside a user's allowed memory space

Q.79 The counter implemented by the following circuit diagram where inputs to the NAND gate are the outputs of the B and C flip-flops, is:



Question ID : **2391303425**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. MOD-7 Counter
✓ 2. MOD-6 Counter
✗ 3. MOD-8 Counter
✗ 4. MOD-4 Counter

Q.80 What will be the minimum Hamming distance for the following coding scheme?

Data Word	Code Word
00	00111
01	01001
10	10101
11	11100

Question ID : **2391303466**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 1
✓ 2. 2
✗ 3. 3
✗ 4. 4

Q.81 In clustering index, the number of index entries is same as the number of:

Question ID : **2391303432**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. attributes in data file
✗ 2. records in data file
✗ 3. blocks in data file
✓ 4. distinct index field values

Q.82 Which of the following operators can be used if a portion of a given bit patterns needs to be copied to a new word, while the remainder of the new word is filled with 0s?

Question ID : **2391303508**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Logical AND
✓ 2. Bitwise AND
✗ 3. Bitwise OR
✗ 4. Bitwise XOR

Q.83 Let each process P_i, i=1 to 7 executes the following code.

```
repeat
      P(mutex);
      CS
      V(mutex);
forever
```

The process P_8 executes the following code:

```
repeat
      V(mutex);
      CS
      V(mutex);
forever
```

What is the maximum number of processes that can be present in the critical section at any point of time? Given that the initial value of binary semaphore variable "mutex" is 1.

Question ID : **2391303473**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 7
✓ 2. 8
✗ 3. 1
✗ 4. 10

Q.84 Which of the following is the best-case time complexity of Floyd's algorithm for finding shortest paths in a graph with 'n' vertices?

Question ID : **2391303445**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. $\Theta(n^2)$
✗ 2. $\Theta(1)$
✗ 3. $\Theta(n)$
✓ 4. $\Theta(n^3)$

Q.85 State TRUE or FALSE for the following.

(i) A sine wave with a phase of 180° starts at time 0 with a zero amplitude. The amplitude is decreasing.
(ii) If a signal changes instantaneously, its frequency is zero.
(iii) In bipolar encoding, we use three voltage levels: positive, negative and zero.
(iv) Infrared signals can be used for short-range communication in a closed area using ground propagation.

Question ID : **2391303468**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. (i) TRUE, (ii) FALSE, (iii) TRUE, (iv) FALSE
✗ 2. (i) TRUE, (ii) TRUE, (iii) TRUE, (iv) FALSE
✗ 3. (i) FALSE, (ii) TRUE, (iii) FALSE, (iv) FALSE
✗ 4. (i) TURE, (ii) TRUE, (iii) FALSE, (iv) FALSE

Q.86 Consider the characters and their frequency counts given in the following table.

	a	b	c	d	e	f
Frequency (in 1000s)	24	16	12	20	8	4

Using the Huffman coding technique, which of the following is the valid code for character 'c'?

Question ID : **2391303439**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 11111
✓ 2. 1110
✗ 3. 11110
✗ 4. 110

Q.87 A block of addresses is granted to a small organization. If one of the addresses is 210.32.64.79/26, then what will be the values of the following?

(i) First address
(ii) Last address
(iii) Total number of addresses

Question ID : **2391303469**
Status : **Answered**
Chosen Option : **2**

Ans
✓ 1. (i) 210.32.64.64, (ii) 210.32.64.127, (iii) 64
✗ 2. (i) 210.32.64.64, (ii) 210.32.64.255, (iii) 32
✗ 3. (i) 210.32.64.79, (ii) 210.32.64.255, (iii) 64
✗ 4. (i) 210.32.64.64, (ii) 210.32.64.79, (iii) 128

Q.88 A _____ takes a directed _____ graph G and produces a linear ordering of all its vertices such that for every directed edge <v, w> in G, the vertex v comes before the vertex w in the ordering.

Question ID : **2391303492**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. breadth first search; acyclic
✓ 2. topological sort; acyclic
✗ 3. breadth first search; cyclic
✗ 4. topological sort; cyclic

Q.89 Match the following.

List I	List II
I) Stack	P) Non-linear
II) Heap tree	Q) Complete binary tree
III) Tree	R) Ordered list
IV) Binary search	S) Linear

Question ID : **2391303495**
Status : **Answered**
Chosen Option : **1**

Ans
1. I – S, II – R, III – P, IV – Q
2. I – S, II – Q, III – P, IV – R
3. I – S, II – P, III – Q, IV – R
4. I – P, II – Q, III – R, IV – S

Q.90 Which of the following statements is TRUE for the function prototype declaration given below?

Int *(*P) (char *Q[]);

Question ID : **2391303506**
Status : **Answered**
Chosen Option : **3**

Ans
1. P is a function that accepts an argument which is a character array and returns a pointer to an integer quantity.
2. P is a function that accepts an argument which is a pointer to a character array and returns a pointer to an integer quantity.
3. P is a pointer to a function that accepts an argument which is an array of character pointers, and returns a pointer to an integer quantity.
4. P is a pointer to function that accepts an argument which is a character array and returns a pointer to an integer quantity.

Q.91 Consider the following segment of codes related to process creation. How many times the message "child process created" will be printed?

```
#include <stdio.h>
void main(){
fork(); fork(); fork();
printf("child process created");
}
```

Question ID : **2391303513**
Status : **Answered**
Chosen Option : **3**

Ans
1. 9
2. 7
3. 8
4. 3

Q.92 What is the output when the following segment of 'C' code is executed?

```
void main(){
float a = 123.456;
printf("%7.2f, %7.3f, %12e", a, a, a);
}
```

Question ID : **2391303503**
Status : **Answered**
Chosen Option : **2**

Ans
1. 123.450, 123.4560, 1.234560e+02
2. 123.46, 123.456, 1.234560e+02
3. 123.456000, 123.456, 0.1234560e+03
4. 123.45, 123.4560, 1.234560e+02

Q.93 Which of the following is a seven-bit code?

Question ID : **2391303419**
Status : **Answered**
Chosen Option : **2**

Ans
1. Biquinary code
2. BCD code
3. 2421 code
4. Excess-3 code

Q.94 Which of the following attributes can be considered as composite, single-valued and key attribute?

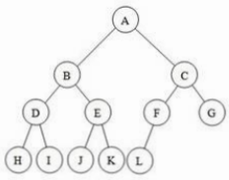
Question ID : **2391303426**
Status : **Answered**
Chosen Option : **2**

Ans
1. Age
2. Date of birth
3. Gender
4. Enrollment number

Q.95

Question ID : **2391303491**
Status : **Answered**
Chosen Option : **2**

Which of the following statements about the following binary tree is FALSE?



Ans
1. It is a binary search tree. ✔
2. It is a complete binary tree. ✘
3. Nodes 'J' and 'K' are siblings. ✘
4. Node 'B' is the ancestor of node 'J'. ✘

Q.96 The default storage class for functions in 'C' language is:

Question ID : **2391303459**
Status : **Answered**
Chosen Option : **2**

Ans
1. Static ✘
2. Register ✘
3. Extern ✔
4. Auto ✘

Q.97 If T is a binary tree with number of levels as L, then the number of leaf nodes in the binary tree is at most:

Question ID : **2391303490**
Status : **Answered**
Chosen Option : **2**

Ans
1. 2^{L+1} ✘
2. 2L ✘
3. 2^{L} ✘
4. 2^{L-1} ✔

Q.98 If a connected graph G does not contain any vertex whose removal disconnects the rest of the graph, then G is called:

Question ID : **2391303493**
Status : **Answered**
Chosen Option : **2**

Ans
1. Biconnected graph ✔
2. Separable graph ✘
3. Forest ✘
4. Diagraph ✘

Q.99 Consider a cache memory organization with m lines in which the cache is divided into v sets, each of which consists of k lines. The set associative mapping technique reduces to direct mapping when:

Question ID : **2391303479**
Status : **Answered**
Chosen Option : **2**

Ans
1. v = m and k = m ✘
2. v = 1 and k = m ✘
3. v = m and k = 1 ✔
4. v = 1 and k = 1 ✘

Q.100 Consider a memory unit of size 96 K × 16, where first component represents the total number of words and that the second component represents the number of bits per word. What will be the number of address lines and input-output data lines?

Question ID : **2391303421**
Status : **Answered**
Chosen Option : **2**

Ans
1. 16 address lines, 7 data lines ✘
2. 7 address lines, 16 data lines ✘
3. 17 address lines, 16 data lines ✔
4. 16 address lines, 17 data lines ✘