Teachingninja.in

HPCL Engineer (IS Officer) 04 Nov 2022

HPCL-01st & 04th Nov 22

Participant ID	
Participant Name	
Test Center Name	
Test Date	04/11/2022
Test Time	2:00 PM - 4:30 PM
Subject	IS Officer

Section : **English Language**

Q.1 **Select the correct option to fill in the blanks.**

Throughout history, fantastic treasures from various cultures have been stolen or _____ gone missing.

Ans
✗ 1. mystiriously
✓ 2. mysteriously
✗ 3. mysiterously
✗ 4. misteriously

Question ID : **8401605738**
Status : **Answered**
Chosen Option : **2**

Q.2 **Select the most appropriate synonym of the given word.**

TENDER

Ans
✗ 1. robust
✗ 2. durable
✗ 3. sturdy
✓ 4. delicate

Question ID : **8401605734**
Status : **Answered**
Chosen Option : **4**

Q.3 **Select the option which is NOT an antonym of another word by way of adding the prefix 'in-'.**

Ans
✗ 1. inoffensive
✓ 2. insidious
✗ 3. inscrutable
✗ 4. innumerable

Question ID : **8401605733**
Status : **Answered**
Chosen Option : **1**

Q.4 **Select the most appropriate option to fill in the blank.**

She _____ her homework yet; she cannot go out to play.

Ans
- ✗ 1. did not finish
- ✗ 2. does not finish
- ✗ 3. is not finishing
- ✓ 4. has not finished

Question ID : **8401605744**
Status : **Answered**
Chosen Option : **4**

Q.5 **Select the most appropriate synonym of the given word.**

PENURIOUS

Ans
- ✗ 1. benevolent
- ✗ 2. extravagant
- ✗ 3. prodigal
- ✓ 4. economical

Question ID : **8401605735**
Status : **Answered**
Chosen Option : **1**

Q.6 **Select the most appropriate meaning of the given idiom.**

put your foot down

Ans
- ✗ 1. to make great effort
- ✗ 2. to squash an insect
- ✓ 3. to be firm about something
- ✗ 4. to get into trouble

Question ID : **8401605737**
Status : **Answered**
Chosen Option : **4**

Q.7 **Select the most appropriate meaning of the given idiom.**

rock the boat

Ans
- ✗ 1. enjoy a boat ride
- ✓ 2. act without thinking
- ✗ 3. escape from problems
- ✗ 4. disturb an existing situation

Question ID : **8401605736**
Status : **Answered**
Chosen Option : **2**

Q.8 **Select the most appropriate option to fill in the blank.**

Sanjana is _____ different from her mother.

Ans
✗ 1. the very
✓ 2. very
✗ 3. a very
✗ 4. much very

Question ID : **8401605747**
Status : **Answered**
Chosen Option : **2**

Q.9 **Given below are four jumbled sentences. Select the option that gives their correct order forming a meaningful and coherent paragraph.**

A. If the Beatrice is ever found, it may be possible to retrieve the ancient sarcophagus.
B. In the 1830s, English military officer Howard Vyse explored the Giza pyramids.
C. Vyse tried to ship the sarcophagus to England in 1838 aboard the merchant ship Beatrice, but the ship sank during its journey and took the ornate sarcophagus down with it.
D. Vyse made a number of discoveries at Giza, including an ornate sarcophagus found in Menkaure's pyramid.

Ans
✗ 1. BACD
✗ 2. ADBC
✓ 3. BDCA
✗ 4. CDAB

Question ID : **8401605740**
Status : **Answered**
Chosen Option : **3**

Q.10 **Select the option that completes the given proverb correctly.**

_____ of all trades is master of none.

Ans
✗ 1. A workman
✓ 2. A jack
✗ 3. A speaker
✗ 4. A king

Question ID : **8401605748**
Status : **Answered**
Chosen Option : **1**

Q.11 **Select the most appropriate option to fill in the blank.**

My brother Anurag is one year _____ than your brother Rohit.

Ans
✗ 1. elder
✓ 2. older
✗ 3. eldest
✗ 4. oldest

Question ID : **8401605746**
Status : **Answered**
Chosen Option : **2**

Q.12 **Select the most appropriate option to fill in the blank.**

This time next week, they _____ in Canada.

Ans
✗ 1. have been
✗ 2. had been
✗ 3. be
✓ 4. will be

Question ID : **8401605743**
Status : **Answered**
Chosen Option : **4**

Q.13 **Select the segment which has a spelling error in the given sentence. If there is no error, select 'No error'.**

The National Education Policy, 2020, is based on the foundational principals of access, equity, quality, affordability and accountability..

Ans
✗ 1. of access, equity, quality, affordability and accountability..
✓ 2. is based on the foundational principals
✗ 3. The National Education Policy, 2020
✗ 4. No error

Question ID : **8401605739**
Status : **Answered**
Chosen Option : **2**

Q.14 **Select the most appropriate option to fill in the blank.**

In 1025 AD, Mahmud Gazni _____ an attack on the Somnath temple in order _____ the wealth that had gathered within the temple.

Ans
✗ 1. to launch ; stealing
✓ 2. launched ; to steal
✗ 3. launching ; steal
✗ 4. launch ; stole

Question ID : **8401605742**
Status : **Answered**
Chosen Option : **2**

Q.15 **Select the most appropriate option to fill in the blank.**

One pirate ship was _____ by the king's soldiers but the other one _____.

Ans
✗ 1. kidnapped ; deserted
✓ 2. captured ; escaped
✗ 3. collected ; broke
✗ 4. abducted ; arived

Question ID : **8401605741**
Status : **Answered**
Chosen Option : **2**

Q.16 **Select the most appropriate antonym of the given word.**

IRATE

Ans
✗ 1. indignant
✗ 2. annoyed
✗ 3. furious
✓ 4. cheerful

Question ID : **8401605732**
Status : **Answered**
Chosen Option : **4**

Q.17 **Select the most appropriate option to fill in the blank.**

People were quite prepared that day _____ the demolition of the Supertech Twin Towers in NOIDA.

Ans
✗ 1. to
✓ 2. for
✗ 3. of
✗ 4. at

Question ID : **8401605745**
Status : **Answered**
Chosen Option : **2**

Section : **Quantitative Aptitude**

Q.1 **Two bowlers A and B take average wickets of 28 and 34 in a series of 8 and 12 matches, respectively. If they took 5 wickets in the 9th match and 1 wicket in the 13th match, then the average number of wickets of both the bowlers is:**

Ans
✗ 1. 30
✗ 2. 32
✗ 3. 28
✓ 4. 29

Question ID : **8401605754**
Status : **Answered**
Chosen Option : **3**

Q.2 **A dealer has the following three schemes running for products in his store. Which of the following has maximum discount percentage?**

I. Two successive discounts of 15% and 20%
II. Buy 5 get 3
III. Buy 5 get 6

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

Question ID : **8401605764**
Status : **Answered**
Chosen Option : **4**

Q.3 **Krishna's salary was increased by 8% in the first year and then increased by 9% in the next year. In the third year, he earned Rs.2,536 for working overtime. If his initial salary was Rs.32,500, his total salary drawn in the third year is:**

Ans
✗ 1. Rs.40,979
✗ 2. Rs.40,975
✓ 3. Rs.40,795
✗ 4. Rs.40,579

Question ID : **8401605757**
Status : **Answered**
Chosen Option : **2**

Q.4 **A merchandiser sells bananas and apples at a gain of 20% on bananas and at a loss of 5% on apples. If the cost price of both fruits is Rs.5,000 and he earned 6% on the whole, then the cost price of bananas is:**

Ans
✗ 1. Rs.2,800
✓ 2. Rs.2,200
✗ 3. Rs.2,500
✗ 4. Rs.2,820

Question ID : **8401605759**
Status : **Answered**
Chosen Option : **2**

Q.5 The diagonal of a cube is $6\sqrt{3}$ ft. If 1 kg paint covers 12 sq ft, how much will it cost to paint the exterior of the cube if the cost of paint per kg is Rs.320?

Ans
✓ 1. Rs.5,760
✗ 2. Rs.5,706
✗ 3. Rs.5,607
✗ 4. Rs.5,670

Question ID : **8401605780**
Status : **Answered**
Chosen Option : **2**

Q.6 **Ten years ago, a man is six times as old as his daughter. Three years hence, thrice his age will be equal to five times of his daughter's age. The present age of his daughter is:**

Ans
✓ 1. 12 years
✗ 2. 13 years
✗ 3. 14 years
✗ 4. 15 years

Question ID : **8401605775**
Status : **Not Answered**
Chosen Option : **--**

Q.7 **In what ratio must water be mixed with milk to gain 20% by selling the mixture at cost price?**

Ans

✔ 1. 1 : 5

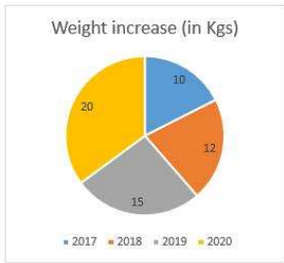
✘ 2. 2 : 5

✘ 3. 2 : 3

✘ 4. 3 : 4

Question ID : **8401605755**
Status : **Answered**
Chosen Option : **3**

Q.8 The given chart shows the increase in weight of a boy over the given years. Study the given chart and answer the question that follows.



What is the percentage change in weight of the boy from 2018 to 2019?

Ans

✔ 1. 25%

✘ 2. 75%

✘ 3. 50%

✘ 4. 80%

Question ID : **8401605772**
Status : **Answered**
Chosen Option : **1**

Q.9 **The distance between two stations, Mathura and Haridwar, is 356 km. Train ABC Express, which is running at a speed of 72 km/h, leaves Mathura station at 10:50 p.m. Train XYZ Express, which is running at the speed of 82 km/h, leaves Haridwar station at 11:30 p.m. At what time will ABC Express and XYZ Express meet each other?**

Ans

✘ 1. 12:50 a.m.

✘ 2. 1:00 a.m.

✘ 3. 1:50 a.m.

✔ 4. 1:30 a.m.

Question ID : **8401605771**
Status : **Not Answered**
Chosen Option : **--**

Q.10 **Ram and Syam are working in an IT company with salaries of Rs.23,500 and Rs.32,500, respectively. The chairman of the company wishes to give increments of 6% proportionate to their salaries. Their new salaries will be in the ratio of:**

Ans

✗ 1. $\frac{45}{67}$

✗ 2. $\frac{65}{47}$

✓ 3. $\frac{47}{65}$

✗ 4. $\frac{67}{45}$

Question ID : **8401605766**
Status : **Answered**
Chosen Option : **3**

Q.11 **Two marbles are drawn in succession from a box containing 10 red, 30 white, 20 blue and 15 orange marbles. Find the probability that the first drawn marble is red and the second drawn marble is white.**

Ans

✗ 1. $\frac{6}{75}$

✓ 2. $\frac{4}{75}$

✗ 3. $\frac{8}{75}$

✗ 4. $\frac{9}{75}$

Question ID : **8401605777**
Status : **Not Answered**
Chosen Option : **--**

Q.12 The ratio of the percentage $16\frac{2}{3}\%$ is:

Ans

✗ 1. $\frac{1}{8}$

✗ 2. $\frac{1}{7}$

✗ 3. $\frac{1}{5}$

✓ 4. $\frac{1}{6}$

Question ID : **8401605758**
Status : **Answered**
Chosen Option : **4**

Q.13 **The monthly salary of teaching and non-teaching staff at a college is in the ratio of 5 : 3. They wish to contribute 3% and 2% of their salaries to a welfare society. If each non-teaching staff member contributes Rs.390, then the teaching staff salary is:**

Ans
✗ 1. Rs.35,200
✗ 2. Rs.35,020
✓ 3. Rs.32,500
✗ 4. Rs.32,050

Question ID : **8401605765**
Status : **Answered**
Chosen Option : **3**

Q.14 The vulgar fraction of $0.\overline{32} + 0.2\overline{6} - 0.\overline{53}$ is:

Ans
✓ 1. $\frac{27}{495}$
✗ 2. $\frac{53}{495}$
✗ 3. $\frac{27}{990}$
✗ 4. $\frac{54}{495}$

Question ID : **8401605752**
Status : **Not Answered**
Chosen Option : **--**

Q.15 **A, B and C are trains travelling from Delhi to Ahmedabad at speeds of 45 km/h, 55 km/h and 61 km/h in 3 hours, 2 hours and 1 hour, respectively. Their average speed is:**

Ans
✓ 1. 51 km/h
✗ 2. 41 km/h
✗ 3. 55 km/h
✗ 4. 45 km/h

Question ID : **8401605769**
Status : **Answered**
Chosen Option : **1**

Q.16 **There are two number in the ration 5 : 3. If the difference between the two numbers is 22, find the larger number.**

Ans
✗ 1. 22
✓ 2. 55
✗ 3. 33
✗ 4. 44

Question ID : **8401605776**
Status : **Answered**
Chosen Option : **2**

Q.17 **What annual instalment will discharge a debt of Rs.16550 due in three years at 10% compound interest annually?**

Ans
- ✗ 1. Rs. 6,556
- ✓ 2. Rs. 6,655
- ✗ 3. Rs. 5,566
- ✗ 4. Rs. 5,665

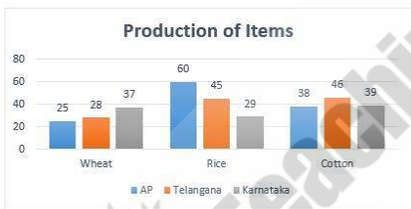
Question ID : **8401605768**
Status : **Not Answered**
Chosen Option : **--**

Q.18 **A merchant marked his goods at 20% above the cost price and offered a discount of 5%. Seeing poor results, he again offered 8% discount and noticed a growth in his sales. His profit will be:**

Ans
- ✓ 1. 4.88%
- ✗ 2. 10.88%
- ✗ 3. 5.88%
- ✗ 4. 3.88%

Question ID : **8401605762**
Status : **Answered**
Chosen Option : **1**

Q.19 Study the given chart and answer the question that follows.



Find the ratio between the difference of rice in AP and Telangana to that of the difference of wheat in Karnataka and AP.

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

Question ID : **8401605773**
Status : **Answered**
Chosen Option : **1**

Q.20 **If two numbers are in the ratio 3 : 5 and their LCM is 45, then the sum of those numbers is:**

Ans
- ✗ 1. 22
- ✗ 2. 15
- ✗ 3. 9
- ✓ 4. 24

Question ID : **8401605750**
Status : **Answered**
Chosen Option : **4**

Q.21 If the area of a circular field is 3850 m^2, then the cost of fencing it at the rate of Rs.52 per metre is:

Ans
✗ 1. Rs.11,220
✗ 2. Rs.11,560
✗ 3. Rs.11,230
✓ 4. Rs.11,440

Question ID : **8401605782**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.22 **The largest length of tape to be used to measure a room's sides, whose distances are 6 m 48 cm, 11m 52 cm and 16m 20 cm is:**

Ans
✓ 1. 36
✗ 2. 32
✗ 3. 72
✗ 4. 45

Question ID : **8401605751**
Status : **Not Answered**
Chosen Option : **--**

Q.23 What is the nature of the roots of $3x^2 - 6x + 5 = 0$?

Ans
✗ 1. The roots are real and more than 2.
✓ 2. There are no real roots.
✗ 3. The roots are real and distinct.
✗ 4. The roots are real and equal.

Question ID : **8401605778**
Status : **Answered**
Chosen Option : **2**

Q.24 The value of $\sqrt{14 + 2\sqrt{45}}$ is:

Ans
✗ 1. $\sqrt{3} + \sqrt{5}$
✗ 2. $\sqrt{3} - \sqrt{5}$
✓ 3. $3 + \sqrt{5}$
✗ 4. $3 - \sqrt{5}$

Question ID : **8401605749**
Status : **Not Answered**
Chosen Option : **--**

Q.25 **A dealer used a faulty weighing machine and measured 950 g instead of 1 kg and claims he sell his goods at cost price. His profit percentage is:**

Ans
✗ 1. 4.56%
✗ 2. 5.56%
✗ 3. 4.26%
✓ 4. 5.26%

Question ID : **8401605761**
Status : **Answered**
Chosen Option : **4**

Q.26 **A vendor earns 25% profit on selling his goods at Rs.2,355. The cost price of the goods is:**

Ans
✗ 1. Rs.1,848
✗ 2. Rs.1,488
✗ 3. Rs.1,484
✓ 4. Rs.1,884

Question ID : **8401605760**
Status : **Answered**
Chosen Option : **4**

Q.27 **A's income is two-fifth of B's income. The expenditure of A is 50% of B's expenditure and the income, expenditures of B are Rs. 48250, 28% of the income of A, respectively. Then the savings of A is:**

Ans
✗ 1. Rs.16,985
✗ 2. Rs.16,589
✓ 3. Rs.16,598
✗ 4. Rs.16,895

Question ID : **8401605756**
Status : **Answered**
Chosen Option : **3**

Q.28 The factorisation of the equation $2x^2 + 7x + 6 = 0$ is:

Ans
✗ 1. $(2x-3)(x+2)=0$
✗ 2. $(2x-3)(x-2)=0$
✗ 3. $(2x+3)(x-2)=0$
✓ 4. $(2x+3)(x+2)=0$

Question ID : **8401605779**
Status : **Answered**
Chosen Option : **4**

Q.29 **What annual installment will discharge a debt of Rs.1,431 due in three years at 6% simple interest?**

Ans
✗ 1. Rs. 350
✗ 2. Rs. 550
✗ 3. Rs. 445
✓ 4. Rs. 450

Question ID : **8401605767**
Status : **Answered**
Chosen Option : **2**

Q.30 **A family wishes to attend a party 150 km away from their home. They travel at an average speed of 50 km/h and return at a speed of 75 km/h. Their average speed for the whole journey is:**

Ans
✗ 1. 62 km/h
✓ 2. 60 km/h
✗ 3. 57 km/h
✗ 4. 65 km/h

Question ID : **8401605753**
Status : **Answered**
Chosen Option : **2**

Q.31 **The number of 5-digit numbers that can be formed by the digits 2, 2, 3, 3 and 4 is:**

Ans
✗ 1. 35
✓ 2. 30
✗ 3. 25
✗ 4. 20

Question ID : **8401605774**
Status : **Answered**
Chosen Option : **2**

Q.32 **The length of train A is 100 m more than the length of a platform. What is the time taken by train A to cross train B travelling in the opposite direction if the speed of train B is 70 km/h and the speed of train A is 90 km/h and the time taken by train A and B to cross the same platform is 24 seconds and 36 seconds, respectively?**

Ans
✗ 1. 17 seconds
✓ 2. 18 seconds
✗ 3. 15 seconds
✗ 4. 16 seconds

Question ID : **8401605770**
Status : **Answered**
Chosen Option : **2**

Q.33 If the curved surface area of a right circular cylinder is 3696 cm^2 and the circumference of its base is 88 cm, then find its volume.

Ans

✗ 1. 27318 cm^3

✓ 2. 25872 cm^3

✗ 3. 24524 cm^3

✗ 4. 26256 cm^3

Question ID : **8401605781**
Status : **Answered**
Chosen Option : **2**

Q.34 **An automobile accessory costs Rs.5,825. A customer requested a discount of 18%, in addition to the discount of 5% already offered by the merchant. The cost of the accessory after these discounts will be:**

Ans

✗ 1. Rs. 4,536.675

✗ 2. Rs. 4,547.675

✓ 3. Rs. 4,537.675

✗ 4. Rs. 4,637.675

Question ID : **8401605763**
Status : **Answered**
Chosen Option : **3**

Section : **Intellectual Potential Test**

Q.1 **Amar, Beerbhan, Vaishali, Mohit, Nitin, Pallavi, Jyoti, Preeti and Sonu are nine friends and they are sitting around a circular table by facing the centre of the table. Mohit is sitting second to the right of Pallavi. Only two people are sitting between Mohit and Vaishali. Two people are sitting between Nitin and Amar. Neither Preeti nor Nitin are an immediate neighbor of Vaishali or Mohit. Only one person is sitting between Vaishali and Nitin. Preeti is an immediate neighbor of Nitin. Amar sits third to the left of Jyoti. Vaishali sits second to the right of Beerbhan.**

Who is sitting on the immediate left of Vaishali?

Ans

✗ 1. Amar

✗ 2. Mohit

✗ 3. Nitin

✓ 4. Jyoti

Question ID : **8401605783**
Status : **Answered**
Chosen Option : **2**

Q.2 **There are seven boxes named Mega, Meta, Rita, Docu, Gimu, Tina, Pina and Lopu of different colours, like; Black, Violet, Red, Blue, Yellow, White and Green but not necessarily in the same order. Only two boxes are kept between yellow colour box and box Docu, which is kept above yellow colour box. Box Docu is not of green colour. Black colour box is kept above violet colour box. Neither Box Rita nor Box Gimu is of Black colour. Box Gimu is kept above box Tina. There are two boxes between box Mega and the box which is Green in colour. Box Rita is kept either immediately above or immediately below green colour box. More than two boxes are kept between Box Rita and the box which is of red colour, which is neither kept at the top nor at the bottom. Box Mega is not of red colour. Only one box is kept between red colour box and the white colour box. Box Mega and box Gimu is not of white colour. Box Meta is of blue colour and is not kept at the top and not at the bottom.**

Which box is kept immediately on the top of Box Docu?

Ans
✗ 1. Tina
✗ 2. Meta
✓ 3. Mega
✗ 4. Rita

Question ID : **8401605787**
Status : **Answered**
Chosen Option : **3**

Q.3 Statements: $B \leq C < A \geq D, E > F \geq D$

Conclusions: I. $E \geq A$ II. $F \leq C$ III. $A > B$ IV. $E \geq B$

Which one of the above conclusions is correct?

Ans
✗ 1. All I, II, III and IV are true
✗ 2. Only III and IV are true
✗ 3. Only I and IV are true
✓ 4. Only III is true

Question ID : **8401605790**
Status : **Answered**
Chosen Option : **4**

Q.4 **In the morning assembly of a school, in the single line of ninth class, Madan is standing at 28th place from both the ends of line. How many students are there in the line?**

Ans
✗ 1. 56
✗ 2. 54
✗ 3. 57
✓ 4. 55

Question ID : **8401605785**
Status : **Answered**
Chosen Option : **4**

Q.5 **If '+' means subtraction, '÷' means addition, '-'means multiplication and '×' means division, then which of the following equation is correct?**

Ans
✗ 1. 112 + 24 × 68 – 24 = 204
✓ 2. 16 ÷ 88 – 10 + 50 = 846
✗ 3. 18 ÷ 128 - 4 × 12 = 108
✗ 4. 224 × 88 – 24 + 20 = 92

Question ID : **8401605812**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.6 **If the day before yesterday was Friday, when will Tuesday be?**

Ans
✗ 1. Tomorrow
✗ 2. Today
✓ 3. Day after tomorrow
✗ 4. Two days after tomorrow

Question ID : **8401605786**
Status : **Answered**
Chosen Option : **3**

Q.7 **Two friends Ashish and Mohit start moving in the opposite direction on a main road and both are 1500 meters apart from each other. Ashish walks for 250 meters on the main road and takes a right turn and then walks for another 150 meters. Then he turns left and walks for another 250 meters and then turns in the direction to reach back to the main road. Meanwhile, Mohit could walk only 350 meters on the main road. What is the distance between both of them at this point?**

Ans
✗ 1. 750 M
✓ 2. 650 M
✗ 3. 450 M
✗ 4. 550 M

Question ID : **8401605802**
Status : **Answered**
Chosen Option : **1**

Q.8 **Choose the correct alternative from the given options which will continue the same pattern and replace the question mark in the given number series.**

1, 2, 5, 26, 677, …….?

Ans
✗ 1. 330458
✓ 2. 458330
✗ 3. 485033
✗ 4. 330584

Question ID : **8401605794**
Status : **Answered**
Chosen Option : **2**

Q.9 **Pointing towards a woman, Sumit told to Garima that she is mother of only daughter of my son. What is relationship between the pointed woman and Sumit?**

Ans
✗ 1. Wife
✓ 2. Daughter-in-law
✗ 3. Mother-in-law
✗ 4. Mother

Question ID : **8401605805**
Status : **Answered**
Chosen Option : **2**

Q.10 **NATION:NOITAN::ACTION:?**

Ans
✓ 1. NOITCA
✗ 2. NOIACT
✗ 3. NOTICE
✗ 4. TCAION

Question ID : **8401605807**
Status : **Answered**
Chosen Option : **1**

Q.11 **Read the series: 8, 13, 11, 16, 14, 19, ... carefully and suggest the number that should come next?**

Ans
✗ 1. 24
✓ 2. 17
✗ 3. 22
✗ 4. 21

Question ID : **8401605795**
Status : **Answered**
Chosen Option : **2**

Q.12 **If + stands for 'x', x stands for '+', – stands for '÷'and ÷ stands for '–', then 10 x 4 + 8 – 4 + 12 – 6 ÷ 2= ?**

Ans
✗ 1. 42
✗ 2. 32
✗ 3. 26
✓ 4. 24

Question ID : **8401605811**
Status : **Answered**
Chosen Option : **4**

Q.13 **Uncertain number of people are sitting in a row by facing the North direction. R is sitting at one of the ends and there are two people between R and Q. Equal number of persons are sitting between U and R and U and S. Two persons are sitting between S and V. Equal number of persons are sitting to the right and left side of V. T is sitting exactly in the middle of P and S. U is third to the left of Q who is sitting fourth from one of the extreme ends of the row. P is sitting at one of the extreme ends of the row. U is not sitting on any of the extreme ends of the row. Number of people sitting between P and S are five.**

Who is sitting between U and S?

Ans
✗ 1. Q
✓ 2. S
✗ 3. R
✗ 4. P

Question ID : **8401605788**
Status : **Answered**
Chosen Option : **2**

Q.14 Following table gives the details of sales of different items sold by three different stores run by three women. Please read the table carefully and answer the question given at the end of table.

Type / Sale in Thousand	Ambika Stores	Mahima Stores	Rohini Stores
Watches	312	234	453
Calculators	231	211	342
Mob. Phones	456	765	889
Coffee Mugs	2109	2306	3212

Find the total number of Mobile Phones sold by all the three Stores.

Ans
✗ 1. 2112
✓ 2. 2110
✗ 3. 2111
✗ 4. 2113

Question ID : **8401605815**
Status : **Answered**
Chosen Option : **2**

Q.15 **A, B, C, D, E, F, G & H are eight friends sitting around a circular table by facing the centre. Three girls are sitting between A and D. A is sitting second to the left of B. H is not an immediate of B. F is sitting at the immediate left of C. D is not an immediate neighbor of either F or E.**

Who is sitting at the immediate right of C?

Ans
✗ 1. C
✗ 2. B
✗ 3. D
✓ 4. A

Question ID : **8401605784**
Status : **Answered**
Chosen Option : **4**

Q.16 **Amit is standing by facing East and took a turn of 90 degree in the anti-clockwise direction and then he turns another 180 degrees in the same direction and then 90 degree in the clockwise direction. Find which direction Amit is facing now ?**

Ans
✗ 1. South
✗ 2. East
✓ 3. West
✗ 4. North

Question ID : **8401605801**
Status : **Answered**
Chosen Option : **3**

Q.17 **Read the following numbers carefully and answer the questions as per direction given after the number series:**

289 496 337 268 245

If all the digits are to be arranged in increasing order from left to right within the number, then what will be the difference between the highest number and the lowest number thus obtained?

Ans
✓ 1. 224
✗ 2. 442
✗ 3. 242
✗ 4. 422

Question ID : **8401605793**
Status : **Answered**
Chosen Option : **1**

Q.18 **In the given question sets of alphabets are given as options and these sets shares a common similarity, whereas one is different. Choose the odd one out.**

Ans
✓ 1. SMO
✗ 2. ACV
✗ 3. XUH
✗ 4. QIB

Question ID : **8401605808**
Status : **Answered**
Chosen Option : **3**

Q.19 Following table gives the details of sales of different items sold by three different stores run by three women. Please read the table carefully and answer the question given at the end of table.

Type / Sale in Thousand	Ambika Stores	Mahima Stores	Rohini Stores
Watches	312	234	453
Calculators	231	211	342
Mob. Phones	456	765	889
Coffee Mugs	2109	2306	3212

Find the difference of highest and lowest sale of coffee Mugs.

Ans
✔ 1. 1103
✘ 2. 1003
✘ 3. 1303
✘ 4. 1203

Question ID : **8401605813**
Status : **Answered**
Chosen Option : **1**

Q.20 **In the following series of alphabet identify the letter pattern and fill the blank in the series.**

ZLM, YPQ, XST, WDE, ……..

Ans
✘ 1. UAB
✔ 2. VAB
✘ 3. UTP
✘ 4. VTP

Question ID : **8401605797**
Status : **Answered**
Chosen Option : **4**

Q.21 **In a code sign MOHAN is coded as 13158114 and ROHIT is coded as 18158920 the what will be the code for ANUJ?**

Ans
✘ 1. 1182110
✔ 2. 1142110
✘ 3. 1118210
✘ 4. 1042111

Question ID : **8401605799**
Status : **Answered**
Chosen Option : **2**

Q.22 **Read the following words and arrange their numbers by observing a pattern.**

1. Baby 2. Adult 3. Child 4. Elder 5. Teenager

Ans

✔ 1. 1,3,5,2,4

✘ 2. 2,3,4,5,1

✘ 3. 4,5,3,1,2

✘ 4. 1,3,4,5,2

Question ID : **8401605796**
Status : **Answered**
Chosen Option : **1**

Q.23 **If RAID is coded as 6821, THAT is coded as 7387 and PUT is coded as 457, what will be the code for RAT?**

Ans

✘ 1. 786

✔ 2. 687

✘ 3. 887

✘ 4. 867

Question ID : **8401605798**
Status : **Answered**
Chosen Option : **2**

Q.24 Following table gives the details of sales of different items sold by three different stores run by three women. Please read the table carefully and answer the question given at the end of table.

Type / Sale in Thousand	Ambika Stores	Mahima Stores	Rohini Stores
Watches	312	234	453
Calculators	231	211	342
Mob. Phones	456	765	889
Coffee Mugs	2109	2306	3212

Find the difference of total number of all the items sold by the Rohini and Ambika Stores. Mugs.

Ans

✘ 1. 1803

✘ 2. 1723

✔ 3. 1788

✘ 4. 1303

Question ID : **8401605814**
Status : **Answered**
Chosen Option : **3**

Q.25 **In the given question, set of pairs of alphabets are given out of which three pairs have a common relationship. Choose the pair of which does not have that same relationship.**

Ans

✘ 1. PUT:SXW

✘ 2. GOT:JRW

✘ 3. NOT:QRW

✔ 4. CAT:DBU

Question ID : **8401605810**
Status : **Answered**
Chosen Option : **4**

Q.26 **If B is sister of L and A is Mother of B and also L is father of K then what is relation of A with K?**

Ans

✗ 1. Daughter

✗ 2. Sister

✗ 3. Mother

✓ 4. Grandmother

Question ID : **8401605806**
Status : **Answered**
Chosen Option : **4**

Q.27 Statements: $P = Q \geq R = S, T > U \geq V = S$

Conclusions: I. $U \geq P$ II. $P \geq V$ III. $T \geq Q$ IV. $T > R$

Which one of the above conclusions is correct?

Ans

✗ 1. Only I and III are true

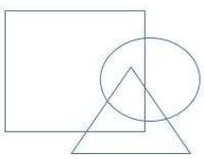
✗ 2. Only II is true

✓ 3. Only II and IV are true

✗ 4. All I, II, III and IV are true

Question ID : **8401605792**
Status : **Answered**
Chosen Option : **3**

Q.28



In the above given Venn diagram rectangle represents teachers, triangle artists and circle sports persons. Give the number of the area represented by the all the three.

Ans

✗ 1. 5

✗ 2. 4

✗ 3. 3

✓ 4. 6

Question ID : **8401605789**
Status : **Answered**
Chosen Option : **4**

Q.29 Following table gives the details of sales of different items sold by three different stores run by three women. Please read the table carefully and answer the question given at the end of table.

Type / Sale in Thousand	Ambika Stores	Mahima Stores	Rohini Stores
Watches	312	234	453
Calculators	231	211	342
Mob. Phones	456	765	889
Coffee Mugs	2109	2306	3212

Find the difference of total number of Calculators sold by all the Rohini and Ambika Stores.

Ans
✗ 1. 211
✗ 2. 112
✗ 3. 101
✓ 4. 111

Question ID : **8401605816**
Status : **Answered**
Chosen Option : **4**

Q.30 **Indicating towards a photograph of a male child, Rohit told to Amit that the child in the photograph is the son of the only son of my mother. How is Rohit related to the male child in the photograph?**

Ans
✓ 1. Father
✗ 2. Grand Father
✗ 3. Uncle
✗ 4. Son

Question ID : **8401605803**
Status : **Answered**
Chosen Option : **1**

Q.31 **Rohit is in the East of Mohan which is in the North of Sushil. If Punit is in the South of Sushil, then in which direction of Rohit, is Punit?**

Ans
✗ 1. South-East
✗ 2. North-West
✓ 3. South-West
✗ 4. North-East

Question ID : **8401605800**
Status : **Answered**
Chosen Option : **3**

Q.32 Statement: $T = U \leq S < Q = P > R$

Conclusions: 1) $T > R$ 2) $P > T$ 3) $P < U$ 4) $R > S$

Which one of the above conclusions is correct?

Ans
✗ 1. Only 1
✗ 2. Only 2 & 4
✓ 3. Only 2
✗ 4. Only 4

Question ID : **8401605791**
Status : **Answered**
Chosen Option : **3**

Q.33 **In the given question, pairs of words are given in which the words of any three pairs have a common relationship. Choose the pair of words which does not have that relationship.**

Ans
✗ 1. Car: Road
✓ 2. Ship: Captain
✗ 3. Train: Railway Track
✗ 4. Boat: Water

Question ID : **8401605809**
Status : **Answered**
Chosen Option : **2**

Q.34 **Anuj told to Mohit that the boy Golu who is playing in the ground is the younger among the two brothers of the daughter of my father's wife. What is relationship between the boy playing in the ground with Anuj?**

Ans
✗ 1. Uncle
✗ 2. Father
✗ 3. Grandfather
✓ 4. Brother

Question ID : **8401605804**
Status : **Answered**
Chosen Option : **1**

Section : **Domain Knowledge**

Q.1 Which of the following is the language of the grammar G = ({S}, {a, b}, {S→bSb|aSa| λ }, S)?

Ans
✓ 1. {wwR: w ∈{a,b}* and wR is reverse of string w}
✗ 2. {b_nab_n: n≥1 where b_n is the n number of b's}
✗ 3. {b_na_n: n≥1 where b_n is the n number of b's and a_n is n number of a's}
✗ 4. {a_nba_n: n≥1 where a_n is the n number of a's}

Question ID : **8401606032**
Status : **Answered**
Chosen Option : **1**

Q.2 **In an operating system, ready queue is maintained in the _____ memory.**

Ans

✗ 1. secondary

✗ 2. tertiary

✗ 3. virtual

✓ 4. primary

Question ID : **8401606045**
Status : **Answered**
Chosen Option : **4**

Q.3 **A combination circuit takes two 3-bit numbers as inputs and its output is the sum of these numbers. How many output lines should be there in this combinational circuit?**

Ans

✗ 1. 5

✗ 2. 6

✓ 3. 4

✗ 4. 3

Question ID : **8401605992**
Status : **Answered**
Chosen Option : **2**

Q.4 **Which of the following statements is correct about the chained matrix multiplication problem?**

Ans

✗ 1.
The time complexity of the dynamic programming algorithm for this problem is Θ (n^2).

✓ 2.
If order of matrix A is mxn and that of matrix B is nxp, then the number of elementary multiplications in AxB should be m*n*p.

✗ 3.
For this problem, the time complexity of brute force algorithm is better than dynamic programming algorithm.

✗ 4.
The time complexity of the brute force algorithm for this problem is Θ (n lg n).

Question ID : **8401606023**
Status : **Answered**
Chosen Option : **1**

Q.5 **Which of the following statements is correct about register addressing mode?**

Ans

✗ 1. In register addressing mode, the operand is stored in the instruction itself.

✓ 2. In register addressing mode, the operand is stored in a CPU register whose address is stored in the register field (address field) of the instruction.

✗ 3. In register addressing mode, the operand is stored in the memory whose address is stored in the address field of the instruction.

✗ 4. In register addressing mode, the operand is stored in a CPU register whose address is stored in the accumulator register (ACC).

Question ID : **8401605998**
Status : **Marked For Review**
Chosen Option : **1**

Q.6 **What will be the maximum number of links in a mesh-topology network of 10 nodes?**

Ans
✗ 1. 55
✗ 2. 54
✓ 3. 45
✗ 4. 10

Question ID : **8401606067**
Status : **Answered**
Chosen Option : **3**

Q.7 **Which of the following types of constraints states that 'the value of primary key cannot be Null'?**

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

Question ID : **8401606053**
Status : **Marked For Review**
Chosen Option : **3**

Q.8 **If the size of logical address space is 4096 and page size is 512 addressing units, then the high-order _____ bits of logical address designate the page number.**

Ans
✗ 1. 8
✗ 2. 9
✓ 3. 3
✗ 4. 2

Question ID : **8401606048**
Status : **Answered**
Chosen Option : **3**

Q.9 **The TCP/IP _____ layer protocols ensure that packets arrive in sequence and without error, by swapping acknowledgments of data reception, and retransmitting lost packets.**

Ans
✓ 1. transport
✗ 2. Internet
✗ 3. physical
✗ 4. application

Question ID : **8401606062**
Status : **Marked For Review**
Chosen Option : **1**

Q.10 **Which of the following statements is/are true about a shift register?**

(i) A shift register is designed by using flip flops and basic gates.
(ii) The information stored within a register can be transferred with the help of shift registers.

Ans
✗ 1. Neither (i) nor (ii)
✗ 2. Only (i)
✗ 3. Only (ii)
✓ 4. Both (i) and (ii)

Question ID : **8401605996**
Status : **Answered**
Chosen Option : **3**

Q.11 **Which of the following is the INCORRECT result corresponding to the expression (5348) - (2873) that are in the base 9 number system?**

Ans
✗ 1. 1760 in the decimal number system
✓ 2. 6E2 in the hexa-decimal system
✗ 3. 3340 in the octal number system
✗ 4. 2365 in the base 9 number system

Question ID : **8401605991**
Status : **Answered**
Chosen Option : **3**

Q.12 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int x=5, y=7;
    x = x+++ ++y;
    cout<<"x="<<x<<"y="<<y;
    return 0;
}
```

Ans
✗ 1. x=12y=7
✗ 2. x=6y=8
✓ 3. x=13y=8
✗ 4. x=12y=8

Question ID : **8401606012**
Status : **Answered**
Chosen Option : **3**

Q.13 Which of the following is a regular grammar for a language denoted by regular expression (ab)*a?

Ans

✔ 1. $G = (\{S\}, \{a, b\}, \{S \rightarrow abS|a\}, S)$

✘ 2. $G = (\{S\}, \{a, b\}, \{S \rightarrow aS|b\}, S)$

✘ 3. $G = (\{S\}, \{a, b\}, \{S \rightarrow abS|b\}, S)$

✘ 4. $G = (\{S\}, \{a, b\}, \{S \rightarrow bS|a\}, S)$

Question ID : **8401606038**
Status : **Answered**
Chosen Option : **1**

Q.14 If Σ is an alphabet, and a, b ∈ Σ, then which of following is NOT a primitive regular expression?
[Note: λ is empty string]

Ans

✘ 1. a

✘ 2. λ

✘ 3. b

✔ 4. (a+b)*

Question ID : **8401606027**
Status : **Marked For Review**
Chosen Option : **2**

Q.15 Which of the following statements is correct about context free language?

Ans

✘ 1. For every context free language there is a regular expression.

✔ 2. For every context free language there is a nondeterministic pushdown automata.

✘ 3. Every context free language is also a regular language.

✘ 4. For every context free language there is a regular grammar.

Question ID : **8401606034**
Status : **Answered**
Chosen Option : **2**

Q.16 Which of the following problems CANNOT be solved by a greedy algorithm?

Ans

✘ 1. Finding the shortest paths of all vertices from a source vertex (single source shortest paths)

✘ 2. Minimum spanning tree

✔ 3. 0-1 knapsack problem

✘ 4. Fractional knapsack problem

Question ID : **8401606019**
Status : **Answered**
Chosen Option : **4**

Q.17 Which of the following grammars is a regular grammar?

Ans

✗ 1. $G = (\{S, A\}, \{a, b\}, \{S \rightarrow aS|A, A \rightarrow bAc|bc\}, S)$

✓ 2. $G = (\{S\}, \{a, b\}, \{S \rightarrow bS|a\}, S)$

✗ 3. $G = (\{S, A\}, \{a, b\}, \{S \rightarrow aS|A, A \rightarrow abAc|bc\}, S)$

✗ 4. $G = (\{S, A\}, \{a, b\}, \{S \rightarrow aS|A, A \rightarrow bAc|abc\}, S)$

Question ID : **8401606037**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.18 Which of the following is represented using double-lined diamond in an ER-diagram?

Ans

✗ 1. Weak entity

✗ 2. Derived attribute

✗ 3. Identifying owner

✓ 4. Identifying relationship

Question ID : **8401606052**
Status : **Answered**
Chosen Option : **4**

Q.19 Which of the following is equivalent to the Boolean expression A + A'?

Ans

✗ 1. 0

✗ 2. A

✗ 3. A'

✓ 4. 1

Question ID : **8401605987**
Status : **Answered**
Chosen Option : **4**

Q.20 Which of the following provides the services of an operating system to the user programs via an Application Program Interface (API)?

Ans

✗ 1. Demand paging

✗ 2. Segmentation

✗ 3. Virtual memory

✓ 4. System call

Question ID : **8401606039**
Status : **Answered**
Chosen Option : **4**

Q.21 **Which of the following is/are optional statement(s) in an SQL query?**

(i) SELECT, (ii) FROM, (iii) WHERE

Ans

✗ 1. Only (ii)

✗ 2. Only (i) and (ii)

✓ 3. Only (iii)

✗ 4. Only (i) and (iii)

Question ID : **8401606058**
Status : **Answered**
Chosen Option : **3**

Q.22 Which of the following for loop is an infinite looping in C++?

Ans

✗ 1. for(int i=1; i<=10; i=i+2)

✓ 2. for(int i=1; ; i++)

✗ 3. for(int i=1; i>=10; i--)

✗ 4. for(int i=1; i<=10; i++)

Question ID : **8401606008**
Status : **Marked For Review**
Chosen Option : **3**

Q.23 **Which of the following statements is correct about cache memory?**

Ans

✗ 1. Its speed is less than the main memory.

✗ 2. It is an auxiliary memory.

✗ 3. It directly communicates with the input device and transfers input data to the main memory.

✓ 4. It is a fast small memory and placed between the CPU and main memory.

Question ID : **8401606003**
Status : **Marked For Review**
Chosen Option : **2**

Q.24 How many tuples will be selected when the following SQL codes are executed?

SELECT* FROM Employee WHERE Age >= 40 AND Age <40;

Ans

✓ 1. None of the tuples of the Employee relation

✗ 2. All tuples of the Employee relation

✗ 3. All those tuples of the Employee relation in which Age value is 40 or more

✗ 4. Only first tuple of the Employee relation

Question ID : **8401606059**
Status : **Marked For Review**
Chosen Option : **1**

Q.25 Which of the following statements is INCORRECT about three-address instructions?

Ans

✔ 1. In three-address instructions, the first address must be a register.

✘ 2.
The instruction ADD R1, A, B is equivalent to R1←M[A] + M[B], where M[A] denotes the operand at memory address A.

✘ 3. The Cyber 170 computer uses three-address instructions.

✘ 4. In it, each address field refers either a register or a memory.

Question ID : **8401606000**
Status : **Answered**
Chosen Option : **2**

Q.26 Which of the following data structures may be used in depth first search graph traversing algorithm?

Ans

✘ 1. Max Heap Tree

✘ 2. Queue

✘ 3. AVL Tree

✔ 4. Stack

Question ID : **8401606016**
Status : **Answered**
Chosen Option : **4**

Q.27 Which of the following is the transition function (δ) of the deterministic finite automata M = (Q, Σ, δ, q0, F) corresponding to language L = {w: |w| mod 3 = 0}, where Σ = {a, b}, Q = {1, 2, 3}, q0 = 1, F = {1}?

Ans

✘ 1.
$\delta(1, a) = 2,\ \delta(1, b) = 2,\ \delta(2, a) = 2,\ \delta(2, b) = 3,\ \delta(3, a) = 3,\ \delta(3, b) = 1$

✔ 2.
$\delta(1, a) = 2,\ \delta(1, b) = 2,\ \delta(2, a) = 3,\ \delta(2, b) = 3,\ \delta(3, a) = 1,\ \delta(3, b) = 1$

✘ 3.
$\delta(1, a) = 2,\ \delta(1, b) = 2,\ \delta(2, a) = 3,\ \delta(2, b) = 2,\ \delta(3, a) = 1,\ \delta(3, b) = 3$

✘ 4.
$\delta(1, a) = 1,\ \delta(1, b) = 1,\ \delta(2, a) = 3,\ \delta(2, b) = 3,\ \delta(3, a) = 1,\ \delta(3, b) = 1$

Question ID : **8401606031**
Status : **Answered**
Chosen Option : **3**

Q.28 _____ provides a user interface through which two hosts can communicate on a character-by-character or line-by-line basis.

Ans

✔ 1. TELNET

✘ 2. FTP

✘ 3. TFTP

✘ 4. Anonymous FTP

Question ID : **8401606064**
Status : **Answered**
Chosen Option : **2**

Q.29 Which of the following regular expressions represents the language {λ, c, ab, cc, cab, abc, abab, ccc, ccab …}? [Note: λ is empty string]

Ans

✗ 1. $c^* . (a + b)$

✗ 2. $(b + (a.c))^*$

✓ 3. $(c + (a.b))^*$

✗ 4. $(a + (b.c))^*$

Question ID : **8401606026**
Status : **Answered**
Chosen Option : **3**

Q.30 In an operating system, the job scheduler is also known as _____.

Ans

✗ 1. dispatcher

✗ 2. short-term schedular

✓ 3. long-term schedular

✗ 4. medium-term schedular

Question ID : **8401606044**
Status : **Marked For Review**
Chosen Option : **2**

Q.31 A network on the Internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts it can handle?

Ans

✗ 1. 1024

✗ 2. 2048

✗ 3. 4069

✓ 4. 4096

Question ID : **8401606070**
Status : **Answered**
Chosen Option : **3**

Q.32 Which of the following statements is INCORRECT about the merge sort algorithm?

Ans

✓ 1.
The time complexity of its merge() operation should be Θ (lg n).

✗ 2. The merge() is its main operation.

✗ 3. It is based on the divide and conquer approach.

✗ 4.
Its time complexity may be represented by $T(n) = 2T(n/2) + \Theta(n)$ recurrence equation.

Question ID : **8401606021**
Status : **Answered**
Chosen Option : **4**

Q.33 Which of the following statements related to a thread is/are true?

(i) There can be more than one thread inside a process.
(ii) Thread is often referred to as a lightweight process.

Ans
✗ 1. Neither (i) nor (ii)
✗ 2. Only (i)
✓ 3. Both (i) and (ii)
✗ 4. Only (ii)

Question ID : **8401606043**
Status : **Marked For Review**
Chosen Option : **3**

Q.34 What will be the average turnaround time and average waiting time if the arrival times and burst times of three processes are as follows?

PID	Arrival Time	Burst Time
P1	0	2
P2	3	1
P3	5	6

Ans
✗ 1. Average turnaround time: 0, Average waiting time: 3
✗ 2. Average turnaround time: 3, Average waiting time: 6
✗ 3. Average turnaround time: 3, Average waiting time: 3
✓ 4. Average turnaround time: 3, Average waiting time: 0

Question ID : **8401606051**
Status : **Answered**
Chosen Option : **4**

Q.35 Which of the following addressing modes is used in zero-address instructions in a stack-organised computer?

Ans
✗ 1. Register addressing mode
✓ 2. Implied addressing mode
✗ 3. Immediate addressing mode
✗ 4. Register indirect addressing mode

Question ID : **8401605997**
Status : **Answered**
Chosen Option : **3**

Q.36 Which of the following statements is INCORRECT about the binomial coefficient (nCk) problem?

Ans
✓ 1.
The time complexity of dynamic programming algorithm for this problem is Θ (k*n*log n).

✗ 2.
For this problem, the algorithms based on the divide and conquer approach as well as dynamic programming approach exits.

✗ 3.
For this problem, it is possible to device dynamic programming algorithm that requires single 1D array.

✗ 4.
The dynamic programming algorithm solves this problem in bottom up fashion.

Question ID : **8401606024**
Status : **Answered**
Chosen Option : **3**

Q.37 Which of the following C++ code segments does NOT print 1 to 10?

Ans

✗ 1. int a=1; for(; a<=10;){cout<<a; a++;}

✗ 2. int a=1; while(a<=10){cout<<a; a++;}

✗ 3. int a=1; do{cout<<a; a++;}while(a<=10);

✓ 4. for(int a= 1 to 10){cout<<a;}

Question ID : **8401606009**
Status : **Answered**
Chosen Option : **4**

Q.38 **How many half adders and basic gates would be needed to implement a full adder combinational circuit?**

Ans

✗ 1. 2 half adders and 1 NAND gate

✓ 2. 2 half adders and 1 OR gate

✗ 3. 2 half adders and 1 AND gate

✗ 4. 2 half adders and 1 NOR gate

Question ID : **8401605994**
Status : **Answered**
Chosen Option : **1**

Q.39 **What is the dotted decimal notation of the IP address whose hexadecimal representation is C22F1582?**

Ans

✗ 1. 194.74.21.130

✓ 2. 194.47.21.130

✗ 3. 194.47.21.103

✗ 4. 149.47.12.130

Question ID : **8401606069**
Status : **Answered**
Chosen Option : **2**

Q.40 Which of the following statements is/are true about Prim's algorithm to find minimum spanning tree?

(i) It is based on the greedy approach.

(ii) Its every case time complexity is Θ(n lg n), where n is the number of vertices in a graph.

Ans

✓ 1. Only (i)

✗ 2. Neither (i) nor (ii)

✗ 3. Both (i) and (ii)

✗ 4. Only (ii)

Question ID : **8401606018**
Status : **Marked For Review**
Chosen Option : **3**

Q.41 Which of the following strings is NOT generated by the grammar G = ({S, A, B}, {a, b}, {S→aaB, B→Aa, A→bBb|λ }, S)?

Ans
- ✗ 1. aababa
- ✓ 2. aabbabba
- ✗ 3. aabbbabababa
- ✗ 4. aabbababa

Question ID : **8401606033**
Status : **Answered**
Chosen Option : **2**

Q.42 Which of the following greedy algorithms may use the disjoint set data structure?

Ans
- ✗ 1. Greedy algorithm for Huffman code
- ✗ 2. Dijkstra's algorithm for single source shortest paths
- ✗ 3. Prime's algorithm to find minimum spanning tree
- ✓ 4. Kruskal's algorithm to find minimum spanning tree

Question ID : **8401606017**
Status : **Answered**
Chosen Option : **1**

Q.43 Which of the following has one entry for each disk block and is indexed by block number?

Ans
- ✗ 1. Virtual memory
- ✗ 2. Memory page
- ✓ 3. File Allocation Table (FAT)
- ✗ 4. Memory segment

Question ID : **8401606042**
Status : **Marked For Review**
Chosen Option : **1**

Q.44 In nondeterministic pushdown automata (npda), the transition function δ accepts current state of control unit, current input symbol, and _____.

Ans
- ✗ 1. set of final states F
- ✗ 2. initial state q0
- ✗ 3. current output symbol
- ✓ 4. current symbol on top of the stack

Question ID : **8401606035**
Status : **Answered**
Chosen Option : **4**

Q.45 **Which of the following statements is/are true about the instruction format?**

(i) The operation code field of the instruction specifies the operation to be performed.
(ii) The mode field stores the address of the operand.

Ans
✗ 1. Neither (i) nor (ii)
✗ 2. Only (ii)
✓ 3. Only (i)
✗ 4. Both (i) and (ii)

Question ID : **8401606001**
Status : **Answered**
Chosen Option : **4**

Q.46 **Which of the following statements is INCORRECT about computer memory?**

Ans
✗ 1. The main memory communicates with the auxiliary memory through an I/O processor.
✓ 2. The program and data currently needed by the processor are transferred from the main memory to auxiliary memory.
✗ 3. The speed of the main memory is greater than that of the auxiliary memory.
✗ 4. The main memory communicates directly with the CPU.

Question ID : **8401606002**
Status : **Marked For Review**
Chosen Option : **4**

Q.47 **Which of the following traversing order of a binary search tree gives non-decreasing order of keys of the nodes?**

Ans
✗ 1. Preorder traversing
✗ 2. Level order traversing
✗ 3. Postorder traversing
✓ 4. Inorder traversing

Question ID : **8401606014**
Status : **Answered**
Chosen Option : **4**

Q.48 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int n=10, b=0;
    while(n!=0){b+=n%10; n=n/3;}
    cout<< b;
    return 0;
}
```

Ans
✓ 1. 4
✗ 2. 2
✗ 3. 1
✗ 4. 3

Question ID : **8401606006**
Status : **Answered**
Chosen Option : **1**

Q.49 Which of the following languages is represented by the regular expression r = (bb)*(aa)*a?

Ans

✗ 1. Set of all strings with an odd number of b's followed by an odd number of a's.

✓ 2. Set of all strings with an even number of b's followed by an odd number of a's.

✗ 3. Set of all strings with an odd number of b's followed by an even number of a's.

✗ 4. Set of all strings with an even number of b's followed by an even number of a's.

Question ID : **8401606029**
Status : **Answered**
Chosen Option : **2**

Q.50 **When a computer software needs to access the operating system's kernel, it uses a _____.**

Ans

✓ 1. system call

✗ 2. virtual memory

✗ 3. CUI

✗ 4. GUI

Question ID : **8401606040**
Status : **Answered**
Chosen Option : **1**

Q.51 Which of the following statements is correct about the fopen() function that is used to open a file in C programming language?

Ans

✗ 1. Its return type is void.

✗ 2. It accepts two parameters, where the first parameter is the file name and second parameter should be int type.

✗ 3. It accepts three parameters.

✓ 4. It accepts two parameters, where both parameters should be char * types.

Question ID : **8401606010**
Status : **Answered**
Chosen Option : **4**

Q.52 **How many binary search trees may be drawn from the keys 1, 2, 3?**

Ans

✗ 1. 3

✗ 2. 4

✓ 3. 5

✗ 4. 1

Question ID : **8401606015**
Status : **Answered**
Chosen Option : **1**

Q.53 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int *a = new int[5];
    for(int i=0; i<4; i++) a[i] = i+1;
    cout<< 3[a]+  ++2[a];
    return 0;
}
```

Ans
✗ 1. 6
✓ 2. 8
✗ 3. 7
✗ 4. 5

Question ID : **8401606005**
Status : **Answered**
Chosen Option : **2**

Q.54 **Which of the following network error conditions is/are detected and reported by the Internet Control Message Protocol (ICMP)?**

(i) Dropped packets (ii) Connectivity failure

Ans
✗ 1. Neither (i) nor (ii)
✗ 2. Only (i)
✓ 3. Both (i) and (ii)
✗ 4. Only (ii)

Question ID : **8401606063**
Status : **Answered**
Chosen Option : **2**

Q.55 **Which of the following is/are routing protocols for TCP/IP networks?**

(i) RIP (ii) EGP

Ans
✓ 1. Both (i) and (ii)
✗ 2. Only (ii)
✗ 3. Only (i)
✗ 4. Neither (i) nor (ii)

Question ID : **8401606065**
Status : **Answered**
Chosen Option : **3**

Q.56 Which of the following statements is/are true about the Turing machine $M = (Q, \Sigma, \Gamma, \delta, q0, b, F)$?

(i) Γ is the finite nonempty set of tape symbols.

(ii) Σ is the finite nonempty set of input symbols and $b \in \Sigma$, where b is blank symbol of the tape.

Ans

✗ 1. Only (ii)

✗ 2. Neither (i) nor (ii)

✗ 3. Both (i) and (ii)

✓ 4. Only (i)

Question ID : **8401606036**
Status : **Answered**
Chosen Option : **4**

Q.57 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    char x=193<<1;
    cout<<"x="<<(int)x;
    return 0;
}
```

Ans

✗ 1. x=386

✗ 2. x=130

✓ 3. x=-126

✗ 4. x=256

Question ID : **8401606013**
Status : **Answered**
Chosen Option : **2**

Q.58 **With respect to memory management in an operating system, what is the full-form of TLB?**

Ans

✗ 1. Trivial Lookaside Buffer

✓ 2. Translation Lookaside Buffer

✗ 3. Trivial Lookaside Block

✗ 4. Translation Lookaside Block

Question ID : **8401606047**
Status : **Answered**
Chosen Option : **2**

Q.59 **Consider a system with byte-addressable memory having the following parameters:**

Logical address size: 32 bits
Page size: 4 kilobytes
Page table entries: 4 bytes each

What will be the size of the page table in the system?

Ans
✗ 1. 8 MB
✓ 2. 4 MB
✗ 3. 4 GB
✗ 4. 16 MB

Question ID : **8401606050**
Status : **Answered**
Chosen Option : **2**

Q.60 **Which of the following statements is/are true about the relative address mode?**

(i) In this mode, the effective address of the operand is computed by adding the content of the program counter to the address part of the instruction.
(ii) In this mode, the address part of the instruction may be either positive or negative.

Ans
✗ 1. Neither (i) nor (ii)
✗ 2. Only (i)
✓ 3. Both (i) and (ii)
✗ 4. Only (ii)

Question ID : **8401605999**
Status : **Answered**
Chosen Option : **2**

Q.61 **Which of the following is the number of bits in the binary number equivalent to the decimal number 1000?**

Ans
✓ 1. 10
✗ 2. 11
✗ 3. 9
✗ 4. 8

Question ID : **8401605989**
Status : **Answered**
Chosen Option : **1**

Q.62 **Which of the following combinational circuit may be implemented using only one X-OR gate and one AND gate?**

Ans
✓ 1. Half Adder
✗ 2. Half Subtractor
✗ 3. Full Adder
✗ 4. Full Subtractor

Question ID : **8401605988**
Status : **Answered**
Chosen Option : **2**

Q.63 How many 0's and 1's should be there in the binary number equivalent to the decimal number 992?

Ans

✗ 1. Four 0's and five 1's

✗ 2. Five 0's and four 1's

✗ 3. Four 0's and six 1's

✓ 4. Five 0's and five 1's

Question ID : **8401605990**
Status : **Answered**
Chosen Option : **4**

Q.64 Which of the following statement is correct about one-address instructions?

Ans

✗ 1.
The one-address instruction LOAD A is equivalent to M[A]← AC, which transfer the content of accumulator register (AC) to memory address A.

✗ 2. The stack-organized computer uses two-address instructions.

✗ 3. One-address instructions use Index Register for all data manipulation.

✓ 4.
The one-address instruction ADD A is equivalent to AC← AC + M[A], where M[A] denotes the operand at memory address A.

Question ID : **8401606071**
Status : **Answered**
Chosen Option : **1**

Q.65 Which of the following need connection-oriented service?

(i) File transfer, (ii) Remote login, (iii) public switched telephone network

Ans

✗ 1. Only (ii) and (iii)

✗ 2. Only (i) and (iii)

✗ 3. Only (i) and (ii)

✓ 4. (i), (ii) and (iii)

Question ID : **8401606068**
Status : **Answered**
Chosen Option : **1**

Q.66 Which of the following statements is correct about the quick sort algorithm?

Ans

✓ 1.
The partition() operation of quick sort placed the pivot-element at its proper position.

✗ 2. It is based on the dynamic programming approach.

✗ 3.
The best case time complexity of the quick sort algorithm is Ω (n).

✗ 4.
The worst case time complexity of the quick sort algorithm is O (n lg n).

Question ID : **8401606022**
Status : **Answered**
Chosen Option : **3**

Q.67 **Reverse Address Resolution Protocol (RARP) maps _____ to _____.**

Ans
✗ 1. Ethernet addresses (64 bits); IPv4 addresses (32 bits)
✗ 2. IPv4 addresses (32 bits); Ethernet addresses (48 bits)
✗ 3. IPv4 addresses (32 bits); Ethernet addresses (32 bits)
✓ 4. Ethernet addresses (48 bits); IPv4 addresses (32 bits)

Question ID : **8401606066**
Status : **Answered**
Chosen Option : **1**

Q.68 **Consider a database relation R1(A, B, C), where A, B, and C are atomic and single-valued attributes. If A is the only one candidate key of R1, then which of the following statements is NOT true?**

Ans
✗ 1. R1 may and may not be in BNCF.
✗ 2. R1 is in first normal form.
✓ 3. R1 is definitely in third normal form.
✗ 4. R1 is in second normal form.

Question ID : **8401606057**
Status : **Answered**
Chosen Option : **3**

Q.69 **If the size of logical address space is 1024 and page size is 256 addressing units, then the _____ low-order bits designate the page offset.**

Ans
✓ 1. 8
✗ 2. 16
✗ 3. 10
✗ 4. 12

Question ID : **8401606049**
Status : **Answered**
Chosen Option : **1**

Q.70 **Which of the following relational algebra operators is NOT commutative?**

Ans
✗ 1. Union
✗ 2. Intersection
✓ 3. Division
✗ 4. Natural Join

Question ID : **8401606056**
Status : **Answered**
Chosen Option : **3**

Q.71 **Which of the following is NOT a Transaction Control Language command?**

Ans

✗ 1. SAVEPOINT

✗ 2. ROLLBACK

✓ 3. GRANT

✗ 4. COMMIT

Question ID : **8401606060**
Status : **Answered**
Chosen Option : **3**

Q.72 Which of the following languages is represented by the regular expression (a+b)?

Ans

✗ 1. {a, b, ab}

✗ 2. {aa, ab, bb}

✓ 3. {a, b}

✗ 4. {a, b, ba}

Question ID : **8401606025**
Status : **Answered**
Chosen Option : **3**

Q.73 If Σ = {a, b} is an alphabet, then which of the following is NOT a regular expression?

Ans

✗ 1. (a + a.b)*

✗ 2. (a + b)*.(a + b)

✗ 3. (a+b)*

✓ 4. (a + b +)

Question ID : **8401606028**
Status : **Answered**
Chosen Option : **4**

Q.74 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int x = 15, *p = &x;
    cout<< ++(*p);
    return 0;
}
```

Ans

✗ 1. 17

✗ 2. 14

✗ 3. 15

✓ 4. 16

Question ID : **8401606004**
Status : **Answered**
Chosen Option : **4**

Q.75 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int n=50;
    if(n>=60)cout<<"A";
    else if(n<=40) cout<<"B";
    else if(n>=30) cout<<"C";
    else cout<<"D";
    return 0;
}
```

Ans

✗ 1. B

✗ 2. A

✓ 3. C

✗ 4. D

Question ID : **8401606007**
Status : **Answered**
Chosen Option : **3**

Q.76 **Which of the following statements is/are true about Strassen's matrix multiplication algorithm?**

(i) It is based on the divide and conquer approach.
(ii) It requires 7 multiplications and 18 additions/subtractions to get the production of two matrices of order 2x2 each.

Ans

✓ 1. Both (i) and (ii)

✗ 2. Only (i)

✗ 3. Neither (i) nor (ii)

✗ 4. Only (ii)

Question ID : **8401606020**
Status : **Answered**
Chosen Option : **2**

Q.77 Which of the following statements is INCORRECT about deterministic finite automata $M = (Q, \Sigma, \delta, q0, F)$?

Ans

✗ 1. $F \subseteq Q$ is the set of final states.

✗ 2. Σ is the finite nonempty set of input symbols.

✗ 3. $q0 \in Q$ is the initial state, where Q is the finite nonempty set of states.

✓ 4. $\delta: Q \rightarrow \Sigma$ is the transition function.

Question ID : **8401606030**
Status : **Answered**
Chosen Option : **2**

Q.78 **Consider 'supplies' relationship which associates supplier, project and product entities. If supplier, project and product have 10, 20, and 30 entities, then what is the degree of the 'supplies' relationship?**

Ans
✗ 1. 60
✓ 2. 3
✗ 3. 2
✗ 4. 6000

Question ID : **8401606054**
Status : **Answered**
Chosen Option : **1**

Q.79 **A transaction is said to be in a/an _____ state if it executes all its operations successfully.**

Ans
✗ 1. active
✗ 2. failed
✗ 3. aborted
✓ 4. committed

Question ID : **8401606061**
Status : **Answered**
Chosen Option : **3**

Q.80 Which of the given options is the output of the following C++ program segment in Dev-C++ compiler under the Windows operating system?

```
int main(){
    int x=1;
    switch(x){case 1: cout<<"X";
      case 2: cout<<"Y"; break;
      case 3: cout<<"Z";
    }
    return 0;
}
```

Ans
✗ 1. Y
✗ 2. YZ
✓ 3. XY
✗ 4. X

Question ID : **8401606011**
Status : **Answered**
Chosen Option : **3**

Q.81 **The logical address generated by the CPU consists of _____.**

Ans
✗ 1. only offset
✓ 2. both page number and offset
✗ 3. only page number
✗ 4. neither page number nor offset

Question ID : **8401606046**
Status : **Answered**
Chosen Option : **2**

Q.82 **Which of the following statements is correct about seven segments to BCD code converter combinational circuit?**

Ans
✗ 1. It converts hexa-decimal digits given in seven segments to BCD code.
✗ 2. It has 5 output lines.
✓ 3. It converts decimal digits given in seven segments to BCD code.
✗ 4. It has 6 input lines.

Question ID : **8401605993**
Status : **Answered**
Chosen Option : **3**

Q.83 **Which of the following statements is/are true about asynchronous counter?**

(i) In asynchronous counter, all flip flops are triggered with the same clock simultaneously.
(ii) Asynchronous counter is slower than synchronous counter in operation.

Ans
✓ 1. Only (ii)
✗ 2. Neither (i) nor (ii)
✗ 3. Only (i)
✗ 4. Both (i) and (ii)

Question ID : **8401605995**
Status : **Answered**
Chosen Option : **3**

Q.84 **Which of the following relational algebra operators is unary in nature?**

Ans
✗ 1. Division
✗ 2. Cartesian Product
✗ 3. Natural Join
✓ 4. Projection

Question ID : **8401606055**
Status : **Answered**
Chosen Option : **4**

Q.85 **When multiple threads are executed in parallel at the same time, this process is known as _____.**

Ans
✗ 1. parallel processing
✓ 2. multithreading
✗ 3. multitasking
✗ 4. distributed processing

Question ID : **8401606041**
Status : **Answered**
Chosen Option : **2**