SSC CGL
Reasoning

Instructions

For the following questions answer them individually

Question 1

Select the related word from the given alternatives.

Cow : Milk :: Bees : ?

A   Silk

B   Honey

C   Flower

D   Water

Answer: B

Explanation:

Milk is obtained from Cow while Honey is obtained from Honey Bee

Question 2

Select the related letters from the given alternatives.

ACF : GIL :: OQT : ?

A   VXY

B   UWZ

C   RSV

D   VXZ

Answer: B

Explanation:

A + 6 = G,C + 6 = I, F + 6 = L

ACF - GIL

Hence, O + 6 = U , Q + 6 = W , T + 6 = Z

OQT - UWZ

Question 3

Select the related number from the given alternatives.

64 : 8 :: 0.01 : ?

A   0.1

B   1

C   10

D   0.08

   Answer: A

Explanation:

Square root of 64 is 8 $\sqrt{64}$ = 8

$\therefore$ Square root of 0.01 is 0.1 $\sqrt{0.01}$ = 0.1

Question 4

Select the odd word from the given alternatives.

A   Stream

B   Rivulet

C   River

D   Valley

   Answer: D

Explanation:

All the given options are Water bodies except Option D.

Rivulet = A small stream of Water

Question 5

Select the odd letters from the given alternatives.

A   ADG

B   HKN

C   ORU

D BDF

   Answer: D

Explanation:

In every option the difference between each letter is '3' except for option D

1)ADG : A + 3 = D, D + 3 = G

2)HKN : H + 3 = K, K + 3 = N

3)ORU : O + 3 = R, R +3 = U

4)BDF : B + 2 = D, D + 2 = F

Hence Option D is correct

Question 6

Select the odd number from the given alternatives.

A 49

B 25

C 8

D 36

   Answer: C

Explanation:

All the Options except 'C' are Perfect Square's. 8 is a Perfect cube

$1) 7^2 = 49$

$2) 5^2 = 25$

$3) 2^3 = 8$

$4) 6^2 = 36$

Hence option C is the Answer

Question 7

A series is given, with one word missing. Choose the correct alternative from the given ones that will complete the series.

upset, aurora, spurn, strut, status, ?

A treasure

B perfect

C right

D unique

　　Answer: A

Explanation:

Expression : upset, aurora, spurn, strut, status, ?

The position of the letter 'u' in each term is shifted one place to the right.

Eg : **u**pset (1st place) , a**u**rora (2nd place) , sp**u**rn (3rd place) , str**u**t (4th place) , stat**u**s (5th place)

Thus, in the next term, 'u' will be at 6th position, and among the options, next word = treas**u**re

=> Ans - (A)

Question 8

A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

L, N, Q, S, V, ?

A W

B Y

C Z

D X

　　Answer: D

Explanation:

L + 2 = N , N + 3 = Q , Q + 2 = S , S + 3 = V , V + 2 = X

The sequence is +2 and +3

Hence option D is Correct

Question 9

A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

111, 107.5, 104, ? , 97, 93.5

A 100

B 99.5

C 100.5

D 99

Answer: C

Explanation:
The sequence is "N-3.5"

111 - 3.5 = 107.5

107.5 - 3.5 = 104

104- 3.5 = 100.5

100.5 - 3.5 = 97

97 - 3.5 = 93.5

Hence Answer is Option C

Question 10

Advik's birthday is on Monday 19th June. On what day of the week will be Nishith's Birthday in the same year if Nishith was born on 17th November?

A   Saturday

B   Wednesday

C   Friday

D   Sunday

Answer: C

Explanation:
There are 11 days remaining in the Month of June.31,31,30,31 in the months of July,August,September,October Respectively.And 17 Days in November. In total there are 151 days between 9th June to 17th November.

151 % 7 = Remainder is 4

0-Monday 1-Tuesday 2-Wednesday 3-Thursday 4-Friday 5-Saturday 6-Sunday

Hence 17th November Will be Friday

Question 11

The weights of 4 boxes are 90, 30, 40 and 60 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes and in a combination a box can be used only once?

A   200

B   220

C 180

D 130

    Answer: A

Explanation:

Except 200 Other Numbers can be formed.

2)90+30+40+60 = 220

3)90+30+60 = 180

4)30+40+60 = 130

Hence,Answer is Option A

Question 12

From the given words, select the word which cannot be formed using the letters of the given word.

JAUNTILY

A NEATLY

B AUNTY

C JAUNT

D UNITY

    Answer: A

Explanation:

AUNTY,JAUNT and UNITY can be formed using the letters JAUNTILY except NEATLY. There is no 'E' in JAUNTILY.

Hence Answer is A

Question 13

If UNCOVER is coded as FMXLEVI, then how will TIP be coded as?

A LTV

B NQV

C KHQ

D GRK

    Answer: D

Explanation:

UNCOVER - FMXLEVI

The decoded alphabets are in revese order sequence to the codded alphabets.

Following the sequence a-26,b-25,c-24 ..... y-2,z-1

For TIP the decoded code is GRK

Hence Option D is correct

Question 14

In a certain code language, '+' represents 'x', '-' represents '+', 'x' represents '÷' and '÷' represents '-'. What is the answer to the following question?

50 + 5 - 700 x 28 = ?

A 94

B 100

C 90

D 275

  Answer: D

Explanation:
Equation can be written as,

 50*5 + 700 % 28 ;

From BODMAS Rule,

250 + 25 = 275;

Question 15

If 3 % 2 = 50, 2 % 4 = 60 then what is the value of 5 % 4 = ?

A 16

B 9

C 90

D 20

  Answer: C

Explanation:
It follows the sequence- $(n1 + n2) \times 10$

$(3 + 2) \times 10 = 50$

$(2 + 4) \times 10 = 60$

Hence for 5 % 4,

$(5 + 4) \times 10 = 90$

Hence Option C is correct

Question 16

Select the missing number from the given responses

23	?	12
6	13	7
138	117	84

A 9

B 13

C 17

D 15

   Answer: A

Explanation:

In each column, the number at the end is obtained by multiplying the other two.

Eg : $23 \times 6 = 138$

and $12 \times 7 = 84$

Similarly, $13 \times x = 117$

=> $x = \frac{117}{13} = 9$

=> Ans - (A)

Question 17

A paper boy cycles 10 km East, then turns South and cycles 3 km, then turns West and cycles 6 km, then turns to his right and cycles 3 km. Where is he now with reference to his starting position?
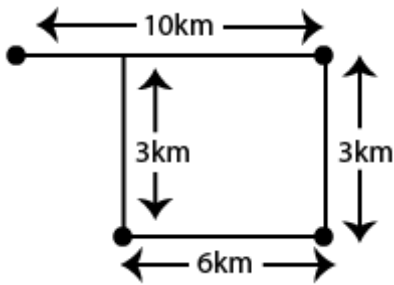
A 4 km West

B 14 km East

C 4 km East

D 14 km West

Answer: C

Explanation:

From his starting point he is 4km towards East.(10 - 6 = 4 kms)

Hence Answer is Option 'C'

Question 18

In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : All flowers are leaves.
Statement 2 : Some flowers are plants.

Conclusion I : Some leaves are plants.
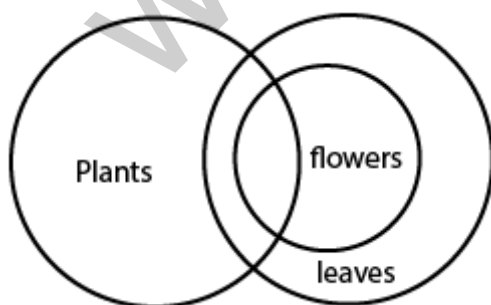**Conclusion II : Some plants are flowers.**

A Only conclusion I follows

B Only conclusion II follows

C Both I and II follow

D Neither I nor II follows
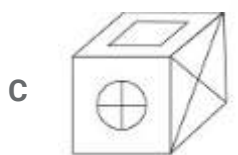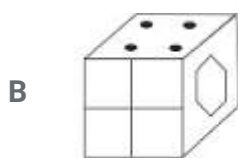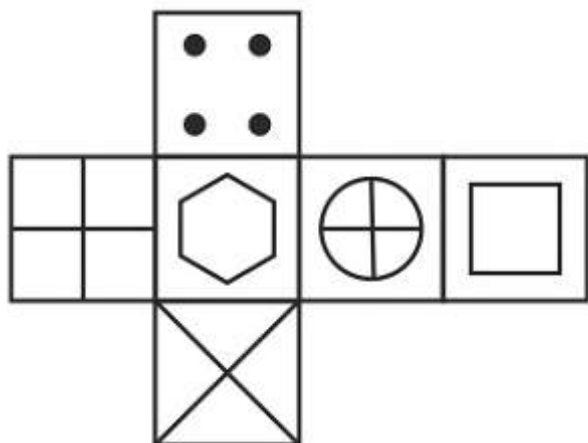
Answer: C

Explanation:

From the the basic diagram We can Conclude that Both Conclusions I and II follow

Question 19

Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?

A

B

C

D

Answer: D

Explanation:

When we fold the given figure, the side with a 'hexagon' sign will become the base of the cube and the side with 'square' sign will become top, and thus they will face each other. Similarly, the sides which will face each other will be :
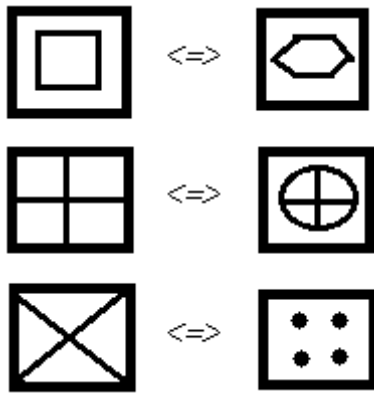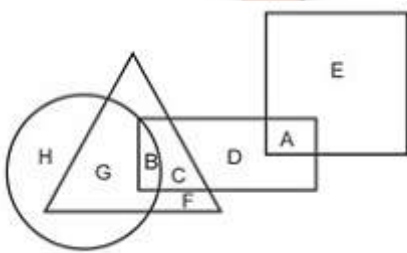
Since, the opposite sides cannot be adjacent in the cube, thus the cube in the last option is not possible.

=> Ans - (D)

Question 20

In the following figure, square represents Philosophers, triangle represents Police officer, circle represents Pharmacists and rectangle represents Americans. Which set of letters represents Americans who are police officers?

A G,F,D,A

B B, C

C C,D

D B,C,G,F

  Answer: B

Explanation:
From the Figure correct Answer would be the letters which are present in Rectangle(Americans) and also in Triangle(Police officers).Only B,C are present both in Rectangle and Triangle.Hence Option 'B' is correct

Question 21

Which answer figure will complete the pattern in the question figure

A

B

C

D
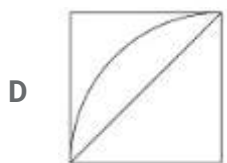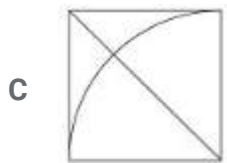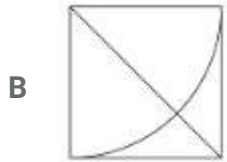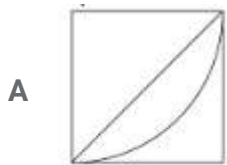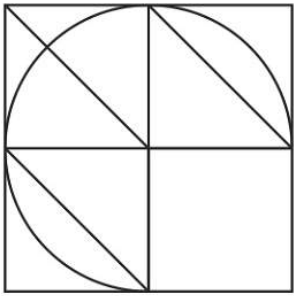
Answer: B

Explanation:

When we complete the above figure, we get :
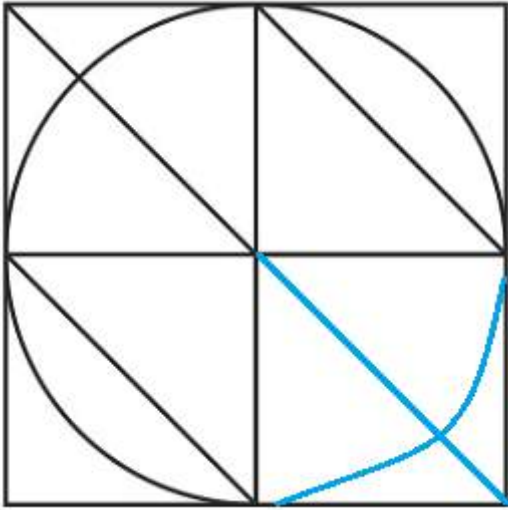
Now, the second figure resembles the above missing part in blue colour.

=> Ans - (B)

Question 22

From the given answer select in one in which the question figure is hidden / embedded
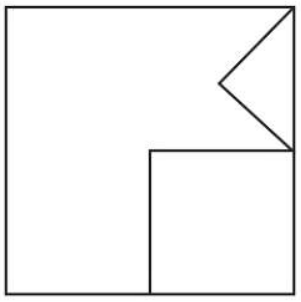
A
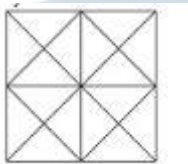
B
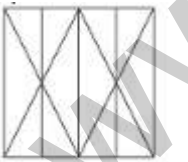
C
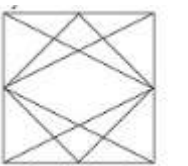
D
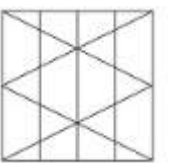
Answer: A

Explanation:

The question figure is embedded in the following figure :

=> Ans - (A)

Question 23

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

A

B

C

D
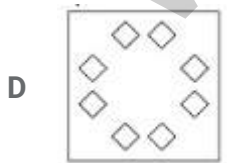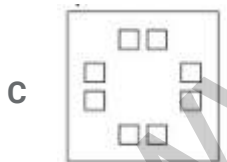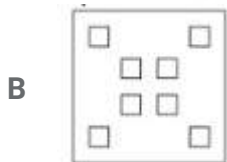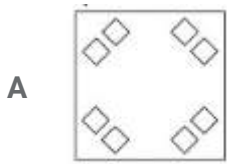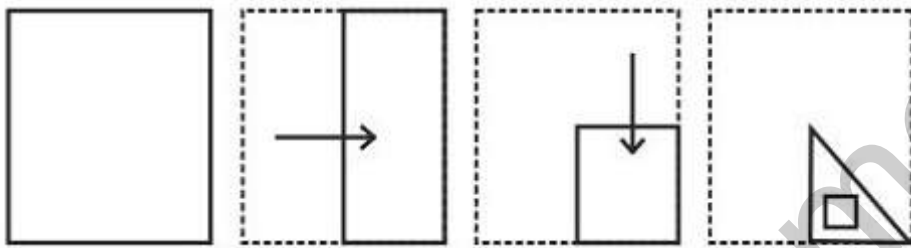
Answer: C

Question 24

If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

A

B

C

D
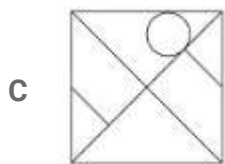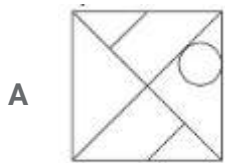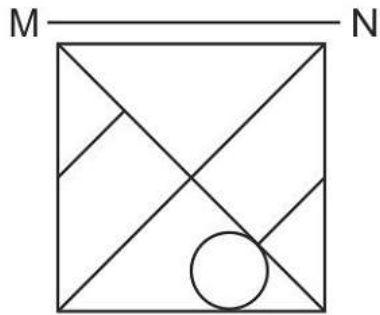
Answer: C

Explanation:

A horizontal mirror is placed, so the objects will turn upside down in the mirror image (e.g - an object at top right will appear at bottom right).

Now, the circle is at bottom right hand side touching the base of the square, when reflected in a horizontal mirror, the circle will appear at top right and will touch the top side of square, thus figure in third option is valid.

=> Ans - (C)

Question 25

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example 'K' can be represented by 40, 24 etc and 'Z' can be represented by 98, 67 etc. Similarly, you have to identify the set for the word 'OXEN'.

Matrix - I	0	1	2	3	4
0	G	B	I	K	C
1	L	H	H	H	G
2	L	H	I	A	K
3	A	D	M	G	B
4	K	J	E	L	F

| Matrix - II	5	6	7	8	9
5	Z	X	S	R	T
6	O	N	Z	P	T
7	U	R	Q	Z	W
8	V	Q	X	Y	V
9	Y	O	X	Z	N

A   65,97,42,99

B   21,33,58,67

C   44,44,55,58

D   14,34,55,66

   Answer: A

Explanation:
'O' can be represented as 65,96. 'X' can be represented as 56,87,97. 'E' can be represented as 42. 'N' can be represented as 66,99

In Options B,C,D either 65 or 96 is not included. Hence option A is correct

General Awareness

Instructions
For the following questions answer them individually

Question 26

If the _____ firm has zero costs or only has fixed cost, the quantity supplied in equilibrium is given by the point where the average revenue is zero.

A   Perfect Competition

B   Monopoly

C   Oligopoly

D   Monopolistic Competition

   Answer: A

Explanation:

If the **Perfect Competition** firm has zero costs or only has fixed cost, the quantity supplied in equilibrium is given by the point where the average revenue is zero.

=> Ans - (A)

Question 27

The average variable cost curve is ____ shaped.

A   U

B   V

C   X

D   W

   Answer: A

Question 28

"Central Bureau of Intelligence and Investigation" is listed in the _____ list given in the Seventh Schedule in the Constitution of India.

A   Union

B   State

C   Global

D   Concurrent

   Answer: A

Question 29

There are total _____ parliamentary seats (Rajya Sabha constituency) in Odisha.

A   11

B   19

C   10

D   1

   Answer: C

Question 30

In 1918, Mahatma Gandhi went to _____ to organise a satyagraha movement amongst cotton mill workers.

A   Madras

B   Bombay

C   Surat

D   Ahmedabad

   Answer: D

Question 31

Murshid Quli Khan, Alivardi Khan and Sirajuddaullah were all nawabs of _____?

A   Lucknow

B   Varanasi

C   Hyderabad

D   Bengal

   Answer: D

Question 32

_____ affect the rate of humus formation of soil.

A   Flora & Fauna

B   Time

C   Temperature

D   Parent rock

   Answer: A

Question 33

The latitudes of main land of India extends between _____.

A 8°4' N and 37°6' N

B 8°4' W and 37°6' W

C 8°4' E and 37°6' E

D 8°4' S and 37°6' S

   Answer: A

Question 34

_____ is a straw coloured, viscous fluid constituting nearly 55 per cent of the blood.

A Plasma

B Formed Elements

C Blood Groups

D Coagulation of Blood

   Answer: A

Question 35

Sexual reproduction in Algae that takes place through fusion of two similar size gametes is called?

A Zoospores

B Anisogamous

C Isogamous

D Oogamous

   Answer: C

Question 36

Animals in which the cells are arranged in three embryonic layers are called _____.

A   Diploblastic

B   Ectoderm

C   Tripoblastic

D   Endoderm

   Answer: C

Question 37

An image formed by a concave mirror on a screen is called _____?

A   Virtual image

B   Real image

C   Inverted image

D   Erect image

   Answer: B

Question 38

The distance-time graph for the motion of an object moving with a constant speed is a _____.

A   Dot

B   Circle

C   Straight Line

D   Curve

   Answer: C

Question 39

_____ is a collection of data values of same types having a common name.

A   Object

B   String

C   Array

D   Numbers

   Answer: C

Question 40

A _____ thread is actually stronger than a steel wire.

A   wool

B   cotton

C   jute

D   nylon

   Answer: D

Question 41

The process of depositing a layer of any desired metal on another material by means of electricity is called _____.

A   Electroplating

B   Galvanisation

C   Rusting

D   Crystallisation

   Answer: A

Question 42

_____ refers to the number of births during a given period in the population that are added to the initial density.

A   Natality

B   Mortality

C   Immigration

D   Emigration

   Answer: A

Question 43

_____ is a welfare scheme started by the Prime Minister in order to provide LPG connections to domestic households that fall under the below the poverty line category.

A Gram Uday Se Bharat Uday Abhiyan

B Pradhan Mantri Ujjwala Yojana

C Pradhan Mantri Surakshit Matritva Yojana

D Vidyanjali Yojana

   Answer: B

Question 44

Who invented the waterproof raincoat?

A Robert Hooke

B Cai Lun

C Charles Macintosh

D William Harvey

   Answer: C

Question 45

In which sport did India win Silver medal at Rio Olympics 2016?

A Badminton

B Boxing

C Hockey

D Wrestling

   Answer: A

Question 46

Who was the architect of Taj Mahal?

A   Ustad Ahmad Lahouri

B   Norman Foster

C   Henry Irwin

D   Ustad Ghani Utbuddin

Answer: A

Question 47

The Nobel Prize in Literature 2016 was awarded to?

A   Frank Sinatra

B   Elvis Presley

C   Bob Dylan

D   Jimi Hendrix

Answer: C

Question 48

Which of the statements given below are not correct?

1. The author of 'India 2020: A Vision for the New Millennium' is Shashi Tharoor.
2. The author of 'The Great Indian Novel' is A.P.J. Abdul Kalam.
3. The author of 'My Country My Life' is I.K Gujral.

A   1 and 2

B   2 and 3

C   1 and 3

D   1, 2 and 3

Answer: D

Question 49

In April 2016, amid rising tension over North Korea, which country launched its first domestically built aircraft carrier?

A   South Korea

B   Japan

C   China

D   USA

Answer: C

Question 50

Which National Park in Nepal is a continuation of India's Valmiki National Park?

A   Chitwan National Park

B   Bandipur National Park

C   Dudhwa National Park

D   Jim Corbett National Park

Answer: A

English

Instructions

For the following questions answer them individually

Question 51

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

I took the shortest (a)/ way through the (b)/ little park close the palace. (c)/No Error (d)

A   1

B   2

C   3

D   4

Answer: C

Explanation:

The word to is omitted in the option c.

Question 52

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

As it came to a stop (a)/ the conductor called (b)/ over in a loud voice. (c)/No Error (d)

A   1

B   2

C   3

D   4

   Answer: C

Explanation:
The meaning of the phrase called out is speaking in a loud voice. So, the third part of the sentence should be modified from called over to called out.

Hence, the correct option is option (c)

Question 53

In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

Moving to the city was eye-_____ for the straitlaced country girl.

A   clearing

B   freeing

C   saving

D   opening

   Answer: D

Explanation:
'Eye opener' means getting to know the reality of a situation. So, the country girl came to know the reality of the situation upon moving to the city.

Question 54

In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

With a blood test, a physician was able to _____ the woman's pregnancy.

A term

B confirm

C firm

D confer

   Answer: B

Explanation:
'Confirm' is the right word as the physician confirmed the pregnancy of the woman.

Question 55

In the following question, out of the four alternatives, select the word similar in meaning to the word given.

Exemption

A Immunity

B Accountability

C Liability

D Responsibility

   Answer: A

Explanation:
Exemption means freeing some one from an obligation, which is the same as immunity.

Question 56

In the following question, out of the four alternatives, select the word similar in meaning to the word given.

Perverse

A Agreeable

B Nefarious

C Compliant

D   Willing

   Answer: B

Explanation:

Perverse is a negative word which means to behave in a way that is unreasonable. The word nefarious also means the same.

Question 57

In the following question, out of the four alternatives, select the word which is same in meaning to the word given.

To maneuver

A   To manipulate

B   To proceed

C   To cease

D   To machinate

   Answer: A

Explanation:

Maneuver means to manage something with skill which also means to manipulate.

Question 58

In the following question, out of the four alternatives, select the word opposite in meaning to the word given.

To avert

A   To abet

B   To deter

C   To forestall

D   To preclude

   Answer: A

Explanation:

To avert is to stop beforehand. Forestall, preclude and deter mean the same.

To abet an activity means to facilitate it. Therefore, option A is the most opposite in meaning among the given options and hence, it is the right answer.

Question 59

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

To go to somebody's head

A   To have a huge ego

B   To complain to the highest authority

C   To make someone dizzy or slightly drunk

D   To arrive at the central point of the topic

   Answer: C

Explanation:
To go to somebody's head is to make someone dizzy or drunk

Question 60

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

To make amends

A   To make new friends

B   To feel guilty for something you have not done

C   To compensate

D   To make flimsy excuses

   Answer: C

Explanation:
To make amends means to compensate for a mistake or wrong committed.

Question 61

In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".

Why should we (bothered)?

A   bother

B   bothering

C   to bother

D   no improvement

   Answer: A

Explanation:
Why should we bother? is the correct way

Question 62

In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".

I absolutely must (seen) him, however painful it may be for me.

A   saw

B   seeing

C   see

D   no improvement

   Answer: C

Explanation:
Must should be followed by verb in simple present. Hence, the answer must be 'must see'.

Question 63

In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

To move back and forth or sideways

A   Sojourn

B   Tarriance

C   Traverse

D   Breather

   Answer: C

Explanation:
Traverse means to move back and forth or sideways. Hence, Tarriance is the answer

Tarriance is a brief travel or visit.

Sojourn is a temporary stay.

Breather is a break in a activity or rest or relief

Question 64

In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

The remains of something that has been badly damaged

A   Pristine

B   Immaculate

C   Wreckage

D   Sterile

   Answer: C

Explanation:
Wreckage means the remains of something that has been badly damaged. Hence, it is the answer.

Question 65

In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

A   Mutiniers

B   Muteneers

C   Muteniers

D   Mutineers

   Answer: D

Explanation:
Mutiny is to revolt. Mutineers are the persons who revolt. 'Mutineers' is the right way to spell the word

Question 66

In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

A   Obeisance

B   Obeisanse

C   Obesance

D   Obesanse

Answer: A

Explanation:
'Obeisance' is the right way to spell the word. Obeisance is to respect.

Question 67

The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

Our only enemies were

X-heat, thirst, and flies, but far
Y-from man or beast than that awful trinity
Z-rather would I have faced any danger

A   XYZ

B   ZYX

C   XZY

D   ZXY

Answer: C

Explanation:
Our only enemies were heat, thirst, and flies, but far rather would I have faced any danger from man or beast than that awful trinity

Question 68

The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

Thus, I stand on a

X-hill and watch a labourer
Y-upon the distant railway
Z-striking with his sledge

A   XYZ

B   XZY

C   ZYX

D   ZXY

   Answer: B

Explanation:

Thus, I stand on a hill and watch a labourer striking with his sledge upon the distant railway.

Question 69

In the following question, a sentence has been given in Active/Passive voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive/Active voice.

The painter painted the entire bungalow.

A   The entire bungalow is painted by the painter.

B   Painting of the entire bungalow was done by the painter.

C   The entire bungalow was painted by the painter.

D   Painting of the entire bungalow is done by the painter.

   Answer: C

Explanation:

The entire bungalow was painted by the painter. In the passive voice, 'was painted' is used because the sentence is in simple past tense.

Question 70

In the following question, a sentence has been given in Direct/Indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct speech.

The teacher said, "Nobody can solve the problem."

A   The teacher said that nobody can solve the problem.

B   The teacher said that nobody should solve the problem.

C   The teacher said that somebody can solve the problem.

D   The teacher said that nobody could solve the problem.

   Answer: D

Explanation:

Because the sentence is in past tense, in the indirect speech, can becomes could. Thus, the correct answer is 'The teacher said that nobody could solve the problem'.

Instructions

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Manja, or the glass-coated string used for flying kites, not only poses threat to humans, animals and birds but also to trees. A study by the country's oldest botanical garden has revealed that it poses a great threat to trees. But how can a snapped string struck in a tree kill the tree? Apparently, it does so by allying with the creepers in the garden.

A research paper by three scientists of the Acharya Jagdish Chandra Bose Indian Botanic Garden, located in West Bengal's Howrah district, illustrates in detail how the manja, in collusion with climbers, does the damage. "The abandoned, torn kite strings act as an excellent primary supporting platform for the tender climbers, giving easy passage to reach the top of the trees. Lateral branches from the top of the climber and other accessory branches from the ground reaches the top taking support of the first climber, completely covers the treetop, thus inhibiting the penetration of sunlight," says the research paper.

Question 71

Abandoned, torn kite strings stuck in trees benefits whom?

A Humans

B Creepers

C Birds

D Trees

  Answer: B

Explanation:
"The abandoned, torn kite strings act as an excellent primary supporting platform for the tender climbers, giving easy passage to reach the top of the trees". This line implies that Creepers benefit from torn kite strings. Thus, Creepers is the correct answer.

Question 72

How many scientists contributed to a study by country's oldest botanical gardens on how manja can kill a tree?

A Two

B Three

C Five

D Four

  Answer: B

Explanation:
"A research paper by three scientists of the Acharya Jagdish Chandra Bose Indian Botanic Garden, located in West Bengal's Howrah district, illustrates in detail how the manja, in collusion with climbers, does the

damage". Thus, three scientists contributed to a study by country's oldest botanical gardens on how manja can kill a tree. Option B is correct.

Question 73

How can a tree be killed by a creeper?

A   By blocking its access to sunlight

B   By wrapping its tentacles around its branches

C   By sucking away the nutrients

D   By secreting toxic chemicals

   Answer: A

Explanation:
Lateral branches from the top of the climber and other accessory branches from the ground reaches the top taking support of the first climber, completely covers the treetop, thus inhibiting the penetration of sunlight. Thus, Option A is correct.

Question 74

What would be the acronym for India's oldest botanical garden?

A   AJCBIBG

B   AJCBBGI

C   AJBCIBG

D   AJBCBGI

   Answer: A

Explanation:
Acharya Jagdish Chandra Bose Indian Botanic Garden - AJCBIBG. Thus, option A is correct.

Question 75

What gives easy passage to 'climbers' to top of the trees?

A   Creepers

B   Torn kites

C   Lateral branches

D Manja

Answer: D

Explanation:

"The abandoned, torn kite strings act as an excellent primary supporting platform for the tender climbers, giving easy passage to reach the top of the trees". Abandoned torn kite string is the Manja. Thus, option D is correct.

Mathematics

Instructions

For the following questions answer them individually

Question 76

What is the remainder when 2468 is divided by 37?

A 26

B 36

C 18

D 14

Answer: A

Explanation:

37*66 = 2442 is the least nearest multiple of 37.

The remainder when 2468 is divided by 37 = 2468 - 2442 = 26

so the answer is option A.

Question 77

A can do 75% of a job in 9 days and B can do half of the job in 8 days. If they work on it together, then in how many days can they do half of the job?

A 40/7

B 24/7

C 7/2

D 9/2

Answer: B

Explanation:

if total work = x units

A can do 75% of a job in 9 days

A can do 100% of work in $9 \times \frac{100}{75} = 12$ days

B can do half of the job in 8 days

B can do 100% of work in 16 days

total work = L.C.M of 12 and 16 = 48

A's efficiency = 48/12 = 4

B's efficiency = 48/16 = 3

both can complete the half work in $\frac{1}{2} \times \frac{48}{4+3} = \frac{24}{7} days$

so the answer is option B.

Question 78

Area of 4 walls of a cuboid 400 sq cm, its length is 15 cm and height is 8 cm. What is its breadth (in cm)?

A 12

B 20

C 24

D 10

Answer: D

Explanation:

Area of 4 walls of a cuboid 400 sq cm

$\Rightarrow 2(bh + hl) = 400$

$\Rightarrow (bh + hl) = 200$

$\Rightarrow (bx8 + 15x8) = 200$

$\Rightarrow 8xb = 200 - 120 = 80$

$\Rightarrow b = 10$

so the answer is option D.

Question 79

At 20% discount the selling price of an article is Rs 2400, what is the selling price (in Rs) if the discount is 32.5%?

A 2125

B 2225

C 2025

D 2325

    Answer: C

Explanation:

$\frac{100-20}{100} \times CP = 2400$

$\frac{80}{100} \times CP = 2400$

$CP = 3000$

if 32.5% discount is allowed then,

$SP = \frac{100-32.5}{100} \times 3000$

$SP = \frac{67.5}{100} \times 3000$

$SP = 2025$

so the answer is option C.

Question 80

What is the fourth proportional to 24, 120 and 22?

A 110

B 120

C 100

D 90

    Answer: A

Explanation:

Let fourth proportional to 24, 120 and 22 is X. then,

24 : 120 :: 22 : X

$\frac{24}{120} = \frac{22}{X}$

$X = 110$

so the answer is option A.

Question 81

What is the average of all numbers between 8 and 74 which are divisible by 7?

A   40

B   41

C   42

D   43

   Answer: C

Explanation:

The numbers between 8 and 74 which are divisible by 7 are 14, 21, 28, 35, 42, 49, 56, 63, 70.

sum = 378

average = 378/9 = 42.

SHORTCUT:

average = 7*(average of 2, 3, 4, 5, 6, 7, 8, 9, 10) = 7*(6) = 42.

so the answer is option C.

Question 82

A trader had 1200 kgs of rice. He sold a part of it at 5% profit and the rest at 11% profit, so that he made a total profit of 7%. How much (in kg) wheat did he sell at 5% profit?

A   900

B   600

C   400

D   800

   Answer: D

Explanation:

Let X be the weight of wheat sold at 5% profit, then

$\Rightarrow \frac{105}{100} \times X + \frac{111}{100} \times (1200 - x) = \frac{107}{100} \times 1200$

$\Rightarrow 1.05 \times X + 1.11 \times (1200 - X) = 1.07 \times 1200$

$\Rightarrow 1.05 \times X - 1.11 \times X = 1.07 \times 1200 - 1.11 \times 1200$

$\Rightarrow -0.6 \times X = -480$

$\Rightarrow X = 800$

so the answer is option D.

Question 83

20% of a = b, then b% of 20 is the same as _____ of a.

A 8%

B 40%

C 4%

D 80%

    Answer: C

Explanation:

b = 20% of a = 0.2a

b% of 20 = 0.2a% of $20 = 0.2 \times 20$ %of a = 4% of a.

so the answer is option C.

Question 84

After excluding stoppages, the speed of a bus is 60 kmph and after including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?

A 10

B 9

C 12

D 15

    Answer: D

Explanation:

In 1 hour the bus can travel 60km without including stoppages

To travel 1km it took 1min

In 1 hour the bus can travel 45km including stoppages

difference = 15kms

so it stopped for 15mins in 1hr.

so the answer is option D.

Question 85

The simple and compound interest that can be earned in two years at the same rate is Rs 1,000 and Rs 1,040 respectively. What is the rate (percent per annum) of interest?

A   9

B   10

C   8

D   11

Answer: C

Explanation:

Let the sum = Rs. $100x$ and rate of interest = $r\%$

Time period = 2 years

Simple interest = $\frac{P \times r \times t}{100}$

=> $\frac{100x \times r \times 2}{100} = 1000$

=> $2rx = 1000$

=> $x = \frac{1000}{2r} = \frac{500}{r}$

Compound interest = $P[(1 + \frac{r}{100})^t - 1]$

=> $100x[(1 + \frac{r}{100})^2 - 1] = 1040$

=> $\frac{100 \times 500}{r}[1 + \frac{r^2}{10000} + \frac{2r}{100} - 1] = 1040$

=> $\frac{50000}{r} \times (\frac{r^2}{10000} + \frac{2r}{100}) = 1040$

=> $5r + 1000 = 1040$

=> $5r = 1040 - 1000 = 40$

=> $r = \frac{40}{5} = 8\%$

=> Ans - (C)

Question 86

If 5/2 - (6/5)(x - 15/2) = -x/5, then what is the value of x?

A   -23/2

B   13/2

C   -13/2

D 23/2

    Answer: D

Explanation:

5/2 - (6/5)(x - 15/2) = -x/5

$\Rightarrow$ 5/2 - (6/5)x + 9 = -x/5

$\Rightarrow$ 5/2 + 9 = -x/5 + (6/5)x

$\Rightarrow$ 23/2 = x

so the answer is option D.

Question 87

If a - b = 2 and ab = 24, then what is the value of $a^3 - b^3$?

A 280

B 124

C 140

D 152

    Answer: D

Explanation:

$a^3 - b^3 = (a - b)^3 + 3ab(a - b)$

$a^3 - b^3 = (2)^3 + 3(24)(2) = 8 + 144 = 152$

so the answer is option D.

Question 88

Sum of twice a fraction and its reciprocal is 17/6. What is the fraction?

A 4/3

B 5/4

C 3/4

D 4/5

    Answer: C

Explanation:

Let that fraction be $\frac{1}{x}$

$2 \times \frac{1}{x} + x = \frac{17}{6}$

$\Rightarrow (2 + x^2) = \frac{17}{6} \times x$

$$\Rightarrow 6x^2 - 17x + 12 = 0$$

$$\Rightarrow (x - \tfrac{8}{6})(x - \tfrac{9}{6}) = 0$$

$$\Rightarrow x = 4/3 \, or \, 3/2$$

$$\Rightarrow \text{fraction} = \tfrac{1}{x} = 3/4 \, (or) \, 2/3$$

so the answer is option C.

Question 89

The 3rd and 7th term of an arithmetic progression are -9 and 11 respectively. What is the 15th term?

A   28

B   87

C   51

D   17

   Answer: C

Explanation:

T_3 = a + 2d = -9-------(1)

T_7 = a + 6d = 11-------(2)

on solving (1) AND (2)

d = 5 & a = -19

T_{15} = a + 14d = -19 + 14(5) = -51

so the answer is option C.

Question 90

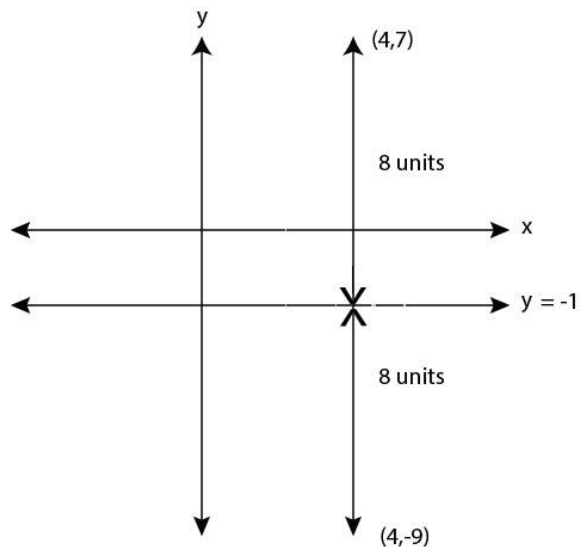**What is the reflection of the point (4, 7) in the line y = -1?**

A   (-6 , 7)

B   (-4 , -9)

C   (4 , -9)

D   (-6 , -7)

   Answer: C

Explanation:

from the diagram answer = (4, -9)

so the answer is option C.

Question 91

What are the co-ordinates of the centroid of a triangle, whose vertices are A(2 , 5), B(-4 , 0) and C(5 , 4)?

A   (-1 , 3)

B   (1 , 3)

C   (1 , -3)

D   (-1 , -3)

   Answer: B

Explanation:
centroid = $\left(\frac{x_1+x_2+x_3}{3}, \frac{y_1+y_2+y_3}{3} \right)$ = $\left(\frac{2-4+5}{3}, \frac{5+0+4}{3} \right)$ = $(1, 3)$

so the answer is option B.

Question 92

Slope of the line AB is -2/3. Co-ordinates of points A and B are (x , -3) and (5 , 2) respectively. What is the value of x?

A   4

B   -14

C   12.5

D   -4

    Answer: C

Explanation:

slope = $\frac{y_2 - y_1}{x_2 - x_1} = \frac{2+3}{5-x} = \frac{5}{5-x} = \frac{-2}{3}$

$\rightarrow 15 = -10 + 2x$

$\rightarrow x = \frac{25}{2} = 12.5$

so the answer is option C.

Question 93

D and E are points on side AB and AC of ΔABC. DE is parallel to BC. If AD:DB = 2:3, what is the ratio of area of ΔADE and area of quadrilateral BDEC?

A   4 : 21

B   4 : 25

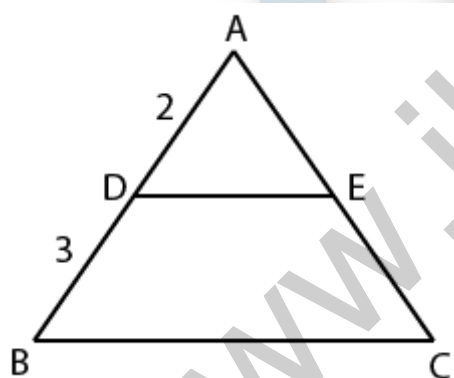**C**   4 : 29

D   4 : 9

    Answer: A

Explanation:

ADE & ABC are similar, let area of $\triangle$ ABC = y, that of ADE = x

For similar triangles

Ratio of sides = $\sqrt{(ratio\,of\,areas)}$

AB/AD = $\sqrt{\frac{area.ABC}{area.ADE}}$

5/2 = $\sqrt{\frac{y}{x}}$

25/4 = $\frac{y}{x}$

y = 25x/4

 area of quadrilateral BDEC = ABC - ADE = y - x = 25x/4 - x = 21x/4

$\frac{ADE}{BDEC} = \frac{x}{21x/4} = \frac{4x}{21x} = \frac{4}{21}$

So the answer is option A.

Question 94

What is the value of Cot 60°- Cos 45° ?

A (9 - 2√3)/9

B (2√6 - 1)/√3

C (1 - 2√3)/2

D (√2 - √3)/√6

   Answer: D

Explanation:

Cot 60°- Cos 45° = $\frac{1}{\sqrt{3}} - \frac{1}{\sqrt{2}} = \frac{\sqrt{2}-\sqrt{3}}{\sqrt{6}}$

so the answer is option D.

Question 95
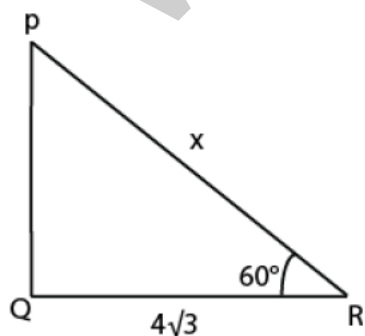
Δ PQR is right angled at Q. If m∠R = 60°, what is the length of PR (in cm), if RQ = 4√3 cm?

A 8

B 4

C 8/√3

D 8√3

   Answer: D

Explanation:

cos60°= $\frac{QR}{PR}$

$\Rightarrow \frac{1}{2} = \frac{4\sqrt{3}}{PR}$

$$\Rightarrow PR = 8\sqrt{3}$$

so the answer is option D.

Question 96

If Tan θ = 9/40, then Sec θ = ?

A   40/41

B   9/41

C   41/40

D   41/9
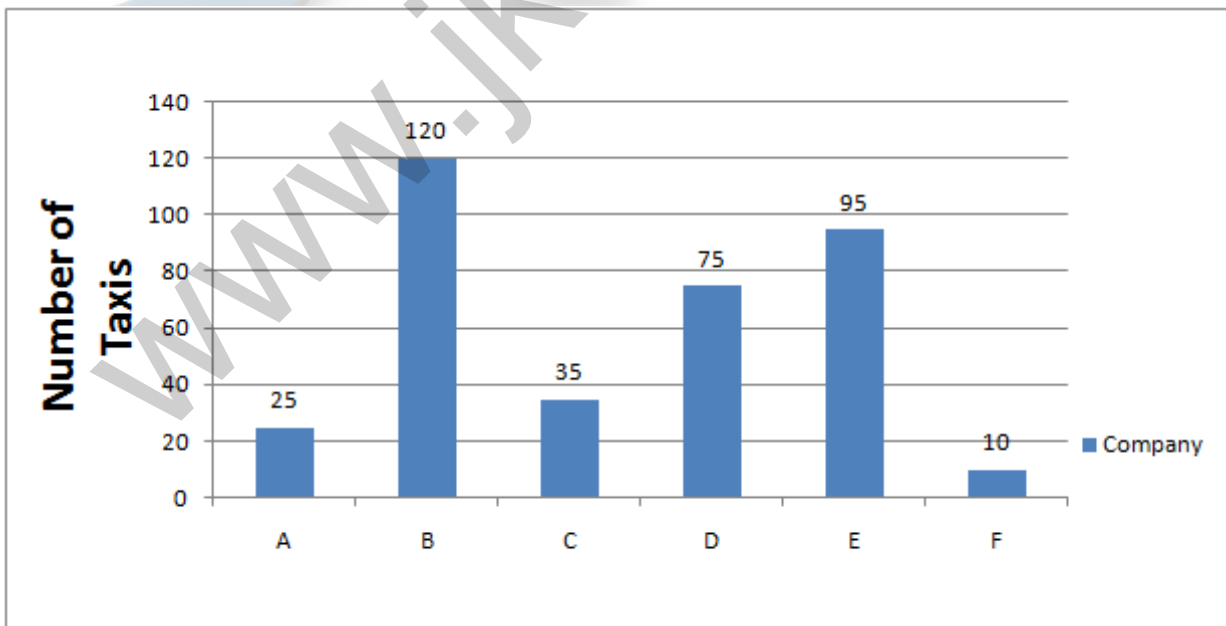
   Answer: C

Explanation:
Tan θ = 9/40

W.K.T

$$sec^2\theta = 1 + tan^2\theta = 1 + (81/1600) = 1681/1600$$

$$\Rightarrow sec\theta = 41/40 \, (\because 41^2 = 1681)$$

so the answer is option C.

Instructions

There are six taxi companies (A, B, C, D, E, F) in a certain city. The bar graph shows the number of taxis run by each of these six companies. Study the diagram and answer the following questions.

Question 97

Which taxi company has more taxis than A but less than D?

A   B

B   C

C   F

D   E

    Answer: B

Explanation:

only C has the less no.of taxis than D and more number of taxis than A with 35 taxis

so the answer is option B.

Question 98

If 30 taxis quit company B and joined company D then D will have how many more taxis than C?

A   40

B   30

C   110

D   70

    Answer: D

Explanation:

D = 75+30 = 105

c = 35

D-C = 105 - 35 = 70

so the answer is option D.

Question 99

Even if A and C decide to merge, still D will have how many more taxis (in %) than the merged A and C entity?

A   15

B   20

C   10

D 25

Answer: D

Explanation:

A+C = 25 + 35 = 60

D = 75

difference = 75-60 = 15

Percentage = (15/60) * 100 = 25%

so the answer is option D.

Question 100

If each taxi on an average runs 100 kms every day and if fuel cost is Rs 3 per km, then all these taxis spend how much (in Rs.) on fuel every day?

A 128000

B 108000

C 118000

D 98000

Answer: B

Explanation:

total taxis = 25+120+35+75+95+10 = 360

total cost = 360*100*3=108000

so the answer is option B.

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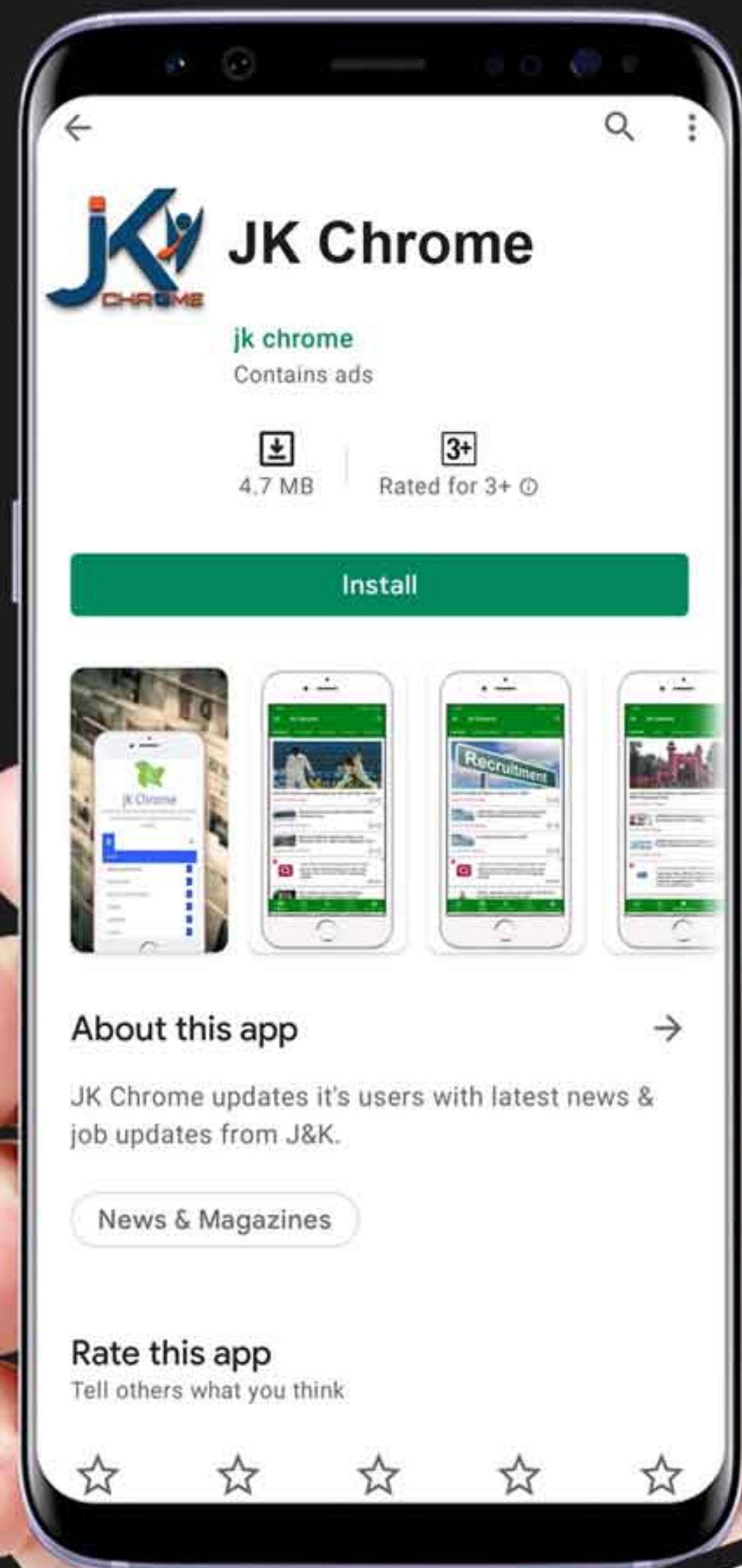Employment News
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