

Question Paper Code

COMPUTER-CSE-1103

Show

AnswerKey

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D	B	A	C	C	D	B	C	C	C	A	D	C	A	C
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A	C	A	D	A	A	B	C	B	C	A	A	D	B	B
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
D	A	D	B	D	D	B	B	B	A	C	D	D	C	D
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
B	C	D	A	D	C	B	D	D	B	B	C	B	A	A
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
D	A	C	D	C	D	C	A	D	D	D	B	D	D	D
76	77	78	79	80	81	82	83	84	85					
A	B	B	B	B	A	C	B	C	A					

Q.No : 1 - Main Subject

What are x and y in the following macro definition?

```

macro                Add x,y

                    Load y

                    Mul x

                    Store y

end macro

```

- A) variables
- B) identifiers
- C) actual parameters
- D) formal parameters

Answer: D

Q.No : 2 - Main Subject

Consider a disk with the following characteristics:

Track size : 10,000 bytes

Rotational latency : 10 ms/ revolution

Block size : 1,000 bytes

What is the minimum transfer rate per track measured in bits per second as is conventional for this disk unit?

- A) 400 Mbps
- B) 8 Mbps
- C) 6,400 Mbps
- D) 4,250 Mbps

Answer: B

Q.No : 3 - Main Subject

Trojan – Horse programs

- A) are legitimate programs that allow unauthorized access
- B) are hacker programs that do not show up on the system
- C) really do not usually work
- D) usually are immediately discovered

Answer: A

Q.No : 4 - Main Subject

What is the output of the following 'C' program ?

```
main ()
{
    structemp
    {
        char name[20];
        int age;
        flatsal;
    };
    Structemp e = {"Tiger"};
    Printf("\n%d%f", e.age, e.sal);
}
```

- A) Error
- B) Garbage values
- C) 0.000000
- D) 10.000000

Answer: C

Q.No : 5 - Main Subject

Consider the grammar with non-terminal $N=\{S,C,S_1\}$, terminals $T=\{a,b,i,t,e\}$, with S as the start symbol, and the following set of rules.

$$S \rightarrow iCtSS_1|a$$

$$S_1 \rightarrow eS|\epsilon$$

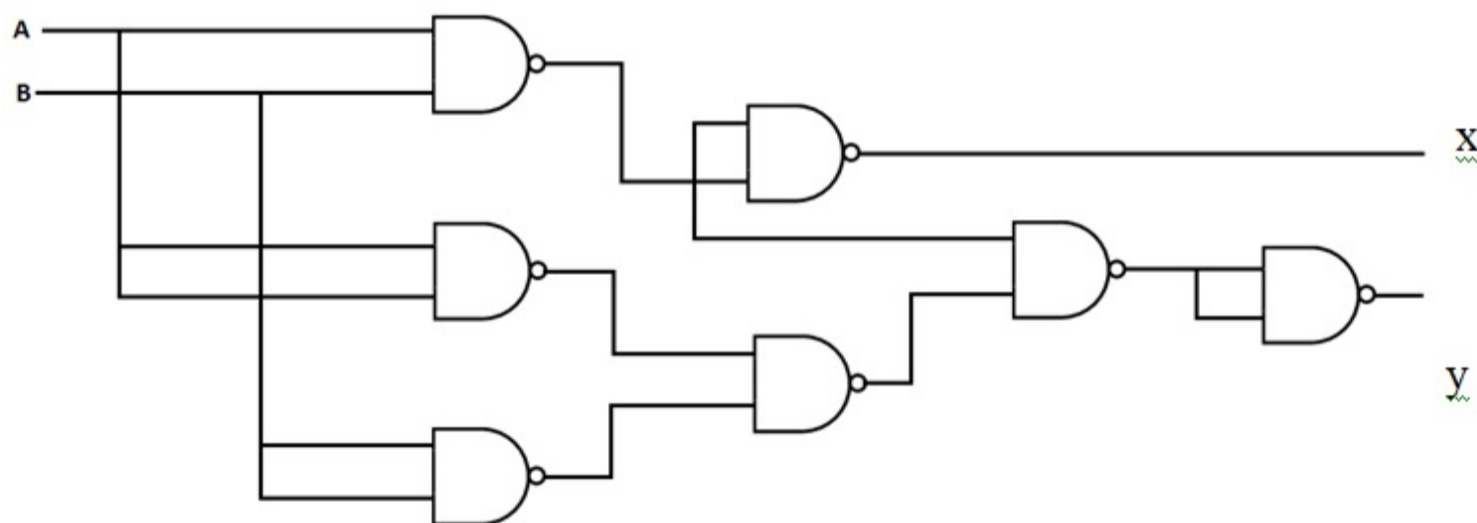
$C \rightarrow b$, The grammar is NOT LL(1) because:

- A) It is left recursive
 B) It is right recursive
 C) It is ambiguous
 D) It is not context free

Answer: C

Q.No : 6 - Main Subject

What logic function is performed by the circuit shown below?



- A) ring counter
 B) ripple counter
 C) full adder
 D) half adder

Answer: D

Q.No : 7 - Main Subject

The table created by lexical analysis to describe all literals used in the source program is

- A) Terminal table
- B) Literal table
- C) Identifier table
- D) Reduction

Answer: **B**

Q.No : 8 - Main Subject

Given a sequence a_1, a_2, \dots, a_n of integers, is there a subset J of $\{1, 2, \dots, n\}$ so that $a_i = \sum_{i \in J} a^i$? The partition problem is NP – complete by constructing a reduction from the

- A) k-colorability problem
- B) exact cover problem
- C) sum – of – subset problem
- D) None of these.

Answer: **C**

Q.No : 9 - Main Subject

Match List I with List II and select the correct answer from the codes given below the list.

List I

- A. Indirect addressing
B. Immediate addressing
C. Auto-decrement addressing

List II

1. Loops
2. Pointers
3. Constants

Codes.

A B C

- A) 3 2 1
- B) 1 3 2
- C) 2 3 1
- D) 3 1 2

Answer: **C**

Q.No : 10 - Main Subject

Consider the declaration:

```
charx [ ] = "WHATIZIT";
```

```
char *y = "WHATIZIT";
```

The output of puts (x) and puts (y) will be

- A) the same
- B) different
- C) not related
- D) none of these

Answer: C

Q.No : 11 - Main Subject

The recurrence relation that arises in relation with the complexity of binary search is

- A) $T(n) = T(n/2) + K$
- B) $T(n) = 2T(n/2) + K$
- C) $T(n) = T(n/2) + \log n$
- D) $T(n) = T(n/s) + n$

Answer: A

Q.No : 12 - Main Subject

The main differences (a) between a CISC and a RISC processor is/are that a RISC processor typically

- A) Has fewer instructions and addressing modes
- B) Has more registers
- C) Is easier to implement using hard – wired control logic
- D) All of these

Answer: D

Q.No : 13 - Main Subject

The ring counter is analogous to

- A) Toggle switch
- B) latch
- C) stepping switch
- D) S-R flip-flop

Answer: **C**

Q.No : 14 - Main Subject

Which of the following statements is incorrect for a micro – processor system using I/O mapped I/O ?

- A) I/O address space is greater.
- B) I/O and memory spaces are distinct
- C) Memory space available is greater
- D) Not all data transfer instructions are available

Answer: **A**

Q.No : 15 - Main Subject

The most powerful parser is

- A) SLR
- B) LALR
- C) Canonical LR
- D) Operator – precedence

Answer: **C**

Q.No : 16 - Main Subject

EEPROM is

- A) Electricity erasable
- B) Easily erasable
- C) Non – erasable
- D) Effective erasable

Answer: **A**

Q.No : 17 - Main Subject

A computer with a 32 – bit word size uses 2's complement to represent numbers. The range of integers that can be represented by this computer is

- A) -2^{32} to 2^{32}
- B) -2^{32} to 2^{31}
- C) -2^{31} to $2^{31} - 1$
- D) -2^{32} to 2^{30}

Answer: C

Q.No : 18 - Main Subject

Consider the following table of arrival time and burst time for three processes P_0, P_1 and P_2 .

Process	Arival Time	Burst Time
P_0	0 ms	9 ms
P_1	1 ms	4 ms
P_2	2 ms	9 ms

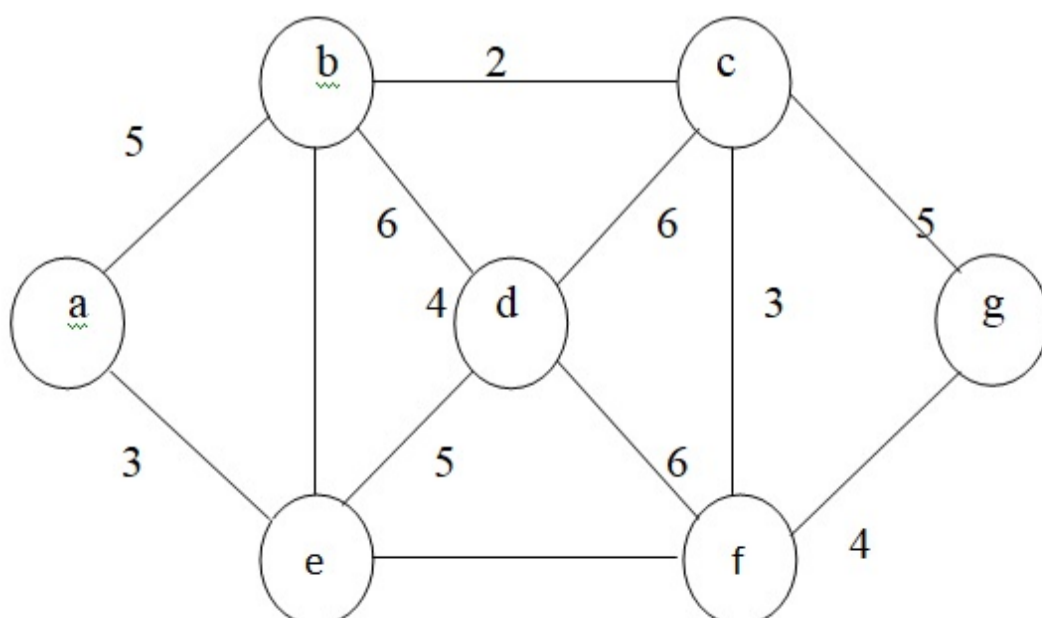
The pre-emptive shortest job first scheduling algorithm is used. Scheduling is carried out only at arrival or completion of processes. What is the average waiting time for the three processes?

- A) 5.0 ms
- B) 4.33 ms
- C) 6.33 ms
- D) 7.33 ms

Answer: A

Q.No : 19 - Main Subject

Consider the following graph:



Which one of the following is NOT the sequence of edges added to the minimum spanning tree using Kruskal's algorithm?

- A) (b,e) (e,f) (a,c) (b,c) (f,g) (c,d)
- B) (b,e) (e,f) (a,c) (f,g) (b,c) (c,d)
- C) (b,e) (a,c) (e,f) (b,c) (f,g) (c,d)
- D) (b,e) (e,f) (b,c) (a,c) (f,g) (c,d)

Answer: D

Q.No : 20 - Main Subject

In the following Karnaugh map, which one of the following represents minimal Sum – of – Products of the map

	yz	wx		
	00	01	11	10
00	0	X	0	X
01	X	1	X	1
11	0	X	1	0
10	0	1	X	0

- A) $xy + y'z$
- B) $wx'y' + xy + xz$
- C) $w'x + y'x$
- D) $xz + y$

Answer: A

Q.No : 21 - Main Subject

The sequence of events that happen during a typical fetch operation is

- A) PC \rightarrow MAR \rightarrow Memory \rightarrow MDR \rightarrow IR
- B) PC \rightarrow Memory \rightarrow MDR \rightarrow IR
- C) PC \rightarrow Memory \rightarrow IR \rightarrow
- D) PC \rightarrow MAR \rightarrow Memory \rightarrow IR

Answer: A

Q.No : 22 - Main Subject

What is the complement of the language accepted by the NFA shown below?

Assume $\Sigma = \{a\}$ and ϵ is the empty string.



- A) \emptyset
- B) $\{\epsilon\}$
- C) a
- D) $\{a, \epsilon\}$

Answer: B

Q.No : 23 - Main Subject

What is the time complexity of Bellman-Ford single source shortest path algorithm on a complete graph of n vertices?

- A) $\Theta(n^2)$
- B) $\Theta(n^2 \log n)$
- C) $\Theta(n^3)$
- D) $\Theta(n^3 \log n)$

Answer: C

Q.No : 24 - Main Subject

Find the sum of expression

$$\frac{1}{\sqrt{1} + \sqrt{2}} + \frac{1}{\sqrt{2} + \sqrt{3}} + \frac{1}{\sqrt{3} + \sqrt{4}} + \dots + \frac{1}{\sqrt{80} + \sqrt{81}}$$

- A) 7
- B) 8
- C) 9
- D) 10

Answer: B

Q.No : 25 - Main Subject

In a paged memory, the page hit ratio is 0.35. The time required to access a page in secondary memory is equal to 100 ms. The time required to access a page in primary memory is 10 ns. The average time required to access a page is

- A) 3.0 ns
- B) 68.0 ns
- C) 68.5 ns
- D) 78.5 ns

Answer: C

Q.No : 26 - Aptitude

At what time between 9 and 9'o clock will the hands of a watch points in opposite directions?

- A) $10\frac{10}{11}$ min past 8
- B) 30 min past 8
- C) $10\frac{4}{11}$ min past 8
- D) $54\frac{6}{11}$ min to 9

Answer: A

Q.No : 27 - Aptitude

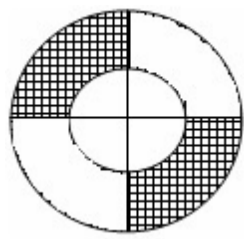
A bag contains 98 coins that constitute coins of the denomination Rs. 2 and Rs. 5 only. The value of the coins is Rs.292. How many Rs.5 coins are there?

- A) 32
- B) 35
- C) 41
- D) 43

Answer: A

Q.No : 28 - Aptitude

Find the area of the shaded region. The inner circle, radius 7, has half the radius of the larger circle.



- A) $196\pi\pi$
- B) 442
- C) $\frac{147\pi}{4}$
- D) $\frac{462}{2}$

Answer: **D**

Q.No : 29 - Aptitude

Five dice are rolled. Find the number of possible outcomes in which at least one die shows 3.

- A) 5428
- B) 4651
- C) 4215
- D) 5362

Answer: **B**

Q.No : 30 - Aptitude

A and B walk up an escalator which moves up with a constant speed. For every three steps that A takes B Takes one step. A gets to the top of the escalator after having taken 60 steps while B takes only 40 steps to reach the top. If the escalator were turned off, how many steps should each of them take to reach the top?

- A) 68 steps
- B) 80 steps
- C) 72 steps
- D) 83 steps

Answer: **B**

Q.No : 31 - Aptitude

What are the three consecutive prime numbers that will divide 131131?

- A) 7, 11, 15
- B) 6, 12, 8
- C) 11, 13, 9
- D) 7, 11, 13

Answer: **D**

Q.No : 32 - Aptitude

If the rate of interest is 20% p.a. and Rs. 16000 is lent at the compound interest, Half-yearly, what is the equivalent simple rate of interest for the first year?

- A) 21%
- B) 34%
- C) 28%
- D) 37%

Answer: **A**

Q.No : 33 - Aptitude

Find the sum of the series $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, \dots$

- A) 2
- B) $\frac{3}{2}$
- C) $\frac{5}{2}$
- D) 3

Answer: **D**

Q.No : 34 - Aptitude

Virat hit the ball far away and then had to go searching for it. He went 98 m towards East and then turned right walking 21 m more. He could hear someone saying ball for which he had to take a right again and walk 80 m. He then turned North and walked 101 m and then found the ball. How far did he find the ball from the starting point?

- A) 80 m
- B) 82 m
- C) 81 m
- D) 90 m

Answer: **B**

Q.No : 35 - Aptitude

30% goods are sold at 5% loss while rest are sold at 10% profit. If there is a total profit of Rs.55, then find the worth of goods sold.

- A) Rs.928
- B) Rs.1100
- C) Rs.550
- D) Rs. 1000

Answer: **D**

Q.No : 36 - Aptitude

25 litres of Liquid A and 23 litres B are mixed. 12 litres of the mixture is added to 50.5 litres of water. Find the percent of Liquid A in the last mixture.

- A) 8.57
- B) 14.28
- C) 7.14
- D) 10

Answer: **D**

Q.No : 37 - Aptitude

In how many rearrangements of the word AMAZED, is the letter 'M' positioned in between the 2 A's?

- A) 120
- B) 119
- C) 23
- D) <24

Answer: **B**

Q.No : 38 - Aptitude

$$\log_{\frac{1}{3}} 81 =$$

A) 9B) 12C) $\frac{4}{3}$ D) 4Answer: **B****Q.No : 39 - Aptitude**

The average of five different positive integers is 50. What is the greatest possible value of one of the integers?

A) 250B) 240C) 244D) 50Answer: **B****Q.No : 40 - Aptitude**

The LCM of two numbers is 495 and their HCF is 5. Find the sum if the difference of the numbers is 10.

A) 100B) 90C) 50D) 45Answer: **A****Q.No : 41 - Reasoning**

One morning Amar and Akbar were talking to each other face to face at a crossing. If Akbar's shadow was exactly to the left of Amar, which direction was Amar facing?

A) EastB) West

C) North

D) South

Answer: C

Q.No : 42 - Reasoning

A Sample pole of 200 votes revealed the following information concerning three candidates A,B and C of a certain party who were running for three different offices. Twenty-eight in favour of both A and B, 98 in favour of A or B but not C, 42 in favour of B but not A or C, 122 in favour of B or C but not A, 64 in favour of C but not A or B, 14 in favour of A and C but not B. How many voters were in favour of only one of the candidates?

A) 58

B) 78

C) 106

D) 134

Answer: D

Q.No : 43 - Reasoning

Directions for Question: Eight Members P,Q,R,S,T,U,V, and W belonging to three families A, B, C go for weekend outing in three different cars Swift, Ritz,Zen. Four of eight members are females. Members of any one family travel in different cars. Each car has at least one male and one female member. Each family has at least two members.

P belongs to family B and he travels in car Zen. S is wife of T and they travel in cars Swift and Ritz, respectively. W is son of Q who is wife of V and they belong to family C. R is daughter of U who is wife of P. T travels in car Ritz. V does not travel with U.

Which of the following group of persons is a group of all females?

A) Q,S,V

B) P,Q,R

C) R,S,T

D) None of these

Answer: D

Q.No : 44 - Reasoning

Choose the missing term out of the given alternatives. AZ,GT,MN,?,YB

A) KF

B) RX

C) SH

D) TS

Answer: **C**

Q.No : 45 - Reasoning

If X o Y means X is the wife of Y; X * Y means X is the son of Y and X □ Y means X is the sister of Y, which of the following would mean that A is the daughter of B ?

A) A * C □ D o B

B) A o C * D □ B

C) A □ C o D * B

D) A □ C * D o B

Answer: **D**

Q.No : 46 - Reasoning

If DELHI is coded as CCIDD, how would you encode BOMBAY?

A) AJMTVT

B) AMJXVS

C) MJXVSU

D) WXYZAX

Answer: **B**

Q.No : 47 - Reasoning

Explosion : I :: Locust : II

I. (A) Bomb (B) Ruin (C) Debris (D) Smoke

II. (P) Crop (Q) Holocaust (R) Pest (S) Field

A) AS

B) BR

C) CQ

D) DP

Answer: **C**

Q.No : 48 - Reasoning

If wall is called pillow, pillow is called mat, mat is called bedsheet and bedsheet is called cover, which will be spread on the floor?

- A) Window
 B) Wall
 C) Floor
 D) Roof

Answer: **D**

Q.No : 49 - Reasoning

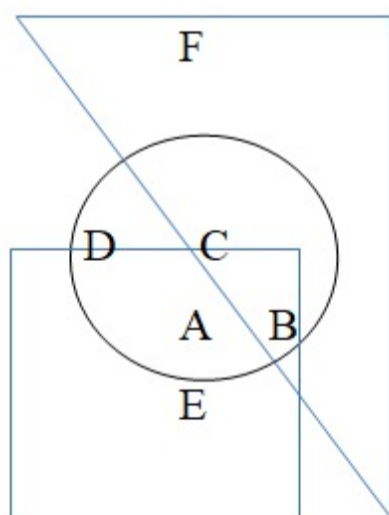
Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's son. Brothers and sisters I have none." At whose portrait was Harsh looking ?

- A) His son
 B) His cousin
 C) His Uncle
 D) His nephew

Answer: **A**

Q.No : 50 - Reasoning

Which one of the following statements is correct with regard to the given figure ?



- A) A and B are in all the three shapes.
 B) E,A,B,C are in all the three shapes.
 C) F,C,D,B,A are in all the three shapes.
 D) Only B is in all the three shapes.

Answer: **D**

Q.No : 51 - Reasoning

What is the area of the triangle ABC?

- a. $AC \cdot BC = 12$ b) $C = 90^\circ$

- A) If (a) alone is sufficient to answer the question.
B) If (b) alone is sufficient to answer the question.
C) If (a) and (b) together are necessary to answer the question.
D) If either (a) or (b) is sufficient to answer the question.

Answer: **C**

Q.No : 52 - Reasoning

In the following series, count each N which is immediately followed by X but X is not immediately followed by T. How many such N's are there?

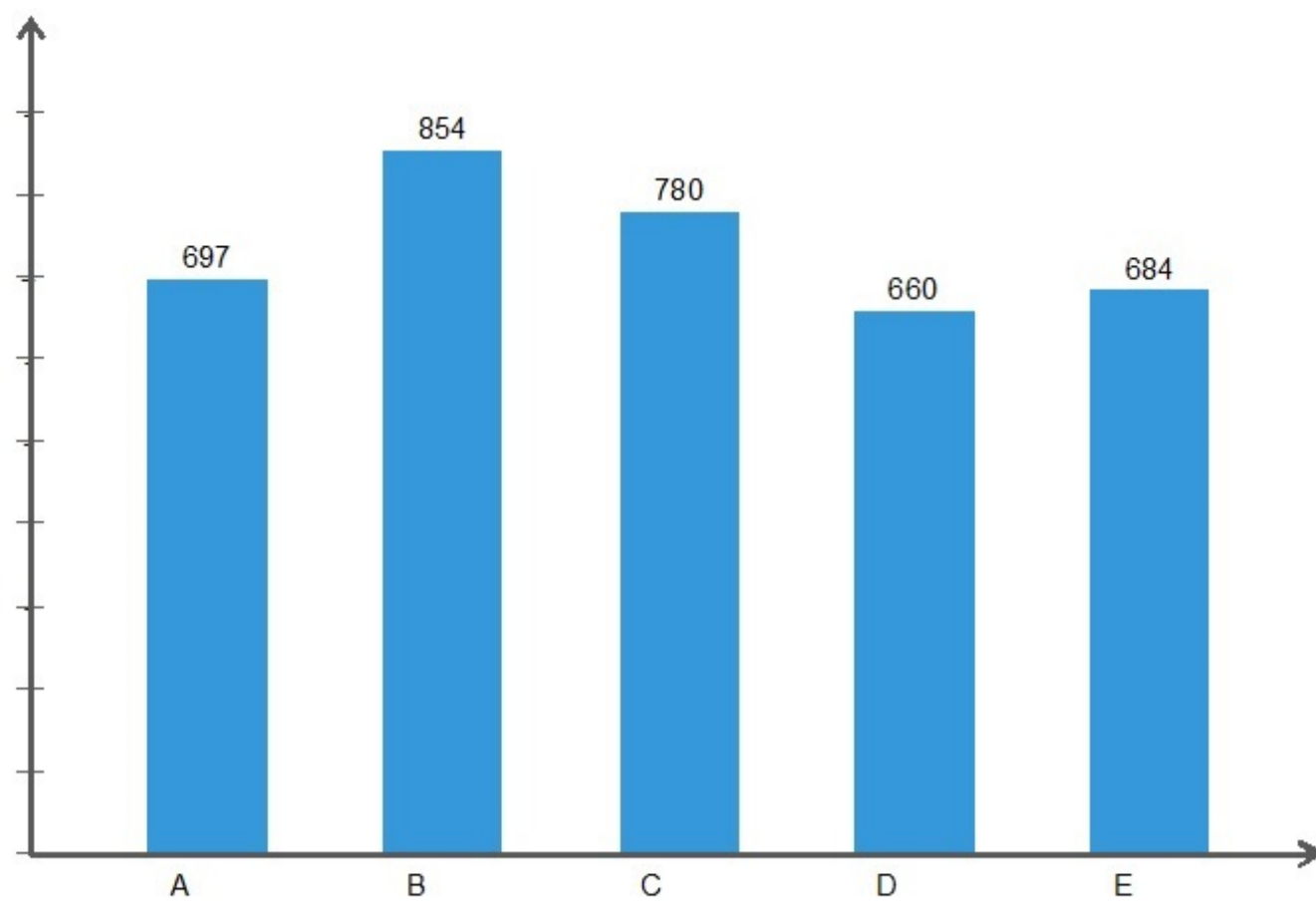
N X N T Q M N X T M X N X C N Q M N N X Q N X T X N A M X N X M

- A) 2
B) 4
C) 5
D) 7

Answer: **B**

Q.No : 53 - Reasoning

Directions for Questions: Study the following graph and table carefully to answer the given question.



	Ratio of Male and Female Ratio	
A	12	5
B	4	3
C	7	8
D	9	11
E	20	18

What is the average number of female employees taking all the years together?

- A) 432
- B) 278
- C) 384
- D) 335

Answer: **D**

Q.No : 54 - Reasoning

In a code language, 'mokdansil' means 'nice big house'; 'fit kondan' means 'house is good' and 'warm tir fit' means 'cost is high'. Which word stands for 'good' in that language ?

- A) mok
- B) dan
- C) fit
- D) kon

Answer: **D**

Q.No : 55 - Reasoning

Find the missing character

18	24	32
12	14	16
3	?	4
72	112	128

- A) 2
- B) 3
- C) 4
- D) 5

Answer: **B**

Q.No : 56 - General Knowledge

Assertion (A): The production of rubber is decreasing in the Amazon basin.

Reason (R) : Equatorial climate is favourable for rubber plantation.

- A) Both A and R are true and R is the correct explanation of A.
- B) Both A and R are true and R is not a correct explanation of A.
- C) A is true R is false.
- D) R is true but A is false.

Answer: **B**

Q.No : 57 - General Knowledge

Given below are four industries that developed during the British rule in India:

1. jute industry
2. iron and steel industry
3. textile industry
4. sugar industry

Which one of the following shows the correct chronological order in which the industries developed?

- A) 1, 2, 3, 4

- B) 3, 1, 2,4
- C) 1, 3, 2, 4
- D) 4, 1, 2, 3

Answer: C

Q.No : 58 - General Knowledge

Which type of soil retains maximum water?

- A) Rocky
- B) Clayey
- C) Loamy
- D) Black

Answer: B

Q.No : 59 - General Knowledge

A Cataract is a

- A) Huge waterfall
- B) A Marshy creek
- C) A mountain pass
- D) Currency

Answer: A

Q.No : 60 - General Knowledge

Which of the following revolutions was an independence movement?

- A) Haitian Revolution
- B) French Revolution
- C) Mexican Revolution
- D) Russian Revolution

Answer: A

Q.No : 61 - General Knowledge

In an earthen pot cooling of water depends upon

- A) outside temperature
- B) Atmospheric humidity
- C) Wind
- D) All of the above

Answer: **D**

Q.No : 62 - General Knowledge

Which of the following pairs is not correct?

- A) Deodhar Trophy: Hockey
- B) Jules Rimet Cup: Football
- C) Corbillon Cup: Table Tennis
- D) Irani Cup: Cricket

Answer: **A**

Q.No : 63 - General Knowledge

Which of the following characteristics of a fossil would suggest that the species belonged to the hominin group?

- A) large canine teeth
- B) a protruding lower face
- C) small canine teeth
- D) prominent brow ridges

Answer: **C**

Q.No : 64 - General Knowledge

Which country/currency/capital combination is wrong?

- A) Iran/Rial/Teheran
- B) Bulgaria/Lev/Sofia
- C) Korea/Won/Seoul
- D) Mongolia/Kip/Ulan Bator

Answer: **D**

Q.No : 65 - General Knowledge

Which country hosted the XI Asiad?

- A) Former W. Germany
- B) South Korea
- C) China
- D) USSR

Answer: **C**

Q.No : 66 - General Knowledge

Isohytes is associated with

- A) Agriculture
- B) Volcanoes
- C) Floods
- D) None of these

Answer: **D**

Q.No : 67 - General Knowledge

The penumbra is

- A) the outer portion of the moon's shadow.
- B) formed by the tangent that intersects between the sun and the moon
- C) both are correct
- D) None of these are correct

Answer: **C**

Q.No : 68 - General Knowledge

The Group of 77 is a/an

- A) Economic group

- B) Political group
- C) Social group
- D) Cultural group

Answer: A

Q.No : 69 - General Knowledge

Which of the following nations is not a member of EEC?

- A) Austria
- B) Italy
- C) France
- D) All of these are members

Answer: D

Q.No : 70 - General Knowledge

The greatest extinction event of all time occurred at the end of the:

- A) Permian
- B) Mesozoic
- C) Cretaceous
- D) Cambrian

Answer: D

Q.No : 71 - English

Consider the following statement and assumptions

Statement: “If you are a mechanical engineer, we want you as our supervisor.” – An advertisement by a company X.

Assumptions : I. The mechanical engineers are expected to be better performers by company X.

II. The company X needs supervisors.

Now select which of the assumptions is implicit in the statement

- A) If only assumption I is implicit
- B) If only assumption II is implicit
- C) If either I or II is implicit

D) If both I and II are implicit

Answer: D

Q.No : 72 - English

Identify the plural of the given word: passer-by

- A) passer-by
B) passers-by
C) passer-bys
D) passer-byes

Answer: B

Q.No : 73 - English

. Choose the alternative from among the four.

But _____ are now regularly written not just for tools, but well-established practices, organizations and institutions, not all of which seem to be _____ away.

- A) reports, withering
B) stories, trading
C) books, dying
D) obituaries, fading

Answer: D

Q.No : 74 - English

Change the following sentence into Passive – Voice

Anger provokes many people many people to take hasty decisions which they later regret very much.

- A) many people is provoked by anger to take hasty decisions which were very much regretted later
B) many people are provoked anger to take hasty decisions which were much regretted later
C) many people are provoked by anger to taken hasty decisions which is very much regretted later
D) many people are provoked by anger to take hasty decisions which are very much regretted later

Answer: D

Q.No : 75 - English

Find the proper sequence of these four sentences.

- A) It results from a carefully revised plan
- B) Men work together for a cause or purpose.
- C) Team work does not just happen.
- D) It must be clearly known to them.

- A) BCAD
- B) CBDA
- C) BCDA
- D) CABD

Answer: **D**

Q.No : 76 - English

Lily decided to..... after the fourth unsuccessful ring.

- A) hang up
- B) hang down
- C) hang over
- D) hang around

Answer: **A**

Q.No : 77 - English

Identify the word with correct spelling.

- A) Aristocracy
- B) courtesey
- C) democracy
- D) bureaucracy

Answer: **B**

Q.No : 78 - English

Choose the pair of words which has similar relationship as the given pair: **Scythe : Reaping**

- A) Light : Shining
- B) Shears : Cutting
- C) Saws : Gluing
- D) Screws : Turing

Answer: **B**

Q.No : 79 - English

Choose the correct meaning for the given idiom/ phrase: **A hard nut to crack**

- A) Difficult things require extra effort
- B) A difficult problem to solve
- C) A difficult problem solved effortlessly
- D) Costly things need careful handling

Answer: **B**

Q.No : 80 - English

Choose the one that express the thought correctly in formal English

- A) The draw
- B) For the raffle has taken place
- C) But nobody had
- D) The winning number

Answer: **B**

Q.No : 81 - English

Choose the word similar in meaning to the given word: Utopia

- A) an ideal place
- B) desired
- C) lesion
- D) practical concept

Answer: **A**

Q.No : 82 - English

Choose the word most opposite in meaning to the given word: Parsimonious

- A) Initial
- B) vegetative
- C) Prodigal
- D) Affluent

Answer: C

Q.No : 83 - English

Change the sentence into indirect narration: "Hello, Ramesh, how are you doing these days?" said Ashok.

- A) Ashok welcomed Ramesh and asked how he is doing these days.
- B) Ashok greeted Ramesh and asked how he was doing those days.
- C) Ashok welcomed Ramesh and ask how he did those days.
- D) Ashok greeted Ramesh and asked how he was done those days.

Answer: B

Q.No : 84 - English

Spot the error if any in the following sentence:

When he was tired he took rest under the shade of a tree.

A B C D

- A) A
- B) B
- C) C
- D) D

Answer: C

Q.No : 85 - English

Choose the appropriate word to fill in the blanks. Sandhya had a perfect TOEFL score; she-----

- A) must have prepared extremely well

B) should have prepared extremely well

C) might have prepared extremely well

D) should prepare extremely well

Answer: **A**

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