

JK Chrome | Employment Portal



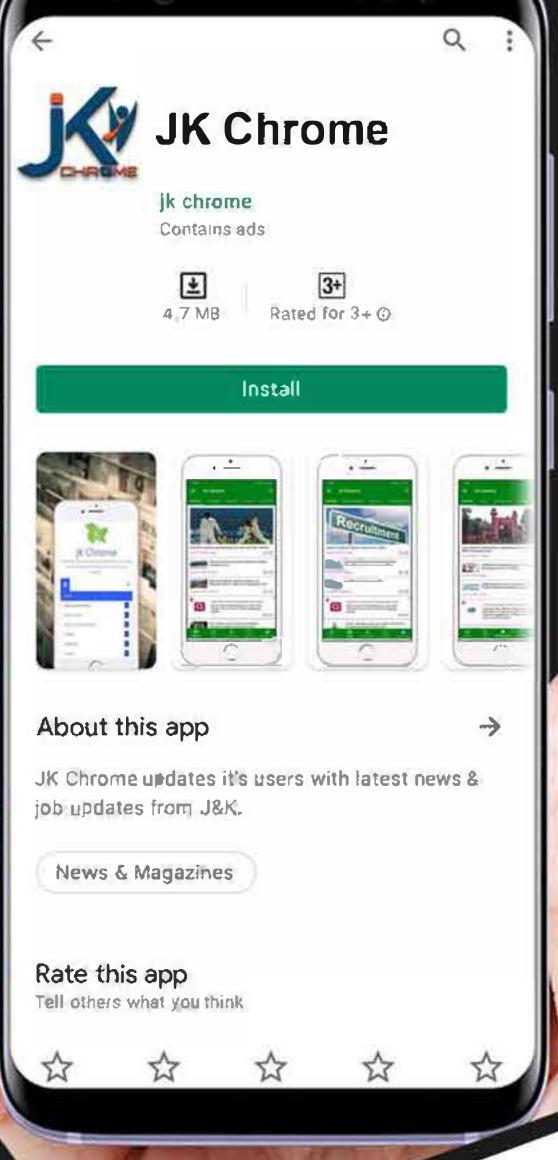
Rated No.1 Job Application of India

Sarkari Naukri
Private Jobs
Employment News
Study Material
Notifications













JK Chrome

jk chrome Contains ads



www.jkchrome.com | Email : contact@jkchrome.com

SSC CPO 3 July 2017 Afternoon Shift

Reasoning

Instructions

In the fo ow ng quest on, se ect the re ated word from the g ven a ternat ves.

Question 1

Car: Road:: Rail:?

- A Water
- B A
- C Road
- **D** Track

Answer: D

Explanation:

First trave sion second, car runs on the road, while a rail on a track.

> Ans - (D)

Question 2

Light: Lumen::?:?

- A Temperature : Cande a
- B Dens ty: K ogram
- C Pressure : Pasca
- D Force: Meter

Answer: C

Explanation:

Second s S.I. un t of f rst, .e. Lumen s un t of .ght, s m ar y S.I. un t of pressure s ${f Pascal.}$

> Ans - (C)

Instructions

In the fo ow ng quest on, se ect the re ated etters from the g ven a ternat ves.

Question 3

BGMR: DIOT:: SNOV: 3

- A UPXQ
- **B** QPUX
- C UMPW
- **D** UPQX

Answer: D

Explanation:

Express on BGMR: DIOT:: SNOV:?

The pattern fo owed s:

В	G	М	R
(+2)	(+2)	(+2)	(+2)
D	I	0	Т

S m ar y, for SNOV: UPQX

S	N	0	٧
(+2)	(+2)	(+2)	(+2)
U	Р	Q	Х

> Ans - (D)

Question 4

UVWX: YYYY:: ABCD:?

A YYYY

B EEEE

C DDDD

D FFFF

Answer: B

Explanation:

Express on UVWX:YYYY::ABCD:?

The etters in the second term are same, which follows the consecutive a phabets from the English a phabet call order.

Eg :- 'Y' fo ows UVWX

S m ar y, after ABCD, we have E

> ABCD : **EEEE**

> Ans - (B)

Instructions

In the fo ow ng quest on, se get the related number from the given a ternatives.

Question 5

12:156::14:?

A 195

B 205

C 208

D 210

Answer: D

Explanation:

Express on 12:156::14:?

The pattern followed s $(n)^2 + n$

 $\operatorname{Eg} : (12)^2 + 12 = 144 + 12 = 156$

```
S m ar y, (14)^2 + 14 = 196 + 14 = 210
```

102:10404::104:?

- 10202
- 10404
- 10804
- 10816

Answer: D

Explanation:

Express on 102:10404::104:?

The pattern followed s $n:(n)^2$

Eg :-
$$(102)^2 = 1040$$

S m ar y,
$$(104)^2 = 10816$$

Instructions

In the fo ow ng quest on, se ect the odd word from the g ven a ternat ves.

Question 7

- Lemon
- Carrot
- Beetroot
- Turn p

Answer: A

Explanation:

Carrot, beetroot and turn p are the vegetab es that grow under the ground, whe lemons are grown in trees.

Question 8

- Sentence
- Letter
- Word
- Paragraph

Answer: B

Explanation:

Sentence, word and paragraph are made from etters or comb nat on of etters, hence letter s the odd one out.

> Ans - (B)

Instructions

In the fo ow ng quest on, se ect the odd etters from the g ven a ternat ves.

Question 9

- A ADG
- **B** CFI
- C JMQ
- D SVY
 - Answer: C

Explanation:

- (A): A (+3 etters) D (+3 etters) G
- (B): C (+3 etters) F (+3 etters) I
- (C): J (+3 etters) M (+4 etters) Q
- (D): S (+3 etters) V (+3 etters) Y
- > Ans (C)

Question 10

- A DWEV
- **B** HSIR
- C KPLO
- **D** PKQI
- Answer: D

Explanation:

In the f rst three opt ons, the a ternate etters are pars of consecutive a phabets according to the Eng. shia phabet callorder.

Eg:-DWEV: (DE), (WV)

But, n the ast opt on, K and I are not consecutive pairs, hence t s the odd one out.

> Ans - (D)

Instructions

In the fo ow ng quest on, se ect the odd number par from the g ven a ternat ves.

Question 14

- **A** 17 12
- **B** 29 14
- C 21 16
- **D** 31 26

Answer: B

Explanation:

The d fference between the numbers s 5.

- (A): 17 12 = 5
- (B): $29 14 = 15 \neq 5$
- (C): 21 16 = 5
- (D): 31 26 = 5
- > Ans (B)

- **A** 3 27
- **B** 7 49
- **C** 5 125
- **D** 6-216

Answer: B

Explanation:

The pattern fo owed s that second number s **cube** of f rst number.

- (A): $(3)^3 = 27$
- (B): $(7)^2 = 49$
- (C): $(5)^3 = 125$
- (D): $(6)^3 = 216$
- > Ans (B)

Instructions

Arrange the g ven words in the sequence in which they occur in the dictionary.

Question 13

- 1. Mobile
- 2. Manage
- 3. Merger
- 4. Merged
- 5. Mango
- **A** 25341
- **B** 25431
- **C** 24351
- **D** 54132

Answer: B

Explanation:

As per the order of d ct onary,

Manage -> Mango -> Merged -> Merger -> Mob e

- $\equiv 25431$
- > Ans (B)

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

- 1. Strain
- 2. Storm
- 3. Stark
- 4. Stored
- 5. Stamp
- **A** 54312
- **B** 53421
- **C** 53412
- **D** 54321

Answer: B

Explanation:

As per the order of d ct onary,

Stamp -> Stark -> Stored -> Storm -> Stra n

 $\equiv 53421$

> Ans - (B)

Instructions

A ser es s g ven w th one term m ss ng. Se ect the correct a ternat ve from the g ven ones that w comp ete the ser es.

Question 15

AD, CE, EF, GG,?

- A II
- B IH
- C HI
- **D** IJ

Answer: B

Explanation:

Express on : AD, CE, EF, GG,

The pattern fo owed n each etter of the terms s:

1st etter: A (+2 etters) C (+2 etters) E (+2 etters) G (+2 etters) I

2nd etter: D (+1 etter) E (+1 etter) F (+1 etter) G (+1 etter) H

Thus, m ss ng term IH

> Ans - (B)

Question 16

AZ, DY, IX, PW,?

- A YY
- B YV
- C WV

D VV

Answer: B

Explanation:

Express on : AZ, DY, IX, PW, ?

1st etter: A (+3 etters) D (+5 etters) I (+7 etters) P (+9 etters) \mathbf{Y}

2nd etter : Z (-1 etter) $\,$ Y (-1 etter) $\,$ X (-1 etter) $\,$ W (-1 etter) $\,$ V

Thus, m ss ng term YV

> Ans - (B)

Instructions

In the fo ow ng quest on, se ect the m ss ng number from the g ven ser es.

Question 17

7, 10, 14, 19, 25, ?

A 32

B 36

C 38

D 40

Answer: A

Explanation:

Consecut ve ntegers start ng from 3 are added.

7+3 10

 $10 + 4 \quad 14$

14 + 5 19

19+6 25

25 + 7 **32**

> Ans - (A)

Question 18

1, 7, 3, 9, 6, 12, 10, 16, 15,

A 18

B 15

C 20

D 21

Answer: D

Explanation:

Ser es: 1, 7, 3, 9, 6, 12, 10, 16, 15, ?

There are 2 ser es at a ternate post ons, $\,$ n which consecutive $\,$ ntegers start ng from 2 are added.

```
Ser es are: (1,3,6,10,15) and (7,9,12,16,?)

1st: 1 (+2) 3 (+3) 6 (+4) 10 (+5) 15

2nd: 7 (+2) 9 (+3) 12 (+4) 16 (+5) 21

> Ans-(D)
```

Instructions

For the fo owng quest ons answer them nd v dua y

Question 19

Mohini is taller than Nita but shorter than Sarita. Sarita and Malini are of same height. Mohini is shorter than Hema. Among them, who is the second tallest?

- A Moh n
- B Nta
- **C** Hema
- D Cannot be determ ned

Answer: D

Explanation:

Moh n s ta er than N ta but shorter than Sar ta, > Sar ta > Moh n > N ta

Sar ta and Ma n are of same he ght, > Sar ta Ma n

Moh n s shorter than Hema, > Hema > Moh n

∴ Malini = Sarita > Mohini > Nita

Now, second ta est can be e ther Ma n, Sar ta or Hema, hence t cannot be determined.

> Ans - (D)

Question 20

Present age of Saksham is one third of his father's present age. 5 years ago Saksham's father's age was half the age of Saksham's grandfather. If Saksham's grandfather will celebrate his 88th birthday after 3 years, then what is the present age (in years) of Saksham?

- **A** 18
- **B** 15
- **C** 16
- **D** 20

Answer: B

Explanation:

Saksham's grandfather's present age 88-3=85 years

Saksham's grandfather's age 5 years ago 80 years

> Saksham's father's age 5 years ago $egin{array}{c} 80 \\ 2 \end{array} = 40$ years

Thus, Saksham's father's present age 40+5=45 years

 \therefore Present age (n years) of Saksham $egin{array}{c} 45 \\ 3 \end{array} = 15$ years

> Ans - (B)

If 'P 3 Q' means 'P is daughter of Q', 'P 5 Q' means 'P is father of Q', 'P 7 Q' means 'P is mother of Q' and 'P 9 Q' means 'P is sister of Q', then how is J related to K in J 3 L 9 N 3 O 5 K?

- A Mother
- **B** W fe
- C N ece
- **D** Daughter

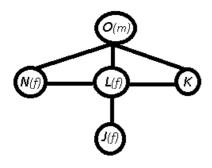
Answer: C

Explanation:

Express on : J 3 L 9 N 3 O 5 K?

J s daughter of L and L s s ster of N, > L s mother of J.

N s daughter of O, and O s father of K, > N and L are s sters of K



Thus, J s niece of K.

> Ans - (C)

Instructions

In the fo ownng quest on, select the word which cannot be formed using the letters of the given word.

Question 22

RIVALRIES

- A RIVAL
- **B** RICE
- C SEAL
- **D** RISE

Answer: E

Explanation:

The word RIVALRIES does not contain any 'C', thus the term Rice cannot be formed.

> Ans - (B)

Question 23

DICTIONARIES

A CATION

- SITE
- **C** DICTATE
- **D** TIRED

Answer: C

Explanation:

The word DICTIONARIES does not contain two T's, thus the term **Dictate** cannot be formed.

Instructions

For the fo owng quest ons answer them nd v dua y

Ouestion 24

In a certain code language, "he is game" is written as "@#*", "good game play" is written as "\$*&" and "play that hard" is written as "!\$%". How is "good" written in that code language?

- **A** &
- B
- CS
- **D** @

Answer: A

Explanation:

he is game →@ # *





∴ Code for good → &

Question 25

In a certain code language, "CAB" is written as "6" and "LEG" is written as "6". How is "MAP" written in that code language?

- **A** 6
- **B** 4
- **C** 3
- **D** 8

Answer: C

Explanation:

The pattern fo owed s:

CAB 3+1+2 6

LEG 12+5+7 24 2+4 6

MAP 13+1+16 30 3+0 3

If " \div " denotes "subtracted from", "+" denotes "multiplied by", "-" denotes "added to" and " \times " denotes "divided by", then $19 + 2 \div 2 + 2 - 14 = ?$

- **A** 52
- **B** 46
- **C** 48
- **D** 88

Answer: C

Explanation:

Express on: $19 + 2 \div 2 + 2 - 14$?

$$\equiv 19\times 2 - 2\times 2 + 14$$

$$(19 \times 2) - (2 \times 2) + 14$$

$$38 - 4 + 14 = 48$$

> Ans - (C)

Question 27

If "#" denotes "multiplied by", "@" denotes "subtracted from", "*" denotes "added to" and "%" denotes "divided by", then which of the following equation must be true?

- A 14%2*3#8 31
- **B** 3 # 9 @ 4 # 6 4
- C 5#6%3@4 8
- **D** 4%2#6*7 18

Answer: A

Explanation:

(A):14%2*3#8 31

$$\equiv 14 \div 2 + 3 \times 8 = 31$$

L.H.S. $\binom{14}{2} + 24 = 31 = \text{R.H.S}$

> Ans - (A

Question 28

If 11 # 2 @ 6 = 78 and 15 # 4 @ 8 = 152, then 17 # 6 @ 7 = ?

- **A** 161
- **B** 143
- C 221
- **D** 157

Answer: A

Explanation:

G ven: 11 # 2 @ 6 78 and 15 # 4 @ 8 152

If we rep ace # by '+' and @ by 'x', and perform the add operat on f rst, we get the des red resu t.

Eg :-
$$(11+2) \times 6 = 78$$

and
$$(15+4)\times 8=152$$

S m ar y,
$$(17+6) imes 7 = 161$$

Question 29

If 2 = 0, 5 = 1 and 8 = 4, then 11 = ?

- **A** 8
- B
- **C** 10
- **D** 6

Answer: B

Explanation:

G ven : $2 = (0)^2 = 0$

$$5 = (1)^2 = 1$$

$$8 = (2)^2 = 4$$

The number on the eft s ncreas ng by 3, and the number on the right s the square of consecutive who e numbers.

Thus,
$$11 = (3)^2 = 9$$

Question 30

In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

3	6
72	18

5	10
120	30

7	14	
?	42	

- **A** 84
- **B** 136
- C ₁₄₄
- **D** 168

Answer: D

Explanation:

Start ng from top eft post on, f we move c ockw se, the pattern fo owed s:

$$3 \times 2 = 6$$
 ; $6 \times 3 = 18$; $18 \times 4 = 72$

$$5 imes 2 = 10$$
 ; $10 imes 3 = 30$; $30 imes 4 = 120$

$$7 imes 2 = 14$$
 ; $14 imes 3 = 42$; $42 imes 4 = 168$

In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

5	11
2	6

13	4	
6	1	

8	7
5	?

- 3

- D 7

Answer: B

Question 32

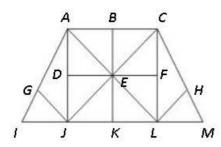
How many triangles are there in the given figure?



- 20
- C 24
- 28

Answer: C

Explanation:



Sma $\,$ tr ang es $\,$ ADE, ABE, BCE, CEF, EFL, ELK, JEK, DEJ, GIJ, AGJ, CLH, HLM

Tr ang es (conta n ng 2 tr ang es) AlJ, ACE, CEL, JEL, AEJ, CLM

Tr ang es (conta n ng 3 tr ang es) AJL, CJL, AJC, ACL

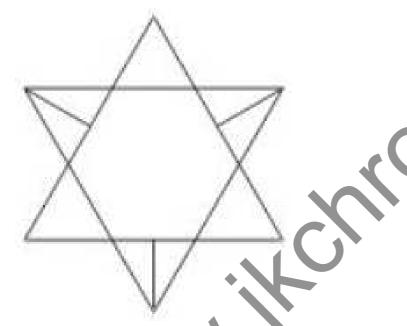
B g tr ang es AIL, CJM

Thus, tota tranges 24

> Ans - (C)

Question 33

How many triangles are there in the given figure?



A 12

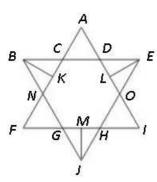
B 14

C 16

D 20

Answer: B

Explanation:



Sma tranges ACD, BCK, BKN, FNG, GMJ, JHM, IOH, DEL, ELO

Tr ang es (conta n ng 2 tr ang es) BCN, GJH, DEO

Bg tranges AFI, BEJ

Thus, tota tranges 14

> Ans - (B)

Instructions

In each of the following question below are given some statements followed by some conclusions. Taking the given statements to be true even if they seem to be at variance from common yiknown facts, read a little conclusions and then decide which of the given conclusion ogically follows the given statements.

Question 34

Statements:

- I. Some pens are pencils.
- II. All pencils are erasers.
- III. Some erasers are cups.

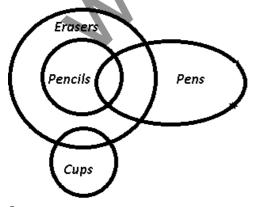
Conclusions:

- I. Some pens are cups.
- II. Some pencils are cups.
- III. Some cups are pencils.
- IV. Some erasers are pens.
- A On y conc us on (II) fo ows
- B On y conc us on (IV) fo ows
- C On y conc us on (I) fo ows
- D No conc us on fo ows

Answer: B

Explanation:

The venn d agram for above statements s:



Conc us ons:

- I. Some pens are cups fa se
- II. Some penc s are cups fa se

III. Some cups are penc s fa se

IV. Some erasers are pens true

Thus, on y conc us on (IV) fo ows.

> Ans - (B)

Question 35

- I. Some pens are cups.
- II. No cups are plates.

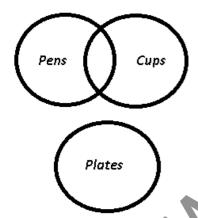
Conclusions:

- I. Some pens are not plates.
- II. All pens are plates.
- III. Some plates are not pens.
- A E ther conc us on (I) or (III) fo ow
- B On y conc us on (I) fo ows
- C On y conc us on (II) and (III) fo ow
- D No conc us on fo ows

Answer: A

Explanation:

The venn d agram for above statements s:



Conc us ons:

- I. Some pens are not p ates may or may not be true
- II. A pens are p ates fa se
- III. Some p ates are pens may or may not be true

Thus, e ther conc us on (I) or (III) fo ow.

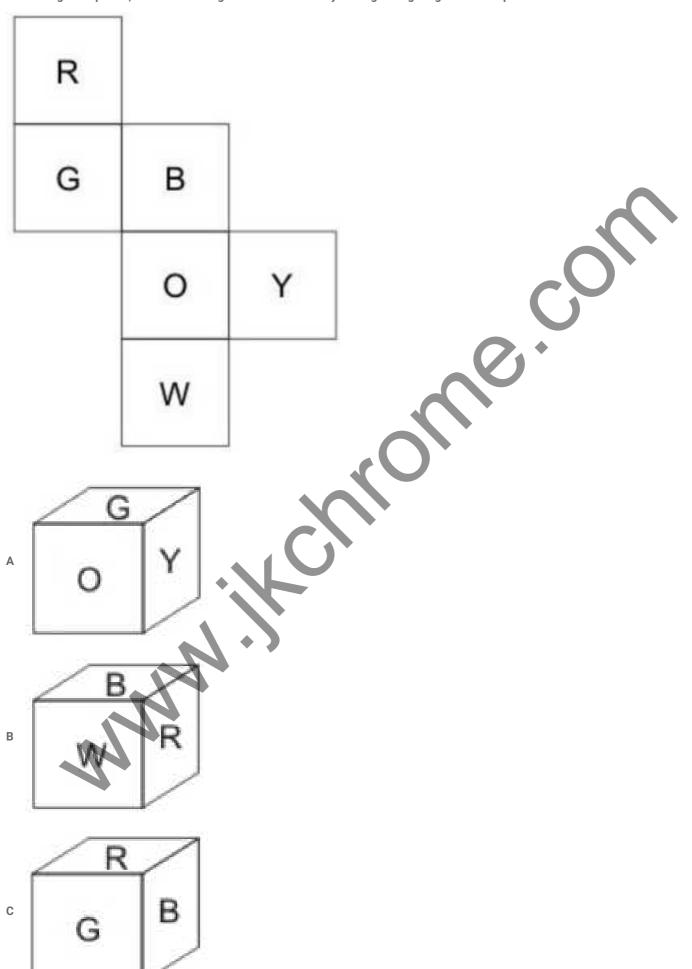
> Ans - (A)

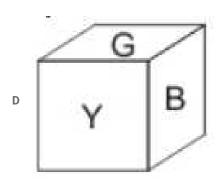
Instructions

For the fo ow ng quest ons answer them nd v dua y

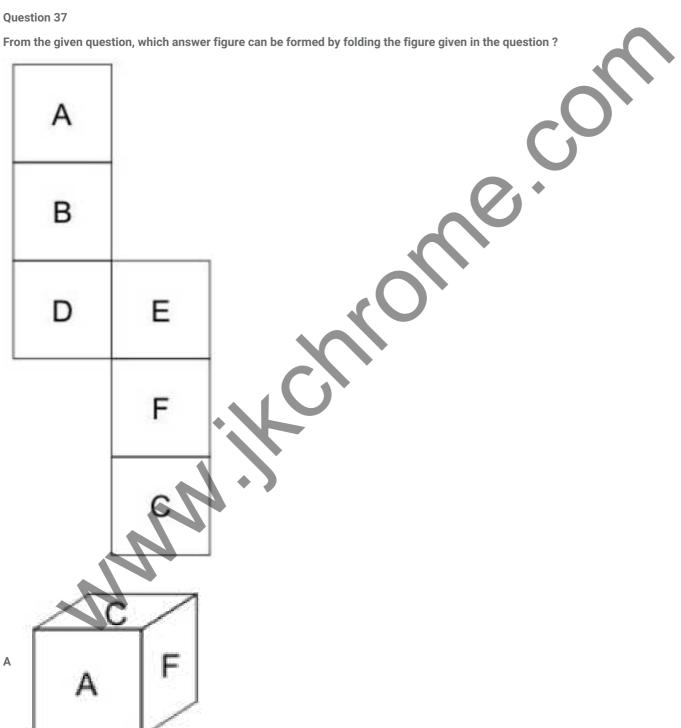
Question 36

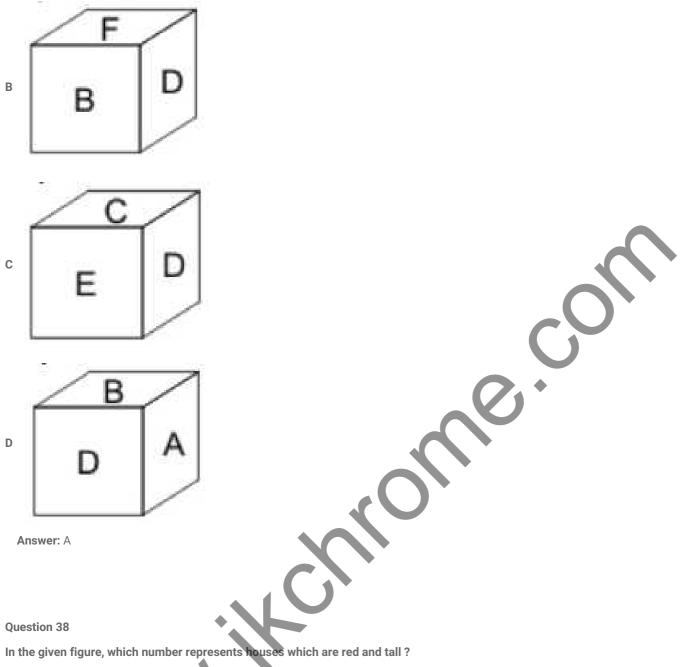
From the given options, which answer figure can be formed by folding the figure given in the question?

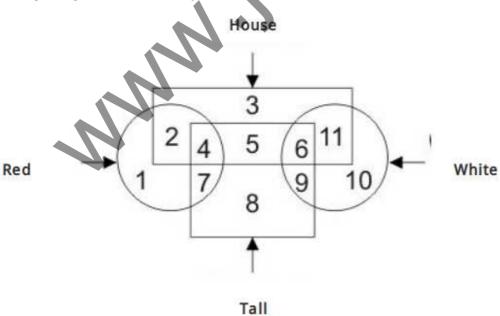




Answer: C



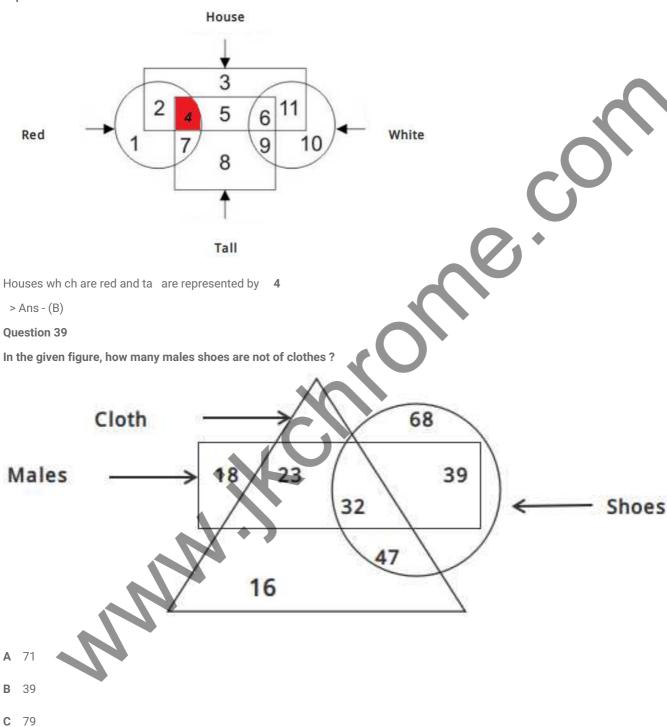




- С 8
- 11

Answer: B

Explanation:

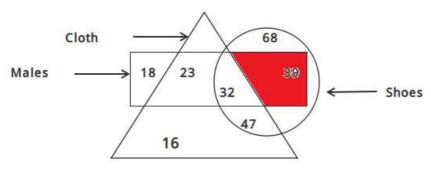


Explanation:

23

Answer: B

В



Ma es shoes that are not of c othes 3

> Ans - (B)

Question 40

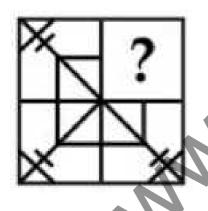
In the given figure, which number represents white glass which is not cup?

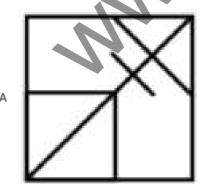
- **A** 2
- B 3
- **C** 6
- D 4

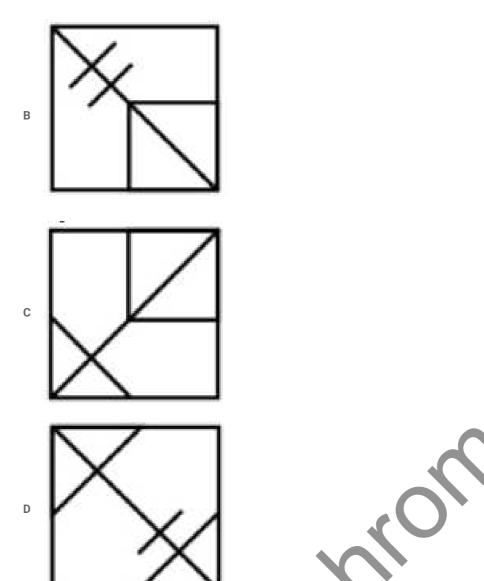
Answer: C

Question 41

Which answer figure will complete the pattern in the question figure ?







Answer: A

Explanation:

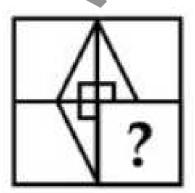
The quest on f gure w be comp eted by:

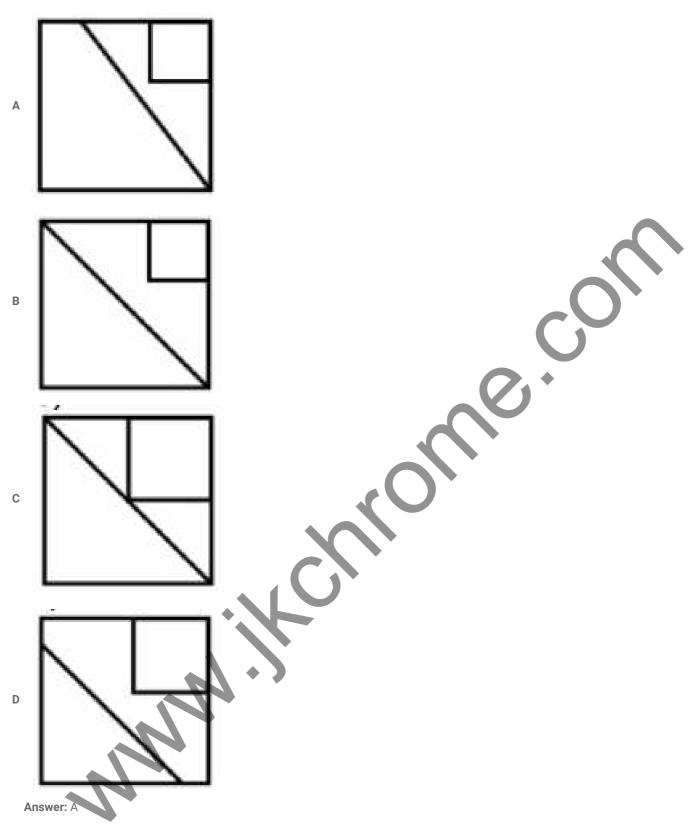


> Ans - (A)

Question 42

Which answer figure will complete the pattern in the question figure ?



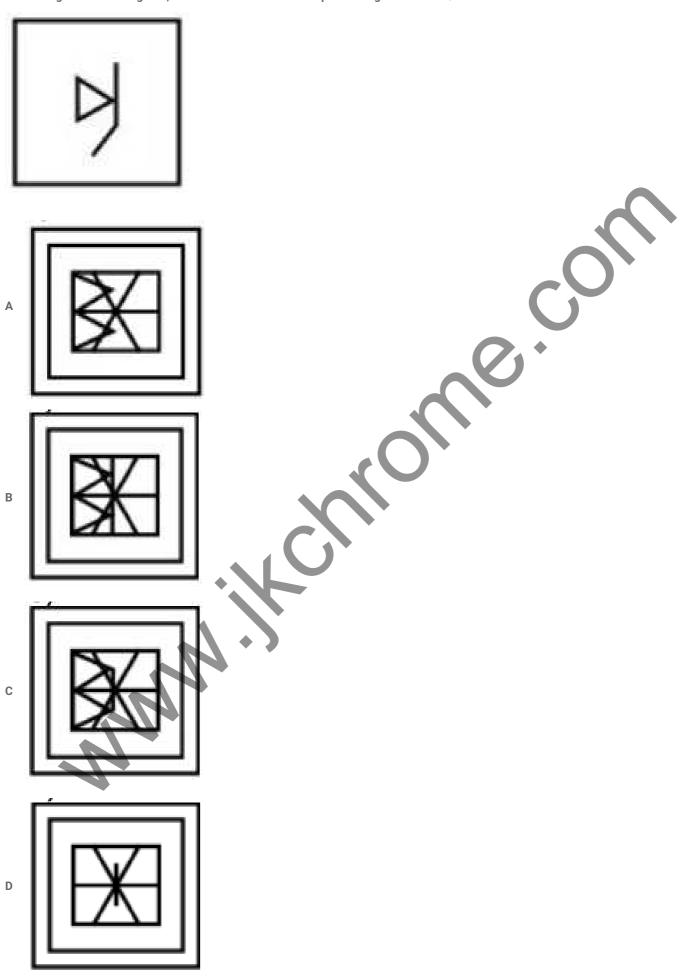


Explanation:

٦.

Question 43

From the given answer figures, select the one in which the question figure is hidden/embedded.



Answer: B

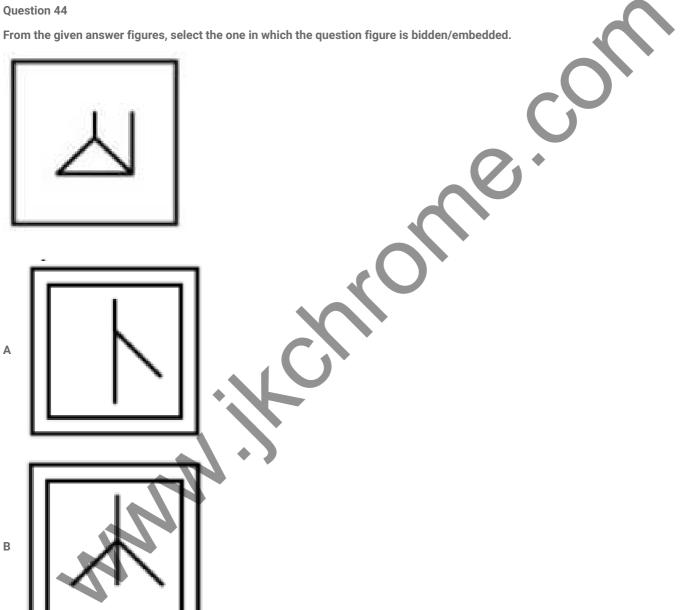
Explanation:

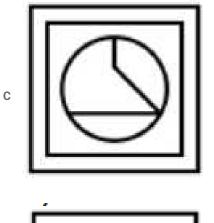
The above f gure $\,$ s represented by 'red' co or and $\,$ s h dden $\,$ n:

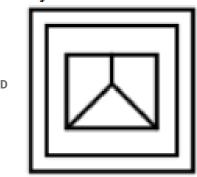


> Ans - (B)









Answer: D

Explanation:

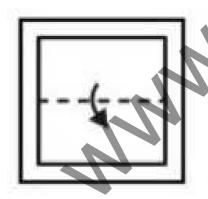
The above f gure $\,s$ represented by 'red' co or and $\,s\,h$ dden $\,n$:

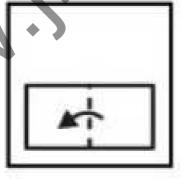


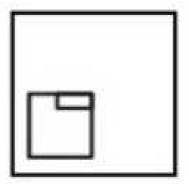
> Ans - (D)

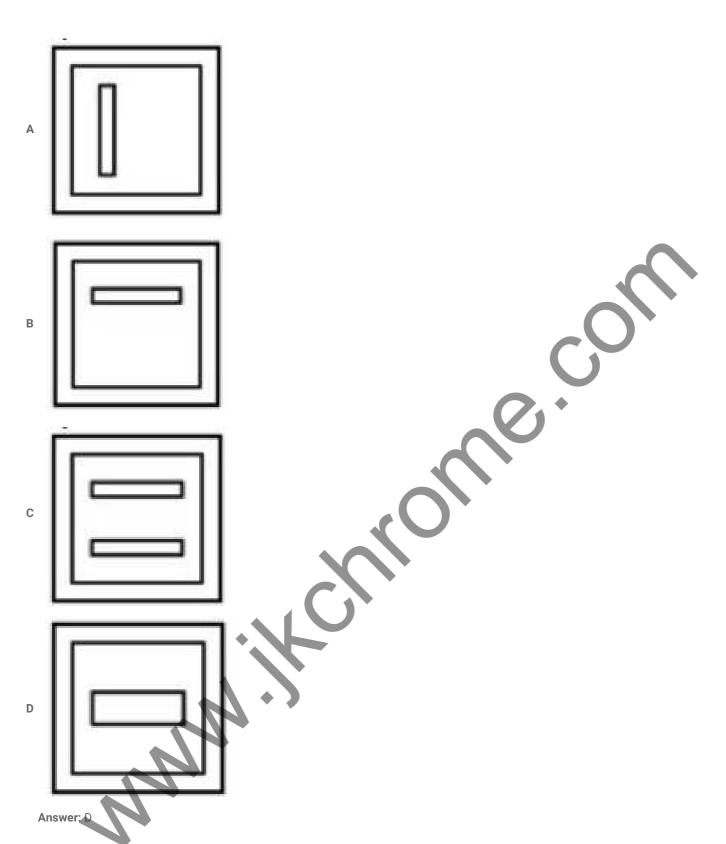
Question 45

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?



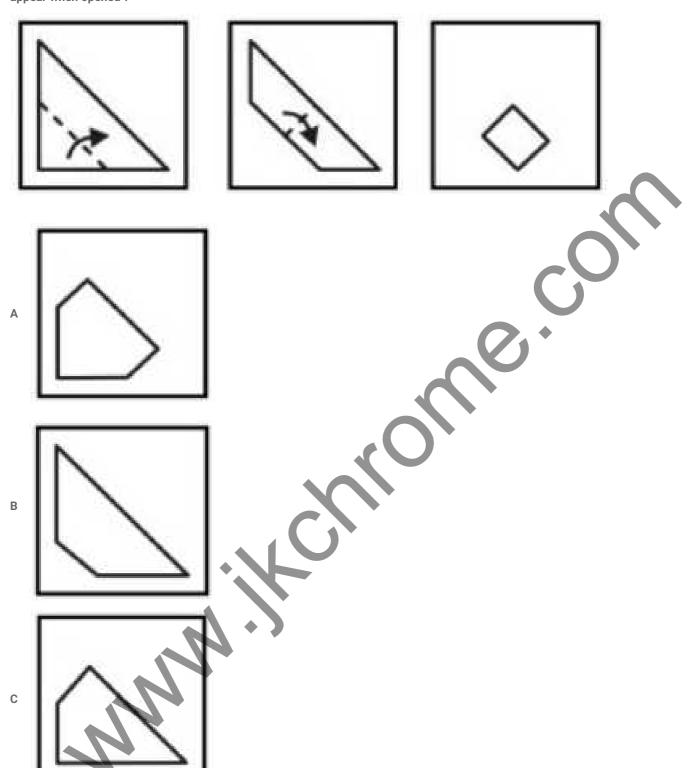


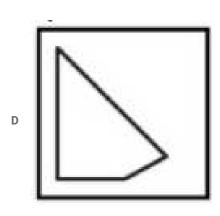




Question 46

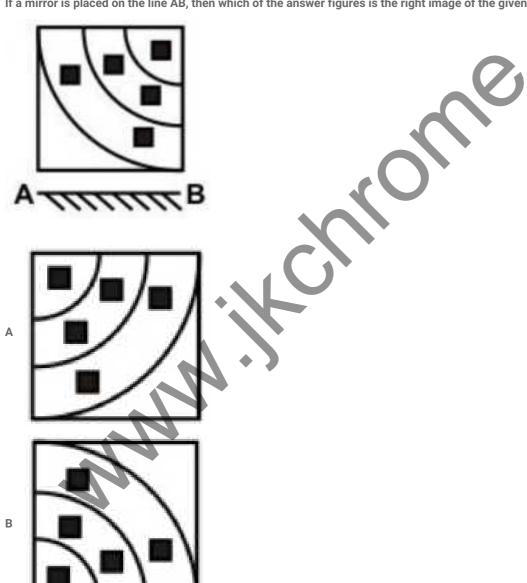
A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?

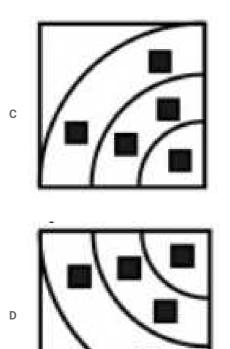




Answer: A

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





Answer: C

Explanation:

A hor zonta m rror s p aced, so the object on the top w appear at the bottom in reverse post on and v ce-versa.

So the three arcs fac ng top r ght w now face at bottom r ght, hence th rd opt on s the r ght mage.

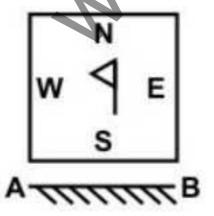
The m rror mage:

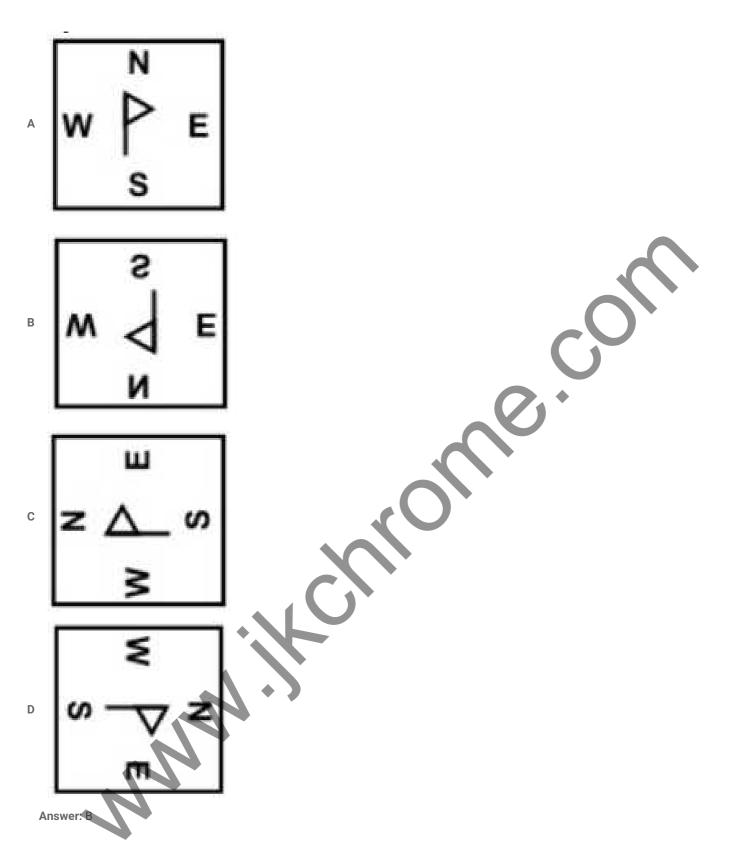


> Ans - (C)

Question 48

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





Explanation:

A hor zonta m rror s p aced, so the object on the top w appear at the bottom n reverse post on and v ce-versa.

So the f ag $\,$ n vert ca $\,$ pos t on $\,$ n the m dd e w $\,$ stay vert ca $\,$ but $\,$ t w $\,$ be turned ups de down and thus w $\,$ face towards $\,$ eft, hence second opt on $\,$ s the r ght $\,$ mage.

> Ans - (B)

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 dasses of alphabets as shown in the given two matrices. The column 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, 'N' can be represented by 10, 41, etc., and 'G' can be represented by 56, 99, etc., Similarly, you have to identify the set for the word "CROW".

Matrix-I					
	0	1	2	3	4
0	Α	R	С	N	K
1	N	K	Α	R	C
2	R	С	N	K	A
3	K	Α	R	С	N
4	С	N	K	Α	R

944	Matrix-II				
	5	6	7	8	9
5	0	G	W	Н	U
6	Н	U	0	G	W
7	G	W	Н	U	0
8	U	0	G	W	Н
9	W	Н	U	0	G

- **A** 40, 13, 56, 57
- **B** 14, 32, 68, 76
- **c** 21, 01, 86, 69
- **D** 02, 20, 97, 88

Answer: C

Explanation:

- (A): 40, 13, 56, 57: CRGW
- (B): 14, 32, 68, 76: CRGW
- (C): 21, 01, 86, 69: CROW
- (D): 02, 20, 97, 88: CRUW
- > Ans (C)

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 dasses of alphabets as shown in the given two matrices. The column 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, 'E' can be represented by 12, 24, etc., and 'D' can be represented by 65, 77, etc., Similarly, you have to identify the set for the word "IDLE".

Matrix-I 2 3 4 0 U 0 E Ī 0 Α U 4 E I 0 2 U E Α 3 E U Ι 0 Α 4 U E I Α 0

Mari IX-II					
	5	6	7	8	9
5	В	F	L	D	Н
6	D	H	В	F	L
7	F	L	D	Н	В
8	Н	В	F	L	D
9	L	D	Н	В	F

Matrix-II

- **A** 20, 65, 95, 43
- **B** 32, 77, 56, 00
- **C** 44, 88, 68, 31
- **D** 01, 96, 75, 43

Answer: A

Explanation:

(A): 20, 65, 95, 43: IDLE

(B): 32, 77, 56, 00: IDFE

(C): 44, 88, 68, 31: ILFE

(D): 01, 96, 75, 43: IDFE

> Ans - (A)

General Awareness

Instructions

For the fo ow ng quest ons answer them nd v dua y

Question 51

Real estate comes under which sector?

- A Pr mary
- B Tert ary
- C Secondary

Both Secondary and Tert ary

Answer: B

Question 52

What is the full form of PMGSY?

- A Pradhan Mantr Greh Sadak Yojana
- B Pradhan Mantr Gaon Sadak Yojana
- C Pradhan Mantr Guarantee Sadak Yojana
- D Pradhan Mantr Gram Sadak Yojana

Answer: D

Question 53

Match the following.

	Organisation / Group		Head Quarter
i.	IMF	1	Geneva
ii.	WTO	2	Washington D.C
iii.	ADB	3	Kathmandu
iv.	SAARC	4	Philippines

- A 1-b, 2-a, 3-c, 4-d
- **B** 1-c, 2-a, 3-d, 4-b
- C 1-b, 2-c, 3-d, 4-a
- **D** 1-b, 2-a, 3-d, 4-c

Answer: D

Question 54

Which Five Year Plan had a motive of Faster, More inclusive and Sustainable growth?

- A Tenth
- **B** Twe fth
- C Seventh
- **D** E eventh

Answer: B

Explanation:

d:

Question 55

How many Navratnas CPSEs (Central Public Sector Enterprises) are there in India?

С	18
D	21
-	Answer: B
Qu	estion 56
In v	which country political theory of 'Fascism' started?
Α	Japan
В	Russ a
С	Ita y
D	Ch na
1	Answer: C
Qu	estion 57
Wh	no among the following supports customary rights?
Α	R tch e
В	Locke
С	P ato
D	He er
-	Answer: A
	estion 58 sich of the following statement(s) is/are CORRECT?
l. li	n federal government, power is distributed among the legislature, executive and judiciary.
	Due to political competition in a democracy, social divisions get reflected in politics. Communal politics is based on the belief that one religion is superior to that of others.
Α	I and IK
В	I, II and III
С	I and III
D	II and III d:
	Answer: B

35 www.jkchrome.com www.jkchrome.com

www.jkchrome.com

Who among the following declares Financial Emergency in India?

Question 59

- A Pres dent
- B Pr me m n ster
- C Centra Counc of Mn sters
- D Supreme Court of Ind a

Answer: A

Question 60

Which among the following is also known as chief law officer of Government of India?

- A Ch ef Just ce of Ind a
- B Comptro er and Aud tor Genera
- C Attorney Genera of Ind a
- D Judge of Supreme Court of Ind a

Answer: C

Question 61

What is the term of office of Chief Election Commissioner of India?

- A F ve years
- **B** Sxyears
- C F ve years or 60 years of age
- D S x years or 65 years of age

Answer: D

Question 62

Lakshadweep's High Court is located in which state of India?

- A Tam Nadu
- B Kera a
- C Andhra Pradesh
- **D** Karnataka

Answer: B

Question 63

Which among the following can be amended only by special majority in India?

- A Adm ss on of New State
- B Sa ar es and a owances of Member of Par ament

Answer: D

Who among of the following started Marathi fortnightly newspaper 'Bahishkrit Bharat'?

- A Dr. B. R. Ambedkar
- **B** V r Savarkar
- C V nobha Bhave
- D Lokmanya T ak

Answer: A

Question 65

Who among the following did not ruled the Delhi Sultanate?

Ammendment of the Const tut on v a art c e 368

- A S ave dynasty
- B Syed dynasty
- C Kh j dynasty
- **D** Ghor dynasty

Answer: D

Explanation:

d:

Question 66

Who among of the following was the Viceroy of India when Indian University Act, 1904 was passed?

- A Lord Duffer n
- B Lord Lansdowne
- C Lord M nto
- D Lord Curzon

Answer: D

Question 67

Who among the following was also known as 'Zinda Pir'?

A Akbar

- Jahang r
- C Shahjahan
- **D** Aurangzeb

Answer: D

Question 68

'Satyashodhak Samaj' was founded by whom?

- A Mahatma Gandh
- B Jyot rao Phu e
- C Dr. B. R. Ambedkar
- D Swam V vekanand

Answer: B

Question 69

Match the following.

	Mountain Range		Continent	
i.	Himalayas	1	South America	
ii.	Andes	2	North America	
iii.	Rocky	3	Asia	

- A 1-b, 2-a, 3-c
- **B** 1 c, 2 a, 3 b
- **C** 1 c, 2 b, 3 a
- **D** 1 a, 2 c, 3 b

Answer: B

Question 70

On which of the following date, summer solstice is observed in Southern Hemisphere?

- A 21st December
- **B** 5th August
- C 18th Ju y
- D 11th January

Answer: A

Question 71

 $\label{lem:moral_continuous_section} \mbox{Moraine is a kind of soil erosion that is caused by which of the following?}$

_	_		
Α.		\sim	Or
А	G	аU	eı

- B Wnd
- C R ver water
- **D** Underground water

Answer: A

Question 72

'Sardar Sarovar Dam' is on which of the following rivers?

- A Kr shna
- **B** Godavar
- C Narmada
- **D** Mahanad

Answer: C

Question 73

Which river of India has an Inland drainage?

- **A** Tap
- **B** Ganga
- **C** Godavar
- **D** Lun

Answer: D

Question 74

Who among the following is known as 'Father of Biology'?

- A Darw n
- B Ar stot e
- C Heck e
- **D** Edward Jenner

Answer: B

Question 75

Which of the following is necessary for Blood clotting in humans?

- A V tam n A
- B V tam n K

What is the normal blood pressure in human beings?

A 120/90

B 120/80

C 140/90

D 140/100

Answer: B

Question 78

Who among the following is known as 'Father of Genetics'?

A Darw n

B Mende

C Lamarck

D De Vr es

Answer: E

Question 79

Early blight is a common disease seen in which of the following?

A Potato

B G nger

C Cabbage

On y I

On y II

On y I and II

Answer: C

Question 82

No change n the

Acce erat o

Question 83

A opt ons are correct

When the speed of a moving object is halved,

K net c energy becomes 1/4 of the or g na

K net c energy becomes 4 times the or g na

The working principle of a mercury thermometer is __

A Change n dens ty of matter on heat ng

Expans on of matter on heat ng

Therma res stance of matter

Change in mass of matter on heating
Answer: B
Question 84 What is storage size of commonly used floppy disks?
A 2.0 MB
B 4.0 MB
C 1.44 MB
D 2.44 MB
Answer: C
Question 85
Which of the following is managed by operating system? I. Memory
II. Processor III. Input/Output devices
iii. iiiput/output devices
A On y I
B I, II and III
C I and II
D On y II
Answer: B
Question 86 Which of the following is used for ripening of fruits?
A Methy ene
B Ethy ene
C Acetone
C Acetone D Methane Answer: B
D Methane Answer: B
D Methane
D Methane Answer: B Question 87 What is the major component of Gobar Gas?
D Methane Answer: B Question 87

Act n um

Bohr um

Osm um

Rad um

Answer: D

Question 90

None of these

Answer: C

Question 91

1973

1982

1993

1962

Which of the following is not a transition metal?

Which of the following is/are CORRECT?

SPM - Suspended Part cu ate Matter

In which year 'Project Tiger' was launched?

Both SPM - Suspended Part cu ate Matter and COD - Chem ca Oxygen Demand

COD - Chem ca Oxygen Demand

Answer: A

Question 92

Which of the following is non-biodegradable?

- I. Glass
- II. Cotton
- III. Paper
- A On y I
- B I and III
- C II and III
- **D** I, II and III

Answer: A

Question 93

The agricultural ministry has unveiled 'A.P.M.C. Act 2017' which has defined each state/UT as a

- A S ng e un f ed market
- B Mutpeunfedmarkets
- C S ng e d vers f ed market
- D MutpedversfedMarket

Answer: A

Question 94

Who amongst the following discovered electron's

- A Arch medes
- B Road Amundsen
- C J. J. Thomson
- **D** Rudo f D ese

Answer: C

Question 95

'Him Gold Cup' is related to which sport?

- A Cr cket
- B Box ng
- C Hockey
- D Vo eyba

Answer: C

Which of the following pair is incorrect?

- A Sanjukta Pan garh Od ss Dance
- B Sh v kumar Sharma F ute
- C Raja Rav Verma Pa nter
- D Ustad V ayat Khan S tar

Answer: B

Question 97

Which album received the 'Album of the year' award at the 59th Annual Grammy Awards?

- **A** 25
- **B** Lemonade
- **C** Purpose
- **D** Vews

Answer: A

Question 98

'Khullam Khulla' is an autobiography of which famous actor

- A Shatrughan S nha
- **B** M thun Chakarborty
- **C** Jeetendra
- D R sh Kapoor

Answer: D

Question 99

India and Turkey have signed three agreements in the fields of ICT, training and _____ on May 1, 2017.

- A Trade
- B Cu ture
- C Educat on
- **D** Agr cu ture

Answer: B

New oil terminal to be built at Motihari in Bihar will supply fuel to _____.

- **A** Myanmar
- **B** Bhutan
- C Ch na
- D Nepa

Answer: A

Quant

Instructions

For the fo ow ng quest ons answer them nd v dua y

Question 101

Which value among $\sqrt[4]{7}$, $\sqrt[3]{11}$ and $\sqrt[3]{1257}$ is the largest ?

- **A** $\sqrt[3]{11}$
- B √√7
- C ½ 1257
- D A are equa

Answer: A

Explanation:

Terms: $\sqrt[4]{7}$, $\sqrt[3]{11}$ and $\sqrt[12]{1257}$

L.C.M. of exponents (4,3,12) 12

Mut p y ng the exponents by 12, we get:

$$\equiv (7)^{\frac{12}{4}}, (11)^{\frac{12}{3}} ext{ and } (1257)^{\frac{12}{12}}$$

$$\equiv (7)^3, (11)^4, (1257)^1$$

$$\equiv 343, 14641, 1257$$

Thus, argest number $14641 \equiv \sqrt[3]{11}$

> Ans - (A)

Question 102

What is the value of
$$\sqrt{1+\frac{1}{2^2}+\frac{1}{3^2}}+\sqrt{1+\frac{1}{3^2}+\frac{1}{4^2}}+\sqrt{1+\frac{1}{4^2}+\frac{1}{5^2}}$$
 ?

- **A** 18/5
- **B** 4/3
- C 7/3

33/10

Answer: D

Explanation:

Express on
$$\sqrt{1+2^2+3^2} + \sqrt{1+3^2+4^2} + \sqrt{1+4^2+5^2}$$

$$\sqrt{1+\frac{1}{4}+\frac{1}{9}} + \sqrt{1+\frac{1}{9}+\frac{1}{16}} + \sqrt{1+\frac{1}{16}+\frac{1}{25}}$$

$$\sqrt{\frac{36}{36}} + \sqrt{\frac{144}{144}} + \sqrt{\frac{400}{400}} + \sqrt{\frac{49}{36}} + \sqrt{\frac{169}{144}} + \sqrt{\frac{441}{400}}$$

$$7 + \frac{13}{6} + \frac{21}{144} + \sqrt{\frac{400}{400}}$$

$$7 + \frac{13}{6} + \frac{21}{12} + \frac{20}{20}$$

$$70 + \frac{65}{60} + \frac{63}{60} = \frac{198}{60} = \frac{33}{10}$$

$$> \text{Ans - (D)}$$

Question 103

What is the value of $(203 + 107)^2 - (203 - 107)^2$?

- 85886
- 86884
- 43442
- 87884

Answer: B

Explanation: Express on
$$(203+107)^2-(203-107)^2$$
 Let $x=(203+107)$ and $y=(203-107)$ $> x^2-y^2=(x+y)(x-y)$ $[(203+107)+(203-107)][(203+107)-(203-107)]$ $406\times 214=86884$ $> {\rm Ans}$ - (B)

Question 104

If 46N is divisible by 18, then what is the value of N?

- 2
- В 4
- D 8

Answer: D

Explanation:

For a number to be d v s b e by 18, t shou d be even and sum of ts d g ts shou d be d v s b e by 9.

Sum of d g ts of 46N 4+6+N=(N+10)

$$> N + 10 = 18$$

$$N = 18 - 10 = 8$$

Which is the smallest four digit number that is a perfect square?

- **A** 1024
- **B** 1048
- C 1021
- **D** 1089

Answer: A

Explanation:

Sma est 4 d g t number 1000

A so,
$$(31)^2 = 961$$
 and $(32)^2 > 1000$

Thus, the sma lest four d g t number that is a perfect square $(32)^2=1024$

Question 106

Aman and Raman together complete a piece of work in 30 days, Raman and Manan can complete the same work in 36 days and Manan and Aman can complete the same work in 45 days. All of the three working together can complete the work in how many days?



B 18

C 24

D 28

Answer: 0

Explanation:

Let tota work to be done 1.C.M. (30,36,45) 180 un ts

Let eff c ency of Aman, Raman and Manan be $\,x,y\,$ and $\,z\,$ un ts/day respect ve y.

Aman and Raman together comp ete a p ece of work in 30 days, $\;$ > $(x+y)=rac{180}{30}=6$ units/day

S m ary,
$$(y+z) = 5$$
 and $(z+x) = 4$

Add ng a the equations, we get : 2(x+y+z)=6+5+4=15

$$(x+y+z) = {15 \atop 2} = 7.5$$

 \therefore T me taken by a $\,$ of them work ng together $\,$ $\,$ $^{180}_{7.5} = 24~\mathrm{days}$

> Ans - (C)

Question 107

Two pipes A and B can fill a tank in 20 hours and 24 hours respectively. If the two pipes opened at 5 in the morning, then at what time the pipe A should be closed to completely fill the tank exactly at 5 in the evening?

- A 3 pm
- B 2 pm
- **C** 1 pm
- **D** 11 am

Answer: A

Explanation:

Let vo ume of tank L.C.M. (20,24) 120 un ts

S m ar y, B's eff c ency $\begin{bmatrix} 120 \\ 24 \end{bmatrix} = 5$ un ts/hr

Let p pe A $\,$ s opened for $\,t$ hours, then $\,$ n 12 hours 120 un ts of tank $\,$ s f $\,$ ed.

$$>(5 \times 12) + (6 \times t) = 120$$

$$> 6t = 120 - 60$$

$$> t = {60 \atop 6} = 10$$

... P pe A s c osed after 10 hours, .e. at 3 pm

> Ans - (A)

Question 108

The marked price of a cycle is Rs 36800. If 24% discount is given, then what will be the selling price (in Rs) of the cycle?

- **A** 26168
- **B** 27168
- **C** 27968
- **D** 28142

Answer: C

Explanation:

Marked pr ce of cyc e Rs 36,800 and d scount 24%

> Se ng pr ce $36,800 - (100 \times 36,800)$

36800 - 8832 = Rs. 27,968

> Ans - (C)

Question 109

An article having marked price Rs 1800 is sold for Rs 1476. What is the discount percentage?

- **A** 14
- **B** 15
- **C** 16
- **D** 18

Answer: D

Explanation:

Marked pr ce of art c e Rs. 1800

Se ng pr ce Rs. 1476

> D scount %
$$\stackrel{(1800-1476)}{}{}_{1800}\times 100$$

$$^{324}_{18}=18\%$$

Question 110

The ratio of two numbers is 5:11. If both numbers are increased by 10, the ratio becomes 7:13. What is the sum of the two numbers?

- **A** 80
- **B** 32
- **C** 48
- **D** 160

Answer: A

Explanation:

Let the numbers be 5x and 11x

Accord ng to ques,

$$5x \ 10 \ 7$$

> $11x \ 10 = 13$

$$>65x+130=77x+70$$

$$>77x - 65x = 130 - 70$$

$$> x = {}^{60}_{12} = 5$$

 \therefore Sum of numbers 5x+11x=16 imes 5=80

> Ans - (A)

Question 111

If 3P = 5Q = 15R, then what is P : Q : R?

- **A** 5:3:4
- **B** 5:3:
- C 3:5:15
- **D** 15:5:3

Answer: B

Explanation:

G ven: 3P 5Q 15R

Now, L.C.M. (3,5,15) 15

$$> P:Q:R$$
 $\binom{15}{3}:\binom{15}{5}:\binom{15}{15}$

- 5:3:1
- > Ans (B)

What is the average of the cubes of the first 13 natural numbers?

- **A** 196
- **B** 364
- **C** 485
- **D** 637

Answer: D

Explanation:

Sum of the cubes of the first n natura numbers $\begin{bmatrix} n(n-1) \\ 2 \end{bmatrix}$

- > Sum of the cubes of the f rst 13 natura numbers $\begin{bmatrix} 13(13 & 1) \\ 2 & \end{bmatrix}^2$
- $>(13)^2 \times 49$
- \therefore Required average $(13)^2 \times 49$
- $13 \times 49 = 637$
- > Ans (D)

Question 113

The average of 50 results was calculated as 30 but later it was found that while calculating, 73 was taken as 33 by mistake, then what will be the correct average?

- **A** 29.2
- **B** 30.8
- **C** 31.6
- **D** 34

Answer: B

Explanation:

Average of 50 resu ts 30

> Sum of 50 resu ts $30 \times 50 = 1500$

After correct ng the m stake new sum 1500-33+73=1540

- > Correct average 50 = 30.8
- > Anc. (P

Question 114

By selling a table for Rs.2700 a man gets 10% loss, and than at what price (in Rs) should he sell to gain 33 $^{1}_{3}$ %?

- **A** 3000
- **B** 3300
- **C** 3600

4000

Answer: D

Explanation:

Se ng pr ce Rs. 2700 and oss % 10%

> Cost pr ce
$$(100 \ 10) \times 100$$

$$30 \times 100 = Rs.3000$$

Prof t %
$$33\frac{1}{3} = \frac{100}{3}\%$$

$$\therefore$$
 Se ng pr ce $3000 + \left(\begin{smallmatrix} 100 \\ 3 \times 100 \end{smallmatrix} \times 3000 \right)$

$$3000 + 1000 = Rs. 4000$$

> Ans - (D)

Question 115

A trader sells two articles for Rs 14784 each. If he gains 12% on one and losses 12% on other, then what is the value (in Rs) of the loss?

- **A** 300
- **B** 368
- c ₄₃₂
- **D** 498

Answer: C

Explanation:

Se ng pr ce of each art c e Rs. 14,784

Prof t % on one art c e 12%

> Cost pr ce of f rst art c e
$$^{14784}_{(100\ 12)} imes 1\underline{00}$$

$$^{14784}_{1.12} = Rs. 13,200$$

S m ar y, cost pr ce of second art c e $(100 \ 12) \times 100$

$$^{14784}_{0.88} = Rs. 16,800$$

Thus, tota cost price 13,200+16,800 = Rs. 30,000

Tota se ng pr ce 14,784+14,784=Rs. 29,568

∴ Tota oss
$$30,000 - 29,568 = Rs.432$$

> Ans - (C)

Question 116

If the length of a rectangle is decreased by 20% and breadth is decreased by 40%, then what will be the percentage decrease in the area of the rectangle?

- **A** 48
- **B** 52
- **C** 60
- **D** 40

Answer: B

Explanation:

Let the ength and breadth of the rectang e be $10\ \mathrm{cm}$

Area of rectang e $10 \times 10 = 100 \ cm^2$

After decreas ng the ength by 20%, $\,$ > New ength $\,$ $\,$ $10-\left(rac{20}{100} imes 10
ight)$

$$10-2=8\,\mathrm{cm}$$

S m ar y, new breadth $10-\left(\begin{smallmatrix} 40\\100 \end{smallmatrix} imes 10 \right)$

$$10-4=6\,\mathrm{cm}$$

- > New area $8 \times 6 = 48 \ cm^2$
- :. Decrease n area $^{(100-48)}_{100} imes 100 = 52\%$
 - > Ans (B)

Ouestion 117

If the radius of sphere is decreased by 10%, then by what percent volume of sphere will decrease?

- **A** 30
- **B** 27.1
- **C** 29.3
- **D** 28.5

Answer: B

Explanation:

Let rad us of sphere $r=10~\mathrm{cm}$

Volume of sphere $V=rac{4}{3}\pi r^3$

Let ${}^4_3\pi=k$ (constant)

$$V = 1000k \, cm^3$$

After decreas ng the rad us by 10% new rad us $v=10-({100\atop 100}\times 10)$

$$10 - 1 = 9 \, \mathrm{cm}$$

- > New yo ume $V' = (9)^3 k = 729k \text{ cm}^3$
- \therefore Decrease n volume 1000 imes 729 imes 1000 imes 1000

$$^{271}_{10} = 27.1\%$$

> Ans - (B)

Question 118

45 pillars are standing in a line such that distance between any two consecutive pillars is same. A car travelling with uniform speed of 72 km/h takes 18 seconds to reach from 1st pole to 10th pole. What is the distance between 10th and 31st pole (in metres)?

- **A** 800
- **B** 820
- **C** 840

910

Answer: C

Explanation:

Let d stance between two consecut ve $\,{
m p}\,$ ars $\,$ d metres

Speed of car
$$\left(72 imes \frac{5}{18}\right) = 20$$
 m/s

Us ng, d stance speed x t me

D stance trave ed by car from 1st to 10th p $\,$ ar $\,$ $\,9d=20\times18$

$$> d = 20 imes {}^{18}_{9} = 40 \, \mathrm{m}$$

Question 119

Two trains are moving in the same direction at speed of 54 km/h and 92 km/h, their lengths are 400 m and 360 m respectively. What is the time taken (in seconds) by faster train to cross the slower train?

- **A** 60
- B 72
- **C** 81
- **D** 90

Answer: B

Explanation:

Re at ve speed of trains (moving in same direction) 92-54=38 km/hi

$$(38 imes {5top 18})$$
 m/s ${95 imes 95}$ m/s

Tota engths $400 + 360 = 760 \,\mathrm{m}$

Thus, t me taken ⁷660

 $760 imes{}^9_{55}=72\, ext{seconds}$

> Ans - (B)

Question 120

What is the compound interest (in Rs) on Rs 2400 at the rate of 20% per annum compounded yearly for 2 years?

- **A** 960
- **B** 1024
- **C** 1056
- **D** 1120

Answer: C

Explanation:

Pr nc pa sum Rs. 2400

Rate of nterest 20% and t me per od 2 years

Amount after compound interest $P(1+{\stackrel{r}{100}})^T$

$$2400(1+{100\atop100})^2$$

$$2400\times(\begin{smallmatrix}6\\5\end{smallmatrix})^2$$

$$96\times 36=Rs.\,3456$$

.:. Compound interest $3456-2400=Rs.\ 1056$

Question 121

An amount was lent for one year at the rate of 10% per annum compounding annually had the compounding been done half yearly, the interest would have increased by 80. What was the amount (in Rs) lent?

- **A** 16000
- **B** 32000
- **C** 48000
- **D** 64000

Answer: B

Explanation:

Let the amount rent Rs. 100x

Rate of nterest 10% and t me per od 1 year

Amount f compounded annual y $P(1+{\stackrel{r}{100}})^T$

and f compounded ha f year y $P(1+{\scriptstyle 200}^r)^{2T}$

Accord ng to ques, requ red d fference:

$$> [100x(1+\frac{10}{200})^2] - [100x(1+\frac{10}{100})^1] = 80$$

$$> [100x \times {21 \choose 20}^2] - [100x \times {11 \choose 10}] = 80$$

$$> {}^{441x}_{4} - 110x = 80$$

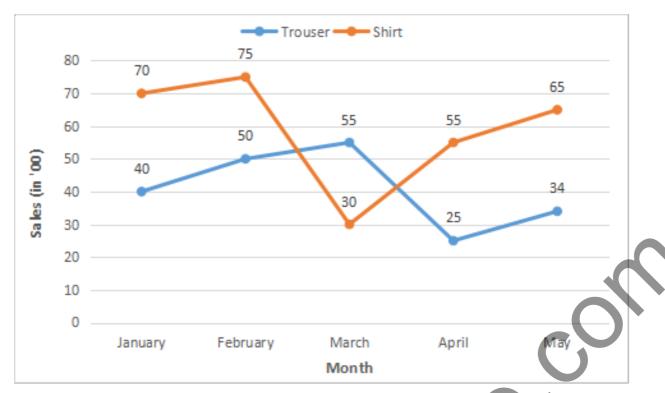
$$>$$
 ^{441}x ^{440}x $=$ 80

>
$$x=80 imes 4=320$$

$$\therefore$$
 Sum ent $100 \times 320 = Rs. 32,000$

Instructions

The ne chart given be ow represents the sales (n 00) of trousers and shirts for five months.



What is the difference between sales of shirts for months January and April?

- **A** 2700
- **B** 1500
- **C** 2000
- **D** 2200

Answer: B

Explanation:

Sa e of sh rts n January 7000

Sa e of sh rts n Apr 5500

- > Required difference 7000 5500 = 1500
- > Ans (B)

Question 123

What is the percentage increase in the sales of the trousers from January to February?

- **A** 25
- **B** 20
- **C** 10
- **D** 28

Answer: A

Explanation:

Sa e of trousers $\,$ n January ($\,$ n '00) $\,$ 40

Sa e of trousers n February (n '00) 50

> Required % increase
$$^{(50-40)}_{40} imes 100$$

$$^{1000}_{~40}=25\%$$

Question 124

In March sale of trousers is what percent of sale of shirts?

- **A** 83.33
- **B** 54.54
- **C** 125
- **D** 183.33

Answer: D

Explanation:

Sa e of sh rts n March (n '00) 30

Sa e of trousers n March (n '00) 55

> Required %
$$^{55}_{30} \times 100$$

$$\overset{550}{3} = 183.33\%$$

Question 125

Total sale of shirts for five months is how much percent more than the total sale of trousers for five months?



D 49.94

Answer: C

Explanation:

Tota sae of sh rts for five months (n'00)

Tota sa e of trousers for f ve months (n'00)

> Required %
$$(295 \quad 204)$$
 $\times 100$

$$\approx \begin{smallmatrix} 90\\2 \end{smallmatrix} = 45 \approx 44.61\%$$

> Ans - (C)

Instructions

For the fo owng quest ons answer them nd v dua y

The ratio of curved surface area of two cones is 1:9 and the ratio of slant height of the two cones is 3:1. What is the ratio of the radius of the two cones?

- A 1:3
- **B** 1:9
- C 1:27
- D 1:1

Answer: C

Explanation:

Let rad us of the cones be r_1 cm and r_2 cm respect ve y.

S ant he ght of f rst cone $l_1=3$ cm and of second cone $l_2=1$ cm

Curved surface area of cone $\pi r l$

Accord ng to ques, $> \frac{\pi r_1 l_1}{\pi r_2 l_2} = \frac{1}{9}$

$$r_1 = \frac{1}{9} \times \frac{1}{3} = \frac{1}{27}$$

Thus, the rat o of the rad us of the two cones 1:27

> Ans - (C)

Question 127

If the area of a square is 24, then what is the perimeter of the square?

- A $2\sqrt{6}$
- B $4\sqrt{6}$
- c $16\sqrt{6}$
- D $8\sqrt{6}$

Answer: D

Explanation:

Let s de of square s cm

> Area
$$s^2=2$$

$$s = \sqrt{24} = 2\sqrt{4}$$

.: Per meter

$$4\times2\sqrt{6}=8\sqrt{6}$$
 cm

> Ans - (D)

Question 128

What is the total surface area (in cm2) of a cylinder having radius of base as 7 cm and height as 15 cm?

- A 814
- **B** 616
- C 968
- **D** 780

Answer: C

Explanation:

Rad us of cy $\,$ nder $\,$ $\,$ r=7 cm and he ght $\,$ $\,$ h=15 cm $\,$

> Total surface area
$$2\pi r(r+h)$$

$$(2 \times {}^{22}_{7} \times 7)(7 + 15)$$

$$44 imes22=968~cm^2$$

Question 129

A cylindrical well of height 40 metres and radius 7 metres is dug in a field 56 metres long and 11 metres wide. The earth taken out is spread evenly on the field. What is the increase in the level of the field?

- **A** 12.5
- **B** 10.66
- C 11.5
- **D** 13.33

Answer: D

Explanation:

Increase n the eve of the fed s the height of fed (cubo da shape) when volume of we (cy nder ca) s equa to the volume of fed (cubo da).

Rad us of we $\ R=7\ \mathrm{m}$ and he ght $\ H=40\ \mathrm{m}$

Length of f e d $\;\;l=56$ m and w dth $\;\;b=11$ m

Let he ght h m

> Vo ume of cubo d Vo ume of cy nder

$$> (lb - \pi R^2) \times h = \pi R^2 H$$

$$>[(56 \times 11) - ({22 \over 7} \times 7^2)] \times (h) = {22 \over 7} \times (7)^2 \times 40$$

$$> (616 - 154)h = 22 \times 280$$

$$> h = {22 \times 280 \atop 462} = 13.33$$

> Ans - (D)

Question 130

A cuboid of sides 5 cm, 10 cm and 20 cm are melted to form a new cube. What is the ratio between the total surface area of the cuboid and that of the cube?

- **A** 6:5
- **B** 7:6
- C 11:10
- **D** 9:7

Answer: B

Explanation:

Let edge of cube a cm

Now, vo ume of cube Vo ume of cubo d

$$> a^3 = 5 \times 10 \times 20$$

$$> a = \sqrt[3]{1000} = 10 \text{ cm}$$

Rat o between the total surface area of the cubo d and that of the cube

$$\begin{array}{ccc} 2(lb & bh & hl) \\ 6a^2 & \end{array}$$

$$\begin{array}{cccc} 2[(5{\times}10) & (10{\times}20) & (20{\times}5)] \\ & 6{\times}(10)^2 \end{array}$$

$$2 \times (50 \ 200 \ 100) = 700 = 7$$

> $600 = 6$

Question 131

What is the value of $\left[\begin{smallmatrix}1&x^p&q\end{pmatrix}+\begin{smallmatrix}1&x^q&p\end{pmatrix}\right]$?

A 0

В

$$(x^q - x^p)/(x^q + x^p)$$

$$D (x^q + x^p)/(x^q - x^p)$$

Answer: B

Explanation:

Express on $\begin{bmatrix} 1 & 1 & 1 \\ 1 & x^{p-q} + 1 & x^{q-p} \end{bmatrix}$

$$\begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & x^q \end{pmatrix} + \begin{pmatrix} 1 & x^q \\ 1 & x^p \end{pmatrix}$$

$$\left(egin{array}{c} x^q \ x^q \ x^p \end{array}
ight) + \left(egin{array}{c} x^p \ x^q \end{array}
ight)$$

$$\begin{pmatrix} x^q \\ x^q & x^p \end{pmatrix} - \begin{pmatrix} x^p \\ x^q & x^p \end{pmatrix}$$

$$x^q \quad x^p = 1$$

Question 132

If $x^2 - 3x + 1 = 0$, then what is the value of $x + \frac{1}{x}$?

- **A** 3
- **B** 7
- **C** 9
- **D** 11

Answer: A

Explanation:

G ven :
$$x^2 - 3x + 1 = 0$$

D v d ng both s des by ${}^{\prime}x^{\prime}$

$$> x - 3 + \frac{1}{x} = 0$$

$$> x + \frac{1}{x} = 1$$

If a+b+c=-11, then what is the value of $(a+4)^3+(b+5)^3+(c+2)^3-3(a+4)(b+5)(c+2)$?

- A -1331
- **B** -121
- **C** 0
- **D** 1331

Answer: C

Explanation:

G ven : a + b + c = -11

$$> a + b + c + 11 = 0$$

$$(a+4)+(b+5)+(c+2)=0$$

Let
$$(a+4)=x$$
, $(b+5)=y$ and $(c+2)=z$

$$> x + y + z = 0$$
 ----()

To f nd : $(a+4)^3 + (b+5)^3 + (c+2)^3 - 3(a+4)(b+5)(c+2)$

$$x^3 + y^3 + z^3 - 3xyz$$

$$(x+y+z)(x^2+y^2+z^2-xy-yz-zx)$$

Subst tut ng va ue from equat on (), we get:

$$(0)(x^2 + y^2 + z^2 - xy - yz - zx) = 0$$

Question 134

If $\sqrt{7x+12}+\sqrt{7x-12}=3+\sqrt{33}$, then what is the value of x?



В

C 3

D G

Answer: 0

Explanation:

Express on :
$$\sqrt{7x+12} + \sqrt{7x-12} = 3 + \sqrt{33}$$

(7x-12) must be greater than equal to 0.

$$>7x-12\geq0$$

>
$$x \geq {7 \atop 7}$$

Thus, first two options are eight matter matter matter matter and x=3 in above equation,

$$>\sqrt{7(3)+12}+\sqrt{7(3)-12}$$

$$> \sqrt{33} + \sqrt{9}$$

$$3+\sqrt{33}=\text{R.H.S.}$$

If $x+rac{1}{x}=3\sqrt{2}$, then what is the value of $\,x^5+rac{1}{x^5}$

- **A** $178\sqrt{3}$
- **B** $789\sqrt{2}$
- **c** $1581\sqrt{2}$
- D $717\sqrt{2}$

Answer: D

Explanation:

G ven :
$$x + \frac{1}{x} = 3\sqrt{2} = k$$

Now,
$$x^5 + rac{1}{x^5} = [(x^3 + rac{1}{x^3}) imes (x^2 + rac{1}{x^2})] - (x + rac{1}{x})$$

$$[(x+rac{1}{x})^3-3(x+rac{1}{x}) imes (x+rac{1}{x})^2-2(x)(rac{1}{x})]-(x+rac{1}{x})$$

$$[(k^3-3k)\times(k^2-2)]-(k)$$

$$[(54\sqrt{2}-9\sqrt{2})\times(18-2)]-(3\sqrt{2})$$

$$(45\sqrt{2} \times 16) - 3\sqrt{2}$$

$$720\sqrt{2} - 3\sqrt{2} = 717\sqrt{2}$$

Question 136

In \triangle PQR, a line parallel to side QR cuts the side PQ and PR at points M and N respectively and point M divide PQ in the ratio of 1 : 2. If area of \triangle PQR is 360 cm2, then what is the area (in cm2) of quadrilateral MNRQ?



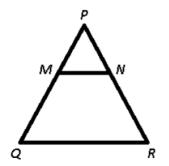


C 120

D 240

Answer: B

Explanation:



G ven PM : MQ 1 : 2 and area of \triangle PQR $360~cm^2$

To f nd area (MNRQ) ?

So ut on S nce, MN s para e to QR, > $\stackrel{PM}{PQ} = \stackrel{PN}{PR} = \stackrel{1}{3}$

$$>$$
 $\triangle PMN \sim \triangle PQR$

Now, rat o of area of the two tr angles is equal to the ratio of square of the corresponding sides.

$$ar(\triangle PMN)$$

> $ar(\triangle PQR) = \begin{pmatrix} 1\\ 3 \end{pmatrix}^2$

$$> ar(\triangle PMN) = 1 \\ 360 = 9$$

$$> ar(\triangle PMN) = {}^{360}_{9} = 40 \ cm^2$$

$$\therefore ar(MNRQ) = 360 - 40 = 320 \ cm^2$$

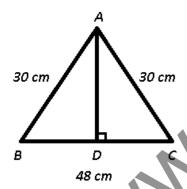
Question 137

ABC is an isosceles triangle such that AB = AC = 30 cm and BC = 48 cm. AD is a median to base BC. What is the length (in cm) of AD?

- **A** 18
- **B** 20
- **C** 24
- **D** 32

Answer: A

Explanation:



G ven: AB AC 30 cm and BC 48 cm. AD s a med an to base BC

To f nd: AD ?

So ut on: In an sosce es trange, med an sperpend cu ar to the base.

$$> CD$$
 $\frac{48}{2} = 24 \text{ cm}$

Thus, n r ght \triangle ADC,

$$>(AD)^2 = (AC)^2 - (CD)^2$$

$$>(AD)^2=(30)^2-(24)^2$$

$$>(AD)^2 = 900 - 576 = 324$$

$$>AD=\sqrt{324}=18\,\mathrm{cm}$$

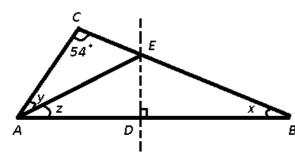
> Ans - (A)

In \triangle ABC, \angle C = 54°, the perpendicular bisector of AB at D meets BC at E. If \angle EAC = 42°, then what is the value (in degrees) of \angle ABC?

- A 25
- **B** 42
- **C** 50
- **D** 60

Answer: B

Explanation:



G ven : ED is the perpendicular b sectors of AB, $\angle C = 54^\circ$ and $\angle EAC = y = 42^\circ$

To f nd :
$$\angle B = x = ?$$

So ut on : In \triangle EAC, us ng exter or ang e property,

$$> \angle AEB \angle C + y$$

>
$$\angle$$
 AEB $54^\circ + 42^\circ = 96^\circ$

Thus, n
$$\triangle$$
 AEB, > $x+z=180^{\circ}-96^{\circ}=84^{\circ}$ ------

A so, n \triangle EAD and \triangle BDE

AD DB (DE b sects AB)

$$\angle$$
 EAD \angle EDB 90°

DE DE (Common)

Thus, \triangle EAD \cong \triangle BDE (By SAS cr ter on)

$$> x = z$$
 (By CPCT)

Subst tut ng above va ue n equat on (), we get :

$$> x + x = 2x = 84$$

$$> x = {}^{84} = 42$$

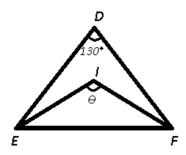
Question 139

In an isosceles triangle DEF, ∠D = 130°. If I is the incentre of the triangle, then what is the value (in degrees) of ∠EIF?

- **A** 120
- **B** 140
- **C** 155
- **D** 165

Answer: C

Explanation:



G ven : I s the ncentre of \triangle DEF and \angle D 130°

To f nd : \angle EIF θ ?

Incentre of a tr ang e $90^{\circ} + \frac{\angle D}{2}$

>
$$\theta = 90^{\circ} + \frac{130^{\circ}}{2}$$

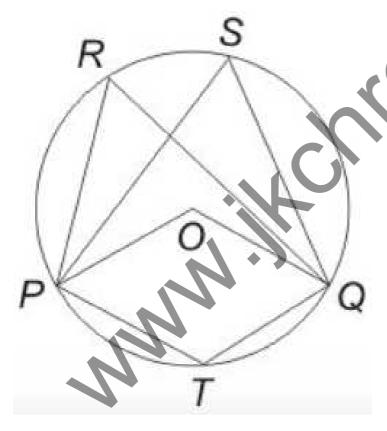
>
$$heta=90^\circ+65^\circ$$

>
$$heta=155^\circ$$

> Ans - (C)

Question 140

In the following figure, O is the centre of the circle and $\angle PRQ = 50^{\circ}$. What is the value (in degrees) of $\angle PTQ$?



- **A** 100
- **B** 75
- **C** 130
- **D** 150

Answer: C

Explanation:

G ven : $\angle PRQ$ 50°

To f nd: ∠PTQ ?

So ut on: Quadr atera PRQT s a cyc c quadr atera, n which opposite angles are supplementary.

$$> \angle PRQ + \angle PTQ 180^{\circ}$$

>
$$\angle$$
 PTQ $180^{\circ}-50^{\circ}=130^{\circ}$

> Ans - (C)

Question 141

If $2\cos^2 \theta - 1 = 0$ and θ is acute, then what is the value of (cot $\theta - \tan^2 \theta$)?

- **A** 0
- **B** 2
- C 10/3
- D 1

Answer: A

Explanation:

G ven :
$$2cos^2\theta-1=0$$

$$> cos^2 \theta = \frac{1}{2}$$

$$> cos\theta = \sqrt{rac{1}{2}} = rac{1}{\sqrt{2}}$$

>
$$\theta = cos^{-1}(\sqrt[1]{2}) = 45^{\circ}$$

$$\therefore \cot^2\theta - \tan^2\theta$$

$$cot^{2}(45^{\circ}) - tan^{2}(45^{\circ})$$

$$1 - 1 = 0$$

Question 142

If $\cos^{-1}sec\theta=rac{1}{2}$, then what is the value of $\cos^{100} heta+sec^{100} heta$?

- **A** (
- B '
- **C** 2
- **D** 4

Answer: C

Explanation:

G ven:
$$\cos\theta$$
 $\sec\theta = \frac{1}{2}$

$$> cos\theta$$
 $cos\theta$ $= 1$

$$> \cos^2\theta = 1$$

$$> cos^2\theta + 1 - 2cos\theta = 0$$

$$> (\cos\theta - 1)^2 = 0$$

$$> cos\theta = 1$$

A so,
$$sec\theta= {0 \atop cos\theta}=1$$

$$\therefore cos^{100} \theta + sec^{100} \theta$$

$$(1)^{100} + (1)^{100} = 1 + 1 = 2$$

What is the simplified value of 1 + cot A cot $\binom{A}{2}$?



B
$$sin^2(\frac{A}{2})$$

$$\mathbf{c}$$
 $\frac{1}{2} cosec^2 \left(\frac{A}{2} \right)$

D cos A

Answer: C

Question 144

If $\tan{(\frac{\theta}{2})}tan(\frac{2\theta}{5})$ = 1, then what is the value (in degrees) of θ ?



B 90°

C 100°

D 120°

Answer: C

Explanation:

G ven: $tan(\frac{\theta}{2})tan(\frac{2\theta}{5}) = 1$

Now, we know that tan(A+B) = 1 tanAtanB

$$> tan(\frac{\theta}{2} + \frac{2\theta}{5}) = [tan(\frac{\theta}{2}) + tan(\frac{2\theta}{5})] \div [1 - tan(\frac{\theta}{2})tan(\frac{2\theta}{5})]$$

Subst tut ng va ue from equat on (), we get:

$$> tan(\frac{\theta}{2} + \frac{2\theta}{5}) = tan(\frac{\theta}{2}) tan(\frac{2\theta}{5})$$

>
$$tan(\frac{\theta}{2} + \frac{2\theta}{5}) = tan(90^\circ)$$

$$> \frac{\theta}{2} + \frac{2\theta}{5} = 90$$

$$> {}^{5\theta}_{10} {}^{4\theta} = 90$$

>
$$\theta = 90 imes {90 imes 9}$$

>
$$heta = 100^\circ$$

What is the simplified value of ${{3}\atop{cosec^2 heta+1}}$ ${{5}\atop{tan^2 heta-2cos^2 heta}}$?

- **A** 3
- **B** 4
- C 5
- **D** 7

Answer: A

Explanation:

Express on $cosec^2 heta + 1 tan^2 heta - 2cos^2 heta$

$$3sin^2 heta+rac{5}{sec^2 heta}-2cos^2 heta$$

$$3sin^2\theta + 5cos^2\theta - 2cos^2\theta$$

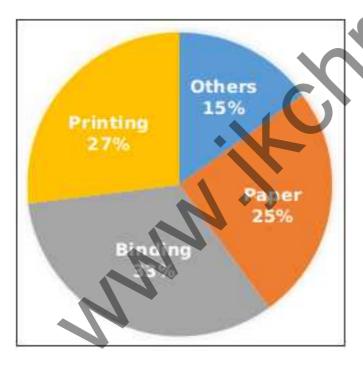
$$3sin^2\theta + 3cos^2\theta$$

$$3(sin^2\theta + cos^2\theta)$$

$$3 \times 1 = 3$$

Instructions

The g ven p e chart shows the expend ture (n degrees) ncurred n mak ng a book



Question 146

If the total expenditure is Rs 60000, then what is the expenditure (in Rs) on the Printing?

- **A** 18400
- **B** 14800
- **C** 13400
- **D** 16200

Answer: D

Explanation:

Tota expend ture Rs. 60,000

Expend ture on Pr nt ng (n %) 27%

> Expend ture (n Rs) on the Pr nt ng $\begin{array}{cc} 27\\100 \end{array} \times 60,000$

$$27 \times 600 = Rs. 16,200$$

> Ans - (D)

Question 147

What is the central angle (in degrees) of the sector made by the expenditure on Paper?

- **A** 25
- **B** 75
- **C** 90
- **D** 120

Answer: C

Explanation:

Expend ture on paper (n %) 25%

> Centra ang e
$$\begin{array}{cc} 25 \\ 100 \end{array} \times 360^{\circ}$$

$$^{360}_{4} = 90^{\circ}$$

> Ans - (C)

Question 148

The expenditure on Binding is how much percent more than the expenditure on Paper?

- **A** 32
- **B** 24.24
- **C** 28.18
- **D** 34

Answer: A

Explanation:

Expend ture on paper (n %) 25%

Expend ture on b nd ng (n %) -33%

> Required %
$$^{(33-25)}_{25} \times 100$$

$$8 imes 4 = 32\%$$

> Ans - (A)

Question 149

If expenditure on Paper is Rs 20000, then what is the expenditure (in Rs) on Binding?

- **A** 24600
- **B** 26400
- **C** 28000
- **D** 22800

Answer: B

Explanation:

Expend ture on paper $25\% \equiv Rs.~20,000$

> Expend ture on b nd ng
$$33\% = \frac{20,000}{25} \times 33$$

$$800 \times 33 = Rs. 26,400$$

> Ans - (B)

Question 150

In Others there are only two types of expenditures viz. Marketing and Distribution in ratio 3:2 respectively. What will be the central angle (in degrees) made by the sector of expenditure on Marketing?

- **A** 21.6
- **B** 32.4
- **C** 27
- **D** 36

Answer: B

Explanation:

Expend ture (n %) n others 15%

Expend ture on Market ng (n %) $(3 \stackrel{3}{\overset{2}{\longrightarrow}} 2) \times 15 = 9\%$

- > Centra ang e (n degrees) made by the sector of expend ture on Market ng 9 100 imes 360
- 32.4°

> Ans - (B)

English

Instructions

In the fo ow ng quest on, 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'.

Question 15

Not only her husband (a:/ but even her father (b:/ also find her selfish. (c:/ No Error (d:

- **A** 1
- **B** 2

B of

to

D on

	Answer: C			
Qu	estion 157		*	
As	soon as he received the call the hospital, he left	the home.		
Α	off			
В	w th	30		
С	from			
D	at			
	Answer: C			
Qı	nestion 158			
	nile travelling to Bangalore Tran a very old friend	of mine.		
Α	across			
В	up			
С	aga nst			
D	nto			
	Answer: D			
0.	estion 159			
	rill leave Australia before three months			
Α	wou d have passed			
В	wou d pass			
72 www	.jkchrome.com	www.jkchrome.com		www.jkchrome.com
		•		-

In the fo ow ng quest on, out of the four a ternat ves, se ect the word s m ar n meaning to the word g ven.

Instructions

Question 161

turmo

acon c

d ff cu t

Answer: A

Question 162

Decrepit

f rm

fate

feeb e

Answer: C

Question 163 Melancholy

thr fty

cur ous

sorrowfu

f ee

νе

Welter

Hysteria

- A gnorance
- **B** generous
- **C** madness
- D expens ve
 - Answer: C

Question 165

Reticence

- A subst tute
- **B** reserve
- C fatter
- **D** request

Answer: B

Instructions

In the fo ow ng quest on, out of the four a ternat ves, se ect the word oppos te n mean ng to the word g ven.

Question 166

Expurgate

- A s de
- B perm t
- C dec ne
- **D** fa

Answer: B

Question 167

Virtuous

- A snfu
- B d sagreeab e

- r ghteous
 - Answer: D
- Question 169
- Chagrin
- remorse
- sn ff e
- fam shed
- p easure
 - Answer: D

Question 170

Diabolical

- av sh
- ornate
- w cked
- mora
- Answer:

Instructions

In the fo owng quest on, out of the four a ternatives, select the a ternative which best expresses the meaning of the id om/phrase.

Question 171

Faint hearted

- A Cam
- Tmd
- Lovab e

Courageous

Answer: B

Question 172

To lead astray

- A To take back what you have sa d
- B To m sgu de
- C To ach eve two resu ts w th one effort
- **D** To apo og ze humb y

Answer: B

Question 173

To make a pile

- A To keep at a d stance
- B To make a ot of money
- C To aggravate the s tuat on
- D To face the r sk

Answer: B

Question 174

Back out of

- A Dec mate
- **B** Record
- **C** W thdraw
- **D** Perta n

Answer: C

Question 175

Throw over

- **A** Enumerate
- **B** Invent
- C Repr mand
- D Reject

Answer: D



_				
In	etri	uoti	OD	•

Improve the bracketed part of the sentence.

Question 176

She doesn't hesitate to do whatever her husband (does).

- A wou d do
- B dd
- C sha do
- D no mprovement

Answer: D

Question 177

The teacher was angry (with) Rahul as he had not done the homework.

- A from
- **B** at
- C on
- D no mprovement

Answer: D

Question 178

Kunal has done nothing (from) yesterday.

- A snce
- **B** through
- **C** after
- D no mprovement

Answer: A

Question 179

The boss has instructed all of us to finish the project by tomorrow, (isn't it)?

- A d dn't she?
- B hasn't she?
- C has she?
- **D** no mprovement

Answer: B

Question 180

Garima has her meal at three, (when she has it), she goes off to sleep.

- A when she w have t
- B when she has had t
- C when she w have had t
- **D** no mprovement

Answer: B

Instructions

Question 181

In the following question, out of the four alternatives, select the alternative which is the best substitute of the phrase A person who starves the body for the good of the soul

- A pacfst
- B parano a
- C ascet c
- D d osyncrasy

Answer: C

Question 182

To make evasive or misleading statement

- A prevar cate
- **B** perorat on
- C soph st
- **D** neffab e

Answer: A

Question 183

A very delicate flaw or mistake which is not expected from the person making it

- A sangu ne
- **B** sacrament
- C so ec sm
- D sentent ous

Answer: C

The practice of taking exorbitant or excessive interest on the money lent

- A em ssary
- **B** usury
- C vena
- **D** macabre

Answer: B

Question 185

Sea with a group of many islands

- A arch pe ago
- B scu ery
- C ab ut on
- D et o ogy

Answer: A

Instructions

In the fo owng quest on, four words are given out of which one word is incorrectly speit. Select the incorrectly speit word.

Question 186

- A curr cu um
- B courag ous
- C co aborate
- D cy nder

Answer: B

Question 187

- A def c enc
- **B** d ct onary
- **C** d aphragm
- D d abet es

Answer: D

Question 188

C mean ngfu	
D bor ng	
Answer: C	
Question 193	
And secondly to provide him with of various kinds.	
A resources	
B power	
C know edge	
D money	
Answer: C	
Question 194	
Education embodies the immense acquired by the	
A ca ber	
B happ ness	
C growth	
D exper ence	
Answer: D	
Question 195	
Classified under two heads-one, relating to the or reasoning, the other	
A emotions	
B nte ect	
C senses	
D strength	

Instructions

Answer: B

A passage s g ven w th f ve quest ons fo ow ng t. Read the passage carefu y and se ect the best answer to each quest on out of the g ven four a ternat ves. Keep ng emp oyees happy, mot vated, and on the payro s one of the key concerns to bus nesses these days because t's an open market for top ta ent. A good emp oyee can wak out of the door today and have a comparable or better job tomorrow. Which brings up a very important quest on: what would the companies do to keep away that person from even thinking about going to work e sewhere? Gone are the days when the month y paycheck and two weeks' vacation a year were enough to keep emp oyees happy. Emp oyers must come up with rises stiple incentives to keep top talent onboard. The results of a recent survey by

Fortune Magaz ne on why peop e eave the r jobs shows that 30 percent eave for better compensat on and benefts, 27 percent for a better career opportunity, 27 percent for new experience, 21 percent are dissatisfied with opportunities at current job, and 16 percent desire to change careers or industries. Money is no onger the only major motivator. So, is this an onsite daycare center for working parents? Paying for a long part of their health insurance? Or offering educational assistance or paying for certification? On an annual skit rip, paid foreign tours, onsite car washes and on changes? Or free aundry and dry cleaning facilities? Or prized stock options? We it could be anything as long as it can keep the employees motivated. There are perks other than monetary gains or raise in pay package which can make employees fee happy and satisfied and the fee good factor.

Question 196

According to the passage, what is not the key concern of the businesses these days?

- A happ ness of emp oyees
- B mot vat ng emp oyees
- c keep ng emp oyees on payro
- **D** cr t c z ng the emp oyees performance

Answer: D

Question 197

What does employers do to its employees now-a-days to keep top talent onboard?

- A month y pay check
- B rres st b e ncent ves
- C two weeks' vacat on a year
- **D** matern ty eaves

Answer: B

Question 198

Which of the following reason is not being mentioned in the passage in regard to people leaving their jobs?

- A fam y constra nts espec a y after gett ng marr ed
- B d ssat sfact on w th opportun t es at current job
- C better compensat on and benef ts n new job
- D to have a new exper ence

Answer: A

Question 199

What does feel good factor mean with respect to employees?

- A monetary ga ns to emp oyees
- B soc a acceptance
- C opportun ty g ven to emp oyees to work abroad
- D anyth ng wh ch can keep emp oyees happy and sat sf ed

Answer: D

Question 200

What can be the suitable title for the passage?

- A Incent ves to emp oyees
- B Money a major mot vator for emp oyees
- **C** G v ng emp oyees a fee good factor
- D Cha enges to keep emp oyees onboard Answer: C

83 www.jkchrome.com www.jkchrome.com www.jkchrome.com



JK Chrome | Employment Portal

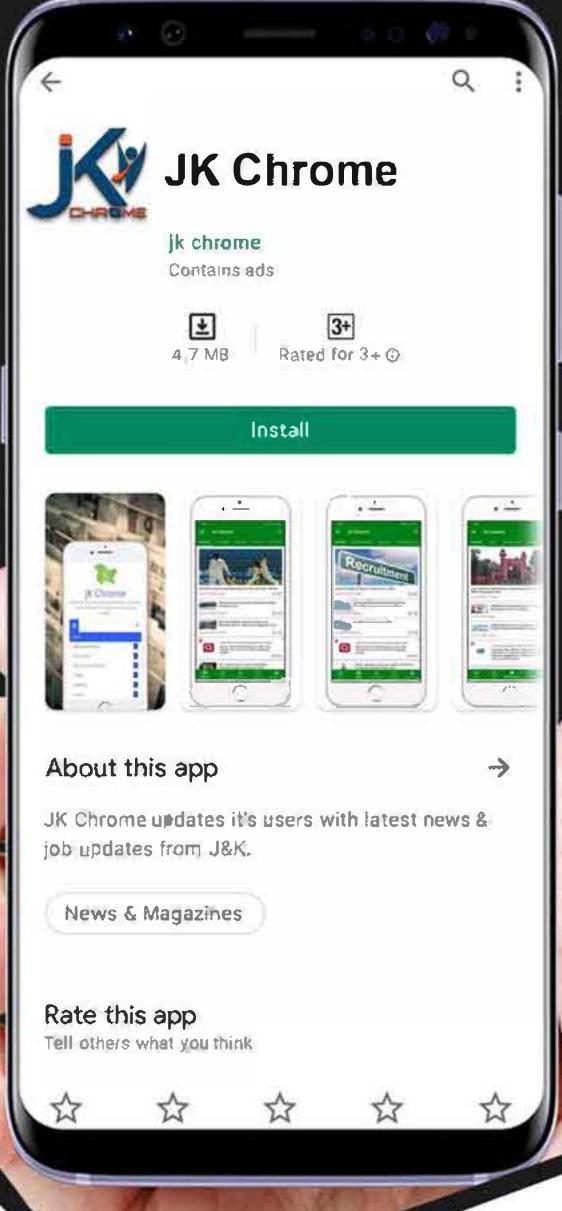


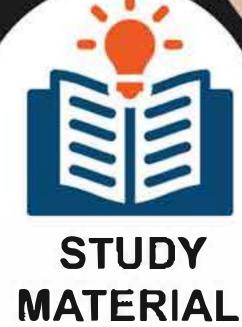
Rated No.1 Job Application of India

Sarkari Naukri
Private Jobs
Employment News
Study Material
Notifications













JK Chrome

jk chrome Contains ads



www.jkchrome.com | Email : contact@jkchrome.com