CALENDARS

1. *Odd Days:*

We are supposed to find the day of the week on a given date.

For this, we use the concept of 'odd days'.

In a given period, the number of days more than the complete weeks are called *odd days*.

2. *Leap Year:*

(i). Every year divisible by 4 is a leap year, if it is not a century.

(ii). Every 4^{th} century is a leap year and no other century is a leap year.

Note: *A leap year has 366 days.*

Examples:

i. Each of the years 1948, 2004, 1676 etc. is a leap year.
ii. Each of the years 400, 800, 1200, 1600, 2000 etc. is a leap year.
iii. None of the years 2001, 2002, 2003, 2005, 1800, 2100 is a leap year.

3. *Ordinary Year:*

The year which is not a leap year is called an *ordinary years*. An ordinary year has 365 days.

4. *Counting of Odd Days:*

1. 1 ordinary year = 365 days = (52 weeks + 1 day.)

   ∴ 1 ordinary year has 1 odd day.

2. 1 leap year = 366 days = (52 weeks + 2 days)

   ∴ 1 leap year has 2 odd days.

3. 100 years = 76 ordinary years + 24 leap years

   = (76 x 1 + 24 x 2) odd days = 124 odd days.

   = (17 weeks + days) ≡ 5 odd days.

   ∴ Number of odd days in 100 years = 5.

   Number of odd days in 200 years = (5 x 2) ≡ 3 odd days.

Number of odd days in 300 years = (5 x 3) ≡ 1 odd day.

Number of odd days in 400 years = (5 x 4 + 1) ≡ 0 odd day.

Similarly, each one of 800 years, 1200 years, 1600 years, 2000 years etc. has 0 odd days.

5. ***Day of the Week Related to Odd Days:***

No. of days:	0	1	2	3	4	5	6
Day:	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.

PRACTICE PROBLEMS

1. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?
   a. Sunday b. Saturday c. Friday d. Wednesday

2. What was the day of the week on 28th May, 2006?
   a. Thursday b. Friday c. Saturday d. Sunday

3. What was the day of the week on 17th June, 1998?
   a. Monday b. Tuesday c. Wednesday d. Thursday

4. Today is Monday. After 61 days, it will be:
   a. Wednesday b. Saturday c. Tuesday d. Thursday

5. The last day of a century cannot be
   a. Monday b. Tuesday c. Wednesday d. Friday

6. **If 6th March, 2005 is Monday,** what was the day of the week on 6th March, 2004?
   a. Tuesday b. Wednesday c. Saturday d. Sunday

7. On what dates of April, 2001 did Wednesday fall?
   a. 1st, 8th, 15th, 22nd, 29th b. 2nd, 9th, 16th, 23rd, 30th
   c. 3rd, 10th, 17th, 24th d. 4th, 11th, 18th, 25th

8. How many days are there in *x* weeks *x* days?
   a. $7x^2$ b. 8x c. 14x d. 7

9. Which of the following is not a leap year?
   a. 1800 b. 800 c. 1200 d. 1600

10. January 1, 2007 was Monday. What day of the week lies on Jan. 1, 2016?
    a. Monday b. Wednesday c. Thursday d. Friday

CLOCKS

1. ***Minute Spaces:***

   The face or dial of watch is a circle whose circumference is divided into 60 equal parts, called minute spaces.

   Hour Hand and Minute Hand:

   A clock has two hands, the smaller one is called the *hour hand* or *short hand* while the larger one is called *minute hand* or *long hand*.

   - In 60 minutes, the minute hand gains 55 minutes on the hour on the hour hand.
   - In every hour, both the hands coincide once.
   - The hands are in the same straight line when they are coincident or opposite to each other.
   - When the two hands are at right angles, they are 15 minute spaces apart.
   - When the hands are in opposite directions, they are 30 minute spaces apart.
   - Angle traced by hour hand in 12 hrs = 360°
   - Angle traced by minute hand in 60 min. = 360°.
   - If a watch or a clock indicates 8.15, when the correct time is 8, it is said to be 15 minutes *too fast*.
   - On the other hand, if it indicates 7.45, when the correct time is 8, it is said to be 15 minutes too slow.

PRACTICE PROBLEMS

1. The reflex angle between the hands of a clock at 10.25 is:
   a. 180º b. 192 ½ º c. 195 º d. 197 ½ º

2. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:
   a. 145º b. 150 º c. 155 º d. 160 º

3. At what time between 7 and 8 o'clock will the hands of a clock be in the same straight line but, not together?
   a. 5 min. past 7 b. 5 2/11 min. past 7
   c. 5 3/11 min past 7 d. 5 5/11 min. past 7

4. The angle between the minute hand and the hour hand of a clock when the time is 4.20, is:
   a. 0º b. 10º c. 5º d. 20º

5. At what angle the hands of a clock are inclined at 15 minutes past 5?
   a. 58.5º b. 64º c. 67.5º d. 72.5º

6. At 3:40, the hour hand and the minute hand of a clock form an angle of:
   a. 120º b. 125º c. 130º d. 135º

CODING DECODING

A CODE is a 'system of signals'. Therefore, Coding is a method of transmitting a message between the sender and the receiver without a third person knowing it. The Coding and Decoding Test is set up to judge the candidate's ability to decipher the rule that codes a particular word / message with different logics and break the code to decipher the message.

EXAMPLE

If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that code ?

Option :

A. CPNCBX B. CPNCBZ C. CPOCBZ D. CQOCBZ E. None of these

EXPLANATION

Each letter in the word is moved one step forward to obtain the corresponding letter of the code.That is, the letter after M is N, A is B and so on. Therefore the correct answer is

Option B. CPNCBZ

PRACTICE PROBLEMS

1. In a certain code language, if the word 'PARTNER' is coded as OZQSMDQ, then what is the code for the word SEGMENT in that language?
   a. TFHNFOU b. RDFLDMS c. RDELDMS d. RDFEDN e. RGEFDNT

2. In a certain code language, if the word 'SPHERE' is coded as EREHPS, then how is the word EXHIBITION coded in that language?
   a. NOTITBIHXE b. NOITIDIHXE c. NOITIBIHWE d. NOITIBIHXE e. IHXEBINOIT

3. In a certain code language, If the word 'PLAYER'Is coded as AELPRY, then how is the word "MANAGER" coded in that language?
   a. AEAGMNR b. AAGEMNR c. AAEGMNR d. AAEGNMR e. AAGEMRN

4. In a certain code language, if the number 1 is assigned to all the letters in odd numbered places in the alphabet and the remaining letters are assigned the number 2, then what is the code for the word 'INDIAN'?
   a. 121212 b. 111222 c. 112212 d. 121221 e. 122112

5. In a certain code language if CRICKET is coded as 3923564, ROCKET is coded as 913564 and KETTLE is coded as 564406, then how is LITTLE coded in that language?
   a. 244060 b. 024406 c. 020446 d. 200446 e. 246400

6. In a certain code language, if the word HYPERBOLA is coded as YPROHEBLA, then how is the word SENTIMENT coded in that language?

a. ENEISTMNT b. ENIESMTNT c. ENIESTMNT d. ENIESTNTM e. EIESNTMNT

7. In a certain code if white is called as black, black as yellow, yellow as blue , blue as red, red as green, green as purple, then what is the color of blood in that language?
   a. Red b. Green c. Yellow d. Purple e. Black

8. In a certain code language, if the word LIBERAL is coded as MJCFSBM, then how is the word REDUCTION coded in that language?
   a. EDCTBSHNM b. SFEVDUJPO c. SFEVCTJPO d. SFDUCTJPO e. SFDEVDJPO

9. In a certain code language, if BUG=90 and ALMS=180 then CADET=?
   a. 153 b. 165 c. 175 d. 148 e. 185

10. In a certain code language , if the word ROUTINE is coded as JMPRRLJ and the word FIDELITY is coded as LGHCXGNW, then how will you code the following word in that language?
    PREVAIL
    a. FPLRDGX b. FPJTBGX c. FTJBNKX d. FPJVBIX e. FTJVXIB

(11 – 15) For the following group of letters given in column the codes are given in column-II. Answer the following questions by finding the codes for the groups from the given columns.

	Column I				Column II			
1)	lit	kit	bit	dit	b	r	p	d
2)	fit	git	mit	kit	t	d	s	v
3)	rit	bit	git	tit	x	p	v	w
4)	nit	dit	fit	rit	r	s	x	j

11. What is the code for lit?
    a. v b. r c. p d. d e. b

12. What is the code for tit?
    a. w b. x c. p d. v e. r

13. What is the code for rit?
    a. j b. s c. r d. x e. w

14. What is the code for nit?
    a. x b. s c. j d. r e. n

15. What is the code for kit?
    a. r b. p c. x d. b e. d

16. If in a specific language, FACEBOOK is coded as 61352151511, what is the code for TWITTER?
    a. 209232020518 b. 202392020518 c. 232051128 d. 2520111128

17. A Computer coded PLEASANT as OKDZRZMS, then as what will it code FLAVOUR as?
    a. EKZUNTQ b. ZEKUTNQ c. EKZNUQT d. EKNUZTQ

18. If BLACK is coded as YOZXP. What is WHITE coded in that language?
    a. DSRGV b. SDRGV c. GDSRV d. DSGRV

19. If in a code language, TRIANGLE is expressed as 92413785, How is INTEGRAL coded in the same language
    a. 43957218 b. 34951872 c. 49532781 d. 45932781

20. If the cost of DATES is 49, what is the cost of CASHEW?
    a. 39 b. 49 c. 59 d. 69

21. If a MOBILE costs Rs. 3360, how much would a COMPUTER cost?
    a. 4360 b. 5560 c. 6650 d. 8880

22. If the code for DHRUVA is BDIUKA, what is the code for BRAVE?
    a. AIAKE b. BIAKE c. DIAKE d. CIAKE

23. WATER : XCWIW :: SAND : ?
    a. TCQH b. TBME c. TCOE d. TCHQ

24. If a month of June has 25 working days and the month of July has 34 working days. How many working days would be there for the month of April?
    a. 30 b. 32 c. 28 d. 29

25. If BRANCHES of a tree is coded as CQCLFEIO, how is LEAVES of the same tree coded?
    a. MDCTHP b. MCDHTP c. MFBWFT d. MBFWFT

BLOOD RELATION

In Blood relation section, the correct answer depends upon the knowledge of the blood relations, some of which are summarized below to help solve these problems.

- Father's father → Grandfather
- Father's mother → Grandmother
- Father's brother → Uncle
- Father's sister → Aunt
- Children of uncle → Cousin
- Wife of uncle → Aunt
- Children of aunt → Cousin
- Husband of aunt → Uncle
- Mother's or father's son → Brother
- Mother's or father's daughter → Sister
- Mother's or father's brother → Uncle
- Mother's father → Maternal grandfather
- Mother's mother → Maternal grandmother
- Mother's brother → Maternal uncle
- Mother's sister → Aunt
- Children of maternal uncle → Cousin
- Wife of maternal uncle → Maternal aunt

EXAMPLE:

Pointing to a photograph, Vipul said, "She is the daughter of my grandfather's only son." How is Vipul related to the girl in the photograph ?

A. Father B. Brother C. Cousin D. Uncle E. Grandson

EXPLANATION

My grandfather's only son -- My father.

So, the girl is the daughter of Vipul's father i.e., Vipul is the girl`s brother. Therefore the correct answer is

Option B. Brother

PRACTICE PROBLEMS

1. Pointing towards a person in a photograph, Aruna said "He is the only son of the father of my sister's brother" How is that person related to Aruna?
   a) Maternal uncle b) Son c) Father d) Brother

2. Pointing to a photograph, a woman says, "This man's son's sister is my mother-in-law" .How is the woman's husband related to a man in the photograph?

a) Son-in-law b) Son c) Grandson d) Nephew

3. A woman while looking at the photograph of a man said “He is the maternal grandfather of children of my husband’s sister. How is the man related to the woman?
   a) Father b) Father-in-law c) Grandfather d) Brother-in-law

4. Pointing to a photograph of a boy Divya said “He is the only son of my mother”. How is the boy related to Divya
   a) Brother b) Uncle c) Cousin d) Father

5. Amit said “This girl is the wife of the grandson of my mother”. How is Amit related to that girl?
   a) Brother b) Grandfather c) Husband d) Father-in-law

6. In a family of seven, three generations are living together
   1) The family consists of two married couples having two children each.
   2) Kannan is Jyothika’s elder brother.
   3) Gopal is lucky to have two grandchildren.
   4) There are two housewives and both are beautiful.
   5) Gopal, who is manoj’s father, is a lawyer and earn’s most.
   6) Jyotsna is the sister of a lecturer and herself is a nurse.
   7) Anuradha is married to a lecturer who is Nidhi’s son.
   8) Jyothika is the grand daughter of one of the housewives and is a classical dancer.

   i. What is manoj’s profession?
   a) Student b) Lecturer c) Lawyer d) Can’t determined e) None of these

   ii. How many male members are there in a family
   a) 2 b) 3 c) 4 d) Can’t determined e) None

   iii. Who are the children of Nidhi?
   a) Jyotsna and Manoj b) Anuradha and Jyotsna
   c) Anuradha and Manoj d)Can’t be determined.

   iv. Which of the following statements is not true?
   a) The Nurse is sister in law of the housewives.
   b) Gopal has two grand children.
   c) Nidhi has a son and a daughter.
   d) Gopal has two children.
   e) Anuradha has a son and a daughter.

   v. Who among the following is one of the married couples
   a) Gopal Jyotika b) Nidhi Gopal
   c) Manoj Jyothika d) Can’t be determined e) None

7. Nine persons – L, M, N, O, P, Q, R, S AND T are the members in a family. M, N, R and S belongs to

the same generation out of which M and S are siblings. L says that P is my sister Q's grandmother's only son's only child. None of them is a widow or widower. Q, S and N belongs to the same gender and the number of males is more than that of the females.

i) How is P related to Q?
   a) Brother b) Sister c) Cousin d) Either (b) or (c)

ii) How is N related to S?
   a) Sister b) Sister-in-law c) Aunt d) Mother-in-law

iii) How is P related to S?
   a) Nephew b) Cousin c) Son d) Daughter

iv) How is O related to L?
   a) Father b) Grandmother c) Grandfather d)Cannot be determined

8. Mr.Reddy has three children Usha, Ram and Sunil. Sunil married Rita ,the eldest daughter of Mr and Mrs.Mathur. The Mathur married their youngest daughter to the eldest son of Mr and Mrs.Rao and they had two children named Sanjay and Sumitha. The Mathur have two more children. Rakesh and Bindhu both elder than Shanthi. Sonu and Surinder are sons of Sunil and Rita. Lata is the daughter of Sanjay

   i. What is the surname of Lata?
      a) Rao b) Mathur c) Sanjay d) Reddy

   ii. What is the surname of Sonu?
      a) Rao b) Mathur c) Reddy d) Sunil

   iii. How is Mrs.Mathur related to Sunil?
      a) Aunt b) Mother-in-law c) Mother d) Sister-in-law

   iv. How is Sunil related to Rakesh?
      a) Brother b) Father c) Son d) Brother-in-law

   v. How is Mr.Rao related to Lata?
      a) Grandfather b) Great grandfather c) Father d) Brother-in-law

9. A family consists of six members P,Q,R,X,Y and Z. Q is the son of R but R is not mother of Q. P and R are a married couple. Y is the brother of R. X is the daughter of P. Z is the brother of P. How is Q relates to X.
   a) Husband b) Father c) Brother d) Uncle

10. Sobha is the niece of Ashish. Ashish's mother is Priya. Kamala is Priya's mother. kamala's husband is Hari. Krish is the mother-in-law of Hari. How is Shoba related to Hari?
   a) Daughter b) Great granddaughter c) Grand niece d) Great grandson daughter

11. In a family there are 6 members A,B,C,D,E and F. A and B are a married couple. A being the male member. D is the only son of C, who is the brother of A. E is the sister of D. B is the daughter in law of F. whose husband has died. How is F related to A?
    a) Mother b) Sister-in-law c) Sister d) Mother-in-law e) None

12. All the six members of the family travelling together A,B,C,D,E&F. B is the son of C but C is not the mother of B. A and C are married couple. E is the brother of C. D is the daughter of A. F is the brother of B. who is the wife of E?
    a) A b) F c) B d) Can't determined

13. Neelam, who is Deepak's daughter says to Deepika, "Your mother Rekha is the younger sister of my father who is the third child of Ramlal. "How is Ramlal related to Deepika?
    a) Uncle b) Father c) Grandfather d) Father-in-law

14. If A+B means A is the sister of B
    A-B means A is the brother of B.
    A*B means A is the daughter of B.
    Which of the following shows the relation that E is the maternal uncle of D?
    a) D+F*E b) D-F*E c) D*F+E d) D*F-E

Directions(15-16)

A+B means A is the son of B.
A-B means A is the wife of B.
A*B means A is the Brother of B.
A/B means A is the mother of B.
A=B means A is the sister of B.

15. What does P+R-Q mean?
    a) Q is father of P b) Q is son of P
    c) P is mother of Q d) Q is the sister of P

16. What does P*R/Q mean?
    a) P is the wife of Q b) P is the uncle of Q
    c) Q is the daughter of P d) Q is the mother of P.

Directions (17-19):

(X*Y) means X is the brother of Y
(X+Y) means X is the daughter of Y.
(X-Y) means X is the husband of Y.

17. If(A+B-C),then
    a) C is the mother of A b) C is sister in law of A
    c) C is aunt of A d) C is mother in law of A
    d) None

18. If(A*B+C),then
    a) A is the brother of C
    b) A is the uncle of C
    c) A is son of C
    d) A is father of C
    d) None

19. If (A+B*C), then
    a) A is the niece of C
    b) A is the daughter of C
    c) A is the cousin of C
    d) A is the daughter-in law of C
    e) None

20. P×Q means P is the sister of Q
    P+Q means P is the father of Q
    P-Q means P is the mother of Q.
    Which of the following mean S is the aunt of T?
    a) T×M+S
    b) S+T×M
    c) S×M+T
    d) S×M+R-T
    e) None

21. P+Q means P is the brother of Q
    P×Q means P is the father of Q
    P-Q means P is the sister of Q
    Which represents S is the niece of T
    a) T×M+S-K
    b) K-S×M+T
    c) T+M×S-K
    d) T×S+M-K
    e) None

22. P+Q means P is the husband of Q
    P/Q means P is the sister of Q
    P×Q means P is the son of Q
    Which represents A is the daughter of B
    a) C×B/A
    b) B+C×A
    c) D×B+C/A
    d) A/D×B
    e) None

Directions for the Q. no (23 – 25):

A+B means A is the daughter of B
A×B means A is the son of B
A-B means A is the wife of B

23. If P×Q-S which is true
    a) S is wife of Q
    b) S is father of P
    c) P is daughter of C
    d) Q is the father of P
    e) None

24. If T-S×B-M which of the following is not true?
    a) B is the mother of S
    b) M is husband of B
    c) T is wife of S
    d) S is daughter of B
    e) S is son of B

25. If Z×T-S×U+P, what is U to Z
    a) Mother
    b) Grandmother
    c) Father
    d) Can't determined
    e) None

Directions(26-28):

A+B means A is daughter of B
A-B means A is husband of B
A×B means A is brother of B

26. If P+Q-R which of the following is true
    a) R is the mother of P
    b) R is sister-in-law of P
    c) R is the aunt of P
    d) R is mother-in-law of P

27. If P×Q+R, which of the following is true?
    a) P is the brother of R
    b) P is the uncle of R
    c) P is the son of R
    d) P is the father of R

28. If P+Q×R which of the following is true?
    a) P is the niece of R
    b) P is the daughter of R
    c) P is the cousin of R
    d) P is the daughter-in-law of R

SEATING ARRANGEMENT

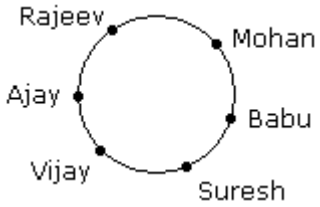
In order to solve seating arrangement questions, first of all diagram should be made. By doing so questions are easily and quickly solved. There are different types of seating arrangement problems; namely circular arrangement, linear arrangement, opposite faces etc.

EXAMPLE :

- 6 Boys are sitting in a circle and facing towards the centre of the circle.
- Rajeev is sitting to the right of mohan but he is not just at the left of Vijay.
- Suresh is between Babu and Vijay.
- Ajay is sitting to the left of Vijay.

Who is sitting to the left of Mohan ?

EXPLANATION



Hence, Babu is sitting to the left of Mohan.

1. Six friends P, Q, R, S, T and U are sitting around the hexagonal table each at one corner and are facing the centre of the hexagonal. P is second to the left of U. Q is neighbour of R and S. T is second to the left of S.

   i. Which one is sitting opposite to P?

   a. R b. Q c. S d. T

   ii. Who is the fourth person to the left of Q?

   a. P b. U c. R d. Data inadequate

   iii. Which are the following are the neighbours of P?

   a. U & P b. T & R c. U & R d. Data inadequate

   iv. Which one is sitting opposite to T?

   a. R b. Q c. Cannot be determined d. S

2. In a class there are seven students (including boys and girls) A, B, C, D, E, F and G. They sit on three benches I, II and III. Such that at least two students on each bench and at least one girl on

each bench. C who is a girl student, does not sit with A, E and D. F the boy student sits with only B. A sits on the bench I with his best friends. G sits on the bench III. E is the brother of C.

i. How many girls are there out of these 7 students?

a. 3 b. 4 c. 3 or 4 d. data inadequate

ii. Which of the following is the group of girls?

a. BAC b. BFC c. BCD d. CDF

iii. Who sits with C?

. 3 b. D c. G d. E

iv. On which bench there are three students?

a. Bench I b. Bench II c. Bench –III d. Bench – I or II

3. In an Exhibition seven cars of different companies - Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo are standing facing to east in the following order :

1. Cadillac is next to right of Fargo.
2. Fargo is fourth to the right of Fiat.
3. Maruti car is between Ambassador and Bedford.
4. Fiat which is third to the left of Ambassador, is at one end.

i. Which of the cars are on both the sides of Cadillac car?

a. Ambassador & Maruti b. Maruti & Fiat

c. Fargo & Mercedes d. Ambassador & Fargo

ii. Which of the following statement is correct?

a. Maruthi is to left of Ambassador b. Bedford is to the left of Fiat

c. Bedford is at one end d. Fiat is second to the right of Maruti

iii. Which of the following statements are correct?

a. Fargo car is in between Ambassador and Fiat
b. Cardillac car is to the left of Mercedes
c. Fargo is to the right of Cardillac
d. Maruti is fourth right of Mercedes

Directions (4-7): Study the following information carefully and answer the questions given below.

P,Q,R,S,T,U, V and J are sitting around a circle facing the centre. S is not an immediate neighbour of V. S is second to the right of T, who is second to the right of Q. R is third to the right of J and second to the left of P.

4. Who is on the immediate right of Q?
   a) S b) R c) V d) Data inadequate e) None of these.

5. What is J's position with respect to P?
   a) Third to the right b) Second to the left
   c) Second to the right d) Data inadequate
   e) None of these.

6. How many of them are there between Q and S?
   a) 2 only b) 3 only c) 4 only d) 2 or 3 only e) None of these.

7. Who among the following is sitting between V and R?
   a) Q b) J c) T d) S e) None of these.

Questions (8 – 12) Direction: Read the following information carefully and answer the questions.

→ A, B, C, D and E are five men sitting in a line facing to south-while M, N, O, P and Q are five ladies sitting in a second line parallel to the first line and are facing to north.
→ B who is just next to the left to D is opposite to Q.
→ C and N are diagonally opposite to each other.
→ E is opposite to O who is just next right of M.
→ P who is just to the left of Q is opposite to D.
→ M is at one end of the line.

8. Who is sitting third to right of O?
   a) Q b) N c) M d) Data inadequate.

9. If B Shifts to the place of E, E shifts to the place of Q, and Q shifts to the place of B, then who will be the second to the left of person opposite to O?
   a) Q b)P c) E d) D

10. Which of the following pair is diagonally opposite to each other?
    a) EQ b) BO c) AN d) AM

11. If O and P, A and E and B and Q interchange their positions, then who will be the second person to the right of the person who is opposite to the person second of the right of P?
    a) D b) A c) E d) O

12. In the original arrangement who is sitting just opposite to N?
    a) B b) A c) C d) D

Directions 13 – 16: Six girls are sitting in a circle facing to the centre of the circle. They are P, Q, R, S, T and V. S is third to the left of T. P is next to the left of V. R is 4th to the right of P.

13. Which of the following statements is not true?
    a. S is just next to the right to R.
    b. T is just next to the right of V.
    c. R is second to the left of T
    d. P is second to the right of R.

14. If P and R interchange their position, then which of the pairs will sit together?
    a. RT b. PV c. VT d. QV

15. What is the position of T?
    a. Just next to the right of Q
    b. Second to the left of P
    c. Between Q and R
    d. To the immediate right of V

16. Which one is sitting just right to the V?
    a. P b. T c. R d. S/Q

Directions 17 – 21 - Each of these questions are based on the information given below:

- 8 persons E, F, G, H, I, J, K and L are seated around a square table - two on each side.
- There are 3 ladies who are not seated next to each other.
- J is between L and F.
- G is between I and F.
- H, a lady member is second to the left of J.
- F, a male member is seated opposite to E, a lady member.
- There is a lady member between F and I.

17. Who among the following is to the immediate left of F ?
    a. G b. I c. J d. H

18. What is true about J and K ?
    a. J is male, K is female
    b. J is female, k is male
    b. Both are female
    d. Both are male

19. How many persons are seated between K and F?
    a. 1 b. 2 c. 3 d. 4

20. Who among the following are three lady members?
    a. E, H and J b. E, F and G c. E, H and G d. C, H and J

21. Who among the following is seated between E and H?
    a. F b. I c. K d. CBD

Directions (22 – 25)
Read the given information & answer the questions below

- Six boys B_1,B_2,B_3,B_4,B_5,B_6 and six girls C_1,C_2,C_3,C_4,C_5 and C_6 are standing in rows. In such a way that each girl faces one boy, not necessarily in the same order

- C_1 is to the immediate right of the girl who is facing B_5, the boy at the extreme right. Only B_2 is between B4 and B5.B6 is to the immediate left of B1 and to the immediate right of B_3. C_3 is facing B_1 and is to the immediate left of C_2. C_6 is third to the left of C_4

22. Which of the following girls is facing B4?
    a) C5 b) C4 c) C3 d) C6 e) None

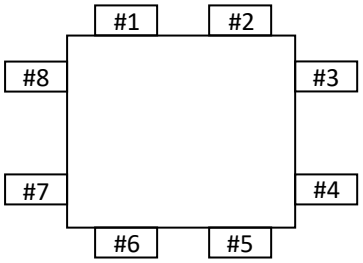
23. Which of the following pairs of a boy and girl is at one of the extreme ends?
    a) C1, B5 b) C4, B5 c) C5, B2 d) Data inadequate e) None

24. Which of the following boys is to the immediate left of B_4?
    a) B1 b) B2 c) B1 or B2 d) Data inadequate e) None

25. Who is facing C2?
    a) B1 b) B6 c) B4 d) Data inadequate e) None

Directions (26 – 29)

A, B, C, D and their wives P,Q,R,S (not necessarily in the same order) sat around a square table facing towards the centre of the table. Their chairs were arranged around the square table in the following manner.



Study some additional clues given below

- Only one couple did not sit next to each other and this couple did not sit opposite each other.
- R and S are wives of neither B nor C. D is husband of neither Q nor R. P is not the wife of B
- The person sitting opposite R was a man who sat on B's immediate left
- The person sitting on P's immediate left was a man who sat opposite D
- R sat at position #1 or #2

26. Who among the following sat on the immediate right of A?
    a) S b) P c) Q d) CBD

27. Which of the following couples did not sit next to each other?
    a) A and his wife b) B and his wife c) P and her husband d) S and her husband

28. Name the two females who sat opposite each other?

a) P and Q b) Q and R c) R and S d) No 2 females sat across each ther

29. Who among the following from the group of males who sat between two people of the same sex?
a) A and B b) B and C c) C and D d) A and C

ANALYTICAL REASONING

Analytical Reasoning questions are designed to assess the ability to consider a group of facts and rules, and, given those facts and rules, determine what could or must be true. The specific scenarios associated with these questions are usually unrelated to law, since they are intended to be accessible to a wide range of test takers. However, the skills tested parallel those involved in determining what could or must be the case given a set of regulations, the terms of a contract, or the facts of a legal case in relation to the law. In Analytical Reasoning questions, you are asked to reason deductively from a set of statements and rules or principles that describe relationships among persons, things, or events.

Analytical Reasoning questions appear in sets, with each set based on a single passage. The passage used for each set of questions describes common ordering relationships or grouping relationships, or a combination of both types of relationships. Examples include scheduling employees for work shifts, assigning instructors to class sections, ordering tasks according to priority, and distributing grants for projects.

Analytical Reasoning questions test a range of deductive reasoning skills.

Questions (1 - 3)

Refer to the data below and give the correct manipulations

Six friends A, B, C, D, E and F work in different companies namely Pentasoft, Quark, Raymond's, Sunmet, Trump & Gates and Uzen and each wears company sponsored different coloured shirts, viz, Blue, Green, Pink, Yellow, Purple and Red though not necessarily in the same order.

- The one wearing the blue shirt works in Sunmet and the one wearing green shirt works in Pentasoft
- F does not work in Raymond's or Trump & Gates.
- A wears Pink shirt and works in Quark
- D does not work in Trump & Gates and purple coloured shirt is not sponsored by Raymond's
- E works in Uzen and neither D nor B works in Sunmet
- Trump & Gates does not sponsor purple or yellow coloured shirts and C works in Pentasoft.

1. Which of the links is rightly matched?
   a. F – Raymond – Purple b. D – Raymond – Red
   c. F – Sunmet – Blue d. C – Pentasoft – Red

2. Which of the following is / are rightly matched?
   i. A – Pink – Quarks ii. D – Blue – Raymond
   iii. B – Red – Trump and Gates iv. E – Green – Uzen

   a. i only b. i & II only c. i & iii only d. i,ii & iii only

3. Which of the following are not correct?
   a. C – Green – Pentasoft b. A – Pink – Quarks

c. E – Purple – Uzen d. B – Blue – Trump & Gates

Question 4 – 13.

Five friends Manish, Ashish, Rahul, Kapil and Pravin are musician, architect, doctor, engineer and artist by profession and live in Lucknow, Mumbai, Kolkatta, Delhi and Pune but not in that order.

- Pravin and Rahul do not live in Lucknow, or Pune and neither of them is an architect or doctor.
- Manish and Ashish are not artist or engineering and they do not live in Delhi or Lucknow
- Kapil is neither a doctor nor a musician
- The person living in Lucknow is neither an artist nor an engineer.
- Manish does not live in Kolkata and Ashish is not a doctor
- The musician does not live in Pune or Mumbai
- Pravin is not an artist
- The artist does not live in Delhi

4. Who lives in Lucknow?
   a) Ashish b) Kapil c) Manish d) Can't say

5. Kapil is a/an _____
   a) Musician b) Artist c) Architect d) Can't say

6. Who is the artist?
   a) Rahul b) Pravin c) Ashish d) Can't say

7. The engineer who lives in delhi is
   a) Kapil b) Pravin c) Rahul d) Manish

8. The musician lives in
   a) Kolkata b) Delhi c) Lucknow d) Can't say

9. The person living in Pune is
   a) Ashish b) Pravin c) Manish d) Can't say

10. The person living in Mumbai is
    a) Architect b) Engineer c) Doctor d) Artist

11. Where does Pravin live?
    a) Lucknow b) Delhi c) Mumbai d) Can't say

12. Ashish living in Kolkata is a/an?
    a) Musician b) Engineer c) Doctor d) Can't say

13. The doctor lives in
    a) Mumbai b) Kolkata c) Pune d) Can't say

Directions (14 - 18):
Read the following information carefully and answer the questions given below:

- Five members A, B, C, D and E of a family eat grapes, apple, watermelon, pomegranate and pineapple one by one after their lunch from Tuesday to Saturday. No member eats any fruit on Sunday or Monday. Each of them eats only one fruit a day.
- No two members eat the same fruit on a day.
- Neither B nor E eats watermelon or grapes on Wednesday.
- A eats pomegranate on Thursday.
- D eats apple on Tuesday.
- E does not eat pineapple on Tuesday.
- B eats pomegranate on Friday.
- C eats grapes on Saturday.
- A eats watermelon on Tuesday.
- D eats pineapple on Wednesday.

14. Which fruit does E eat on Friday?
    a) Grapes b) Apple c) Watermelon
    d) Pomegranate e) None of these.

15. Who eats pomegranate on Wednesday?
    a) A b) B c) E
    d) Can't be determined. e) None of these.

16. On which day does D eat watermelon?
    a) Wednesday b) Thursday c) Friday
    d) Can't be determined e) None of these.

17. Which of the following combinations is definitely true?
    a) C – Pomegranate – Wednesday b) B – Apple – Thursday.
    c) E – Watermelon – Friday d) D – Grapes – Saturday.
    e) A – Pineapple – Saturday

18. Which of the following combinations is definitely false?
    a) C – Apple – Thursday b) E – Pineapple – Saturday.
    c) A – Apple – Friday d) B – Grapes – Wednesday.
    e) D – Watermelon – Thursday.

Directions (19 - 23): Read the following information carefully and answer the questions given below.
There are six members in a family. Amrendra is the only male in that family. One of the members is an engineer. A person came to Amrendra's home to gather some information related to census. When the census officer came in, he saw all the six members of the family was taking their lunch around a table. The census officer came to know that,

- the persons taking their lunch are: the teacher, Sheela, Kamini, the author, the nurse and Priti.
- Kamini is neither the doctor nor the professor.
- Neither Amrendra nor Punam is the nurse.
- Amrendra is not the teacher.

When the census officer was to return, Sheela, Rita and the doctor wanted to go with him in his work.

19. What is the Profession of the only male member in the group?
    a) Doctor b) Professor c) Teacher d) Author e) None of these.

20. Which of the following is the profession of Rita?
    a) Doctor b) Professor c) Teacher d) Author e) None of these.

21. Who is an Engineer?
    a) Amrendra b) Sheela c) Rita d) Punam e) NOTA

22. Which of the following combinations is not correct?
    a) Kamini – Engineer b) Punam – Teacher c) Priti – Nurse
    d) Sheela – Professor e) Amrendra – Author.

23. Which of the following combinations is correct?
    a) Sheela – Engineer b) Rita – Nurse c) Priti – Teacher
    d) Punam – Professor e) Amrendra – Engineer.

24. Today is Saturday. A person wants to meet a lawyer and as that lawyer is busy he asks him to come three days after the before day of the day after tomorrow? On which day the lawyer asks the person to come?
    a) Saturday b) Monday c) Sunday
    d) Friday e) None of these.

Directions – 25 – 29

Five girls Fathima, Gowri, Harshitha, Indu and Jaya are wearing five different coloured dresses among red, blue, green, yellow and black each of which is of different cost. We know the following information about them

- The cost of the yellow coloured dress is less than that of the green coloured dress but more than that of the pink coloured dress.
- The cost of Fathima's dress is more than that of Jaya's dress, which is more than the cost of Harshitha's dress
- The cost of Gowri's dress is less than the cost of the pink coloured dress
- Indu's dress is the costliest and the blue coloured dress is the cheapest
- The cost of the red coloured dress is the average of the costs of the yellow and pink coloured dresses

25. Who is wearing the pink coloured dress
    a) Fathima b) Gowri c) Harshitha d) Jaya e) CBD

26. What is the color of the costliest dress
    a) Green b) Yellow c) Red d) Pink e) CBD

27. Who is wearing the second cheapest dress?
    a) Fathima b) Gowri c) Harshitha d) Jaya e) CBD

28. Which colour dress is Jaya wearing
    a) Yellow b) Red c) Pink d) Green e) Blue

29. The cost of Jaya's dress is greater than the cost of which coloured dress?
    a) Pink b) Red c) Yellow d) Blue
    e) More than one of above

Directions (30 – 34)

Vinay, Shailesh, Rita and Alka are four students of different classroom coaching centers of BSC, a leading classroom coaching for po. Each belongs to the different state AP, MP, Bihar and Orissa but not in order. When BSC arranged an all-India Mock test series for all the class room coaching center students of BSC in 4 cities Delhi, Kolkata, Mumbai & Chennai. Vinay, Sailesh, Rita & Alka appeared for test series in different cities. When the results are declared they got 1^{st} to 4^{th} positions in all-India Ranking. They are the students of different centers of BSC ie.. Lucknow, Rourkela, Patna and Delhi but not in order

- Vinay and Shailesh neither studied at Lucknow nor Rourkela. They appeared for test neither at Kolkata nor at Mumbai. They belong neither to Orissa nor to MP
- The one who studied at Patna does not belong to Bihar. The one who belongs to MP is not Alka. The one who studied at Rourkela didn't appear for test at Kolkata center.
- The one to studied at Delhi classroom coaching center got 4^{th} position in all India ranking. But he is not Shailesh. The one who appeared at Chennai for the test got 1^{st} position .The one who belongs to MP got 3^{rd} position. While the one who studied at Lucknow got 2^{nd} position in all-India Ranking.

30. The one who got the 1st position in all-India ranking associated with which classroom coaching centre?
    a) Can't say b) Delhi c) Lucknow d) Patna

31. Alka belongs to
    a) Bihar b) AP c) MP d) Orissa

32. Vinay appeared for the test at center
    a) Delhi b) Chennai c) Mumbai d) Kolkata

33. Who got the 2nd position in ranking?
    a) Vinay b) Shailesh c) Alka d) Rita

34. Which of the following shows the correct combination
    a) Vinay-Delhi-4 b) Shailesh-Patna-Delhi-1
    c) Alka – lucknow-Mumbai-2 d) None of these

Directions (35 – 39)

P, Q, R, S, T, V & W are travelling in three different vehicles. There are at least two passengers in each Vehicle-1,2,&3,and only one of them is a male. There are 2 engineers 2 doctors, and 3 teachers among them

- R is a lady doctor and she does not travel with the pair of sisters, p and v
- Q, a male engineer, travels with only w, a teacher in vehicle 1.
- S is a male doctor
- Two persons belonging to the same profession do not travel in the same vehicle
- P is not an engineer and travels in vehicle 2

35. What is V's profession?
    a) Engineer b) Teacher c) Doctor d) Data inadequate

36. In which vehicle does R TRAVEL?
    a) I b) II c) III d) II or III

37. Which of the following represents the 3 teachers?
    a) WTV b) WTP c) WTV or WTP d) Data inadequate

38. Which of the following is not correct?
    a) T-Male-Teacher b) Q-Male-engineer
    c) D-female-Teacher d) v-female-Teacher

39. How many lady members are there?
    a) 3 b) 4 c) 3 or 4 d) Data inadequate

Directions (40 – 44)

- There are 7 persons A,B,C,D,E,F&G based in Delhi. Each of them is from a different state, has a different profession and plays different instrument?
- c, a doctor is from Bihar
- E & F play mandolin and violin though not necessarily in that order
- A is not from Kerala
- The person from Kerala is an engineer and plays guitar
- The lawyer plays sitar
- The businessman from UP plays violin
- The teacher and the cricketer play flute and piano though not necessarily in that order
- F is a pilot
- The Maharashtrian is a teacher
- The Gujarati plays piano
- G, a Punjabi does not play sarod

- B is a cricketer.

40. Which state does A belong to?
    a) Gujarat b) Kerala c) Maharastra d) CBD

41. Which instrument does B play?
    a) flute b) piano c) sarod d) CBD

42. Which instrument does c play?
    a) Mandolin b) sitar c) violin d) NOTA

43. What is D's profession
    a) Engineering b) lawyer c) Teacher d) CBD

44. Which state does F belong to
    a) Kerala b) UP c) Punjab d) CBD

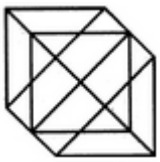
45. A vendor has 6 baskets A, B, C, D, E & F. A has 15 fruits, B has 25 fruits, C has 21 fruits, D has 18 fruits, E has 30 fruits and F has 10 fruits. The fruits are either mangoes or oranges. If all the fruits in one of these baskets are sold, then the number of mangoes left is thrice the number of oranges left. Which basket is sold?
    a) F b) D c) C d) B e) A

ABSTRACT REASONING

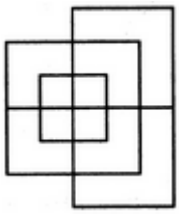
PATTERN

1. Find the number of triangles in the given figure.

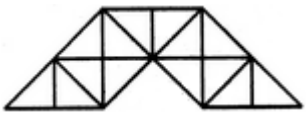
2. Find the number of triangles in the given figure.



3. Find the minimum number of straight lines required to make the given figure.



4. Find the number of triangles in the given figure.



5. Count the number of triangles and squares in the given figure.

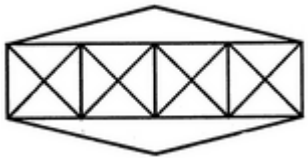


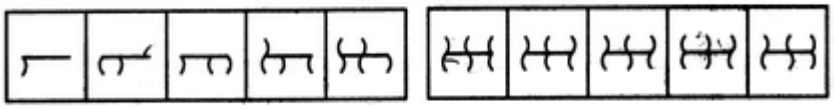
FIGURE SERIES

It is the ability to process ideas that involve complex visual or language-based ideas that are not easily associated with concrete ideas. Abstract ideas are often invisible, complex and subjective. Concrete ideas are usually visible and objective. Understanding the pattern and assessing the intellince testing is the core idea of Figure Series.

EXAMPLE:

Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

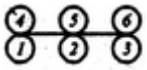
Problem Figures: Answer Figures:



(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

A. 1 B. 2 C. 3 D. 4 E. 5

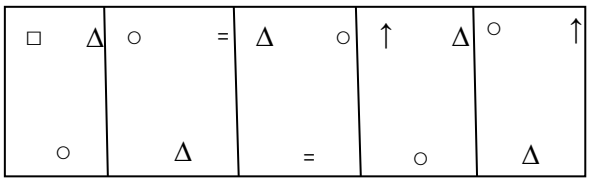
EXPLANATION:

In each step, all the existing arcs get laterally inverted and a new arc is added which is oriented in a direction opposite to that of the last added arc. The arcs are added at various positions in the following sequences: 

Therefore the correct answer is Option C-3.

Each of the following questions consists of figures marked Questions followed by answer figures. Select a figure from amongst the Answer Figures which will continue the same series as established.

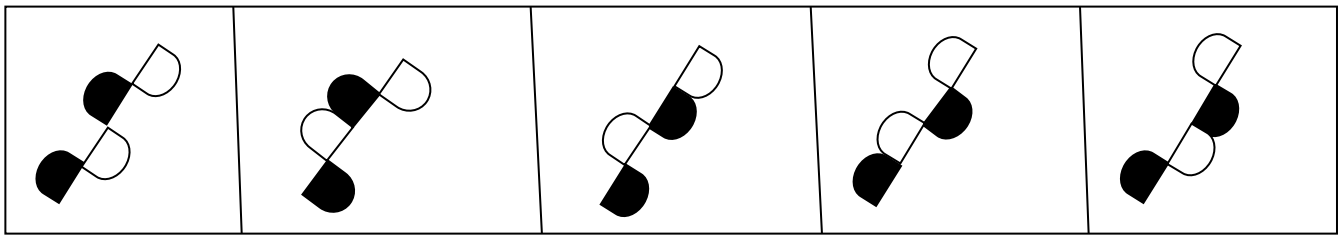
Question – 6 Answer



(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

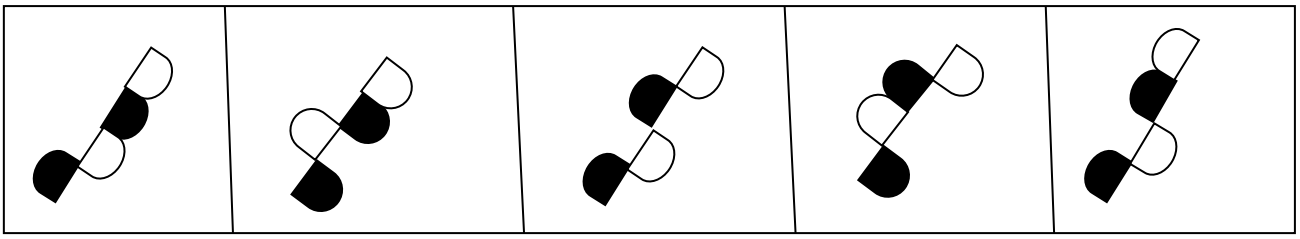
A. 1 B. 2 C. 3 D. 4 E. 5

Question – 7



(A) (B) (C) (D) (E)

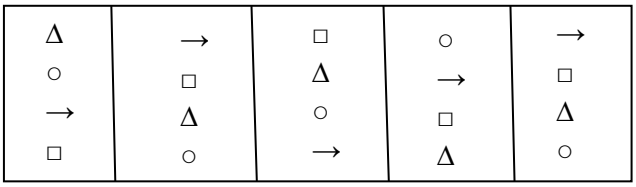
Answer



(1) (2) (3) (4) (5)

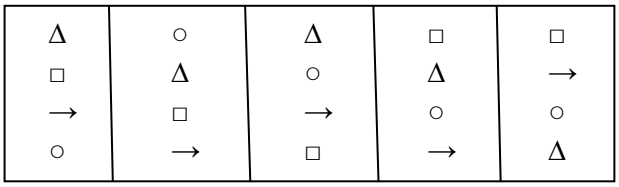
A. 1 **B. 2** **C. 3** **D. 4** **E. 5**

Question – 8



(A) (B) (C) (D) (E)

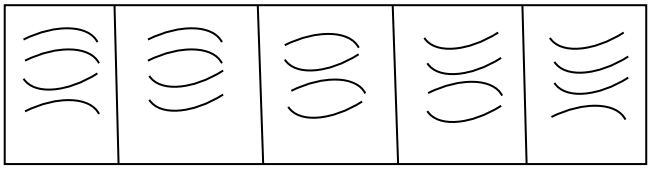
Answer



(1) (2) (3) (4) (5)

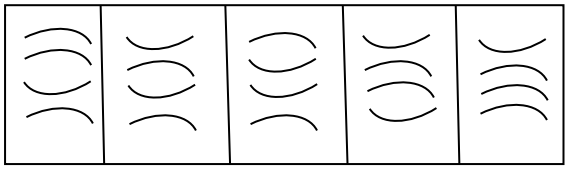
A. 1 **B. 2** **C. 3** **D. 4** **E. 5**

Question – 9



(A) (B) (C) (D) (E)

Answer



(1) (2) (3) (4) (5)

A. 1 **B. 2** **C. 3** **D. 4** **E. 5**

Question – 10

Δ O x S =	Δ = O S x	O = S Δ x	O x = Δ S	= x Δ O S

(A) (B) (C) (D) (E)

Answer

S = x O Δ	= S x o Δ	O S x Δ =	Δ S x O =	x S = O Δ

(1) (2) (3) (4) (5)

A. 1 **B. 2** **C. 3** **D. 4** **E. 5**

Question – 11: FIND (A)

?	V R G L Y X N	G Q R N V L X	Q N X Z L R V	X L V N Q Z A	S A L Z X N Q

(A) (B) (C) (D) (E)

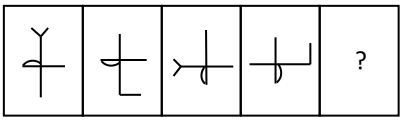
Answer

T Y G K R X L V	G R V Y K D X L	X L V K R J Y G	X L V R T Y G

(1) (2) (3) (4)

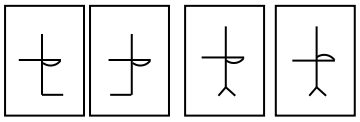
A. 1 **B. 2** **C. 3** **D. 4** **E. NOTA**

Question – 12: FIND (E)



(A) (B) (C) (D) (E)

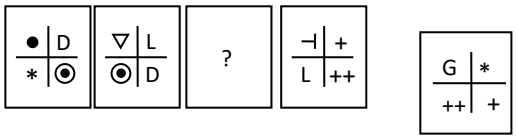
Answer



(1) (2) (3) (4)

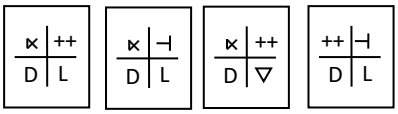
A. 1 **B. 2** **C. 3** **D. 4** **E. NOTA**

Question – 13: FIND (C)



(A) (B) (C) (D) (E)

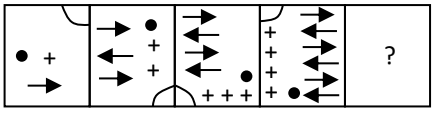
Answer



(1) (2) (3) (4)

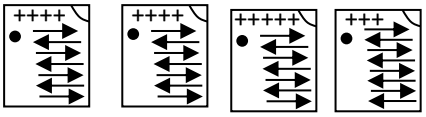
A. 1 **B. 2** **C. 3** **D. 4** **E. NOTA**

Question – 14: FIND (E)



(A) (B) (C) (D) (E)

Answer



(1) (2) (3) (4)

A. 1 **B. 2** **C. 3** **D. 4** **E. NOTA**

Question – 15: FIND THE NEXT ONE IN THE SERIES

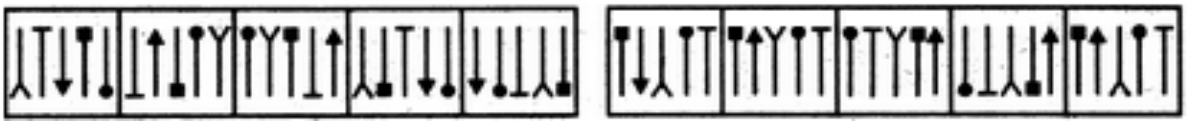
Answer

(A) (B) (C) (D) (E) (1) (2) (3) (4)

A. 1 **B. 2** **C. 3** **D. 4** **E. NOTA**

Question – 16: FIND THE NEXT ONE IN THE SERIES

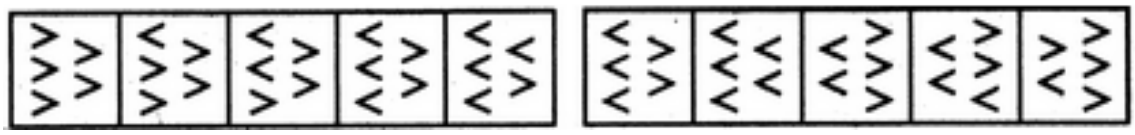
Answer



(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

A. 1 **B. 2** **C. 3** **D. 4** **E. 5**

Question – 17 : FIND THE NEXT ONE IN THE SERIES Answer



(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

A. 1 B. 2 C. 3 D. 4 E. 5

MIRROR IMAGES

18. Choose the alternative which is closely resembles the mirror image of the given combination.

ANS43Q12

(1) AN S4 3Q 12 (2) 2 1Q 34 SNA

(3) SNA 3 4Q 2 1 (4) 1 2Q 4 3ANS

19. Choose the alternative which is closely resembles the mirror image of the given combination.

TARA IN1014A

(1) A4 10 1NI ARAL (2) A1 0 1 4NI ARAT

(3) A1 0 1 4TARA IN (4) A4 10 1NI ARAT

20. Choose the alternative which is closely resembles the mirror image of the given combination.

EFFECTIVE

(1) ƎVITCƎFFƎ (2) EVITCEFFE

(3) ƎFFƎCTIVƎ (4) ƎVITCƎFFƎ

21. Choose the alternative which is closely resembles the mirror image of the given combination.

UTZFY6KH

(1) HK9YFZTU (2) UTZFY9KH

(3) HKϑ⅄ƐZTU (4) HK9YFZTU

22. Choose the alternative which is closely resembles the mirror image of the given combination.

AN54WMG3

(1) ƐGWM4SNA (2) ƐGMW4SNA

(3) ƎƆWM4SNA (4) ƐƆWM4SNA

SERIES AND ANALOGY

Analogy section deals with two types of questions:
I. Choosing a similarly related pair as the given pair on the basis of the relation between the numbers or alphabets in each pair.
II. Choosing a number or an alphabet similar to a group of numbers or alphabets on the basis of certain common properties that they possess.

1. 125 : 343 :: 343 : _____
   a) 512 b) 1331 c) 1728 d) 81 e) 27

2. 81:729:144: _____
   a) 1728 b) 1331 c) 169 d) 2197 e) 121

3. 5 : 150 :: 8 _____
   a) 520 b) 516 c) 512 d) 584 e) 576

4. C : G :: K : _____
   a) N b) Q c) O d) P e) R

5. MONTH : NMQPM :: PAPER: _____
   a) QYTBV b) QXSBX c) QYTAV d) QYSAW e) QWPKV

6. MARINE : AIEQNRM :: DISGUISE _____
   a) IGIEDSUS b) IDGSIUES c) IGESRNPQ d) IGEIUSSD e) IGIESUSD

7. MTSRA : OWXYL :: MNRLIH : _____
   a) DQVTVW b) OQUVRW c) OQTPST d) OQTQRV e) OQWSTU

8. DEPRL : LRPED :: POCKET: _____
   a)TECHOP b)TEKOCP c) TEKCOP d) TELNOQ e) None

9. 12L : 24X :: 5E _____
   a) 21U b) 19S c) 10J d) 20T e) 18R

10. BCD: 234 :: _____ : 678
    a) CDE b) EFG c) GHF d) FGH e) EDC

11. H : S :: C _____
    a) P b) Q c) T d) R e) X

12. BCE: DIY :: ADFG : _____
    a) APLV b) APIW c) AIPW d) APJW e) AQJW

13. BRPL: AOKE :: APPLE : _____
    a) ZMLHZ b) YNLDX c) YMNFV d) ZMKEV e) ZNLDV

14. TRAIN : UUFPW :: _____ : BOARD
    a) CRFYK b) ALVKU c) ALFKT d) ARVHT e) ANFKU

15. NATURE : PEVASI :: ISOMERS : _____
    a) OTUNJTV b) OTUNIST c) PUVNJST d) OVTNJST e) OUTVJRV

16. Find x: 12, 32, 72, 152, x
    a)312 b) 325 c) 515 d) 613

17. 1, 2, 5, 12, 27, 58, 121, _____
    a) 246 b) 247 c) 248 d) 249

18. 6, 11, 21, 36, 56, _____
    a) 91 b) 81 c) 78 d) 87

19. 1,6,13, 22,33
    a) 36 b) 38 c) 46 d) 48

20. 3, 7, 15, 31, 63, ____
    a) 131 b) 127 c) 135 d) 137

21. 225, 336, 447, _____, 669, 7710
    a) 114 b) 338 c) 558 d) 991

22. 4, 5, 9, 18, 34, ____
    a) 43 b) 49 c) 50 d) 59

23. 19, 2, 38, 3, 114, 4
    a) 228 b) 256 c) 352 d) 456

24. (2,3), (3,5), (5,7), (7,11), (11,13)
    a) 13,15 b) 15,16 c) 13,17 d) 13,19

25. 11, 10, _____, 100, 1001, 1000, 10001
    a) 101 b) 110 c) 111 d) None

26. 49, 1625, _____, 6481
    a) 1628 b) 3649 c) 348 d) 642

27. 165, 195, 255, 285, 345, ___
    a) 375 b) 420 c) 436 d) 390

28. 34, 18, 10, 6, 4, ____
    a) 0 b) 1 c) 2 d) 3

29. 3, 8, 22, 63, 185, ____
    a) 550 b) 310 c) 295 d) 285

30. 43, 47, 90, 56, 63, 119, 67, 79, _____
    a) 150 b) 390 c) 270 d) 146

31. Find out the wrong number in the series 4443, 2423, 4322, 4511, 6221
    a) 4443 b) 2423 c) 4322 d) 4511 e) 6221

32. Find the wrong number 3, 5, 12, 38, 154, 914
    a) 5 b) 38 c) 154 d) 914 e) 12

33. 40, 20, 100, 50, _____, 125
    a) 230 b) 329 c) 250 d) 312

34. A C F H __ M
    a) L b) K c) J d) I

35. A B D G __
    a) M b) L c) K d) H

36. AZ, BY, CX, ____
    a) EF b) GH c) DE d) DW

37. b, e, d, f, __, h, j, __, l
    a) i, m b) m, I c) i, n d) j, m

38. AZ, GT, MN, _____ , YB
    a) KF b) RX c) SH d) TS

39. DF, GJ, KM, NQ, RT, ____
    a) UW b) YZ c) XZ d) UX

40. OTE, PUF, QVG, RWH, _____
    a) SYJ b) TCI c) SXJ d) SXI

41. CAT, FDW, IGZ, _____
    a) KJA b) KTC c) LHD d) LJC

42. deb, ijg, nol, ____, xyv
    a) rsp b) stp c) rsq d) stq

43. AB, BA, ABC, CBA, ABCD, _____
    a) ACBD b) BACD c) CABD d) DBAC e) DCBA

44. G4T, J1OR, M2OP, P43N, S9OL Find the wrong number in the series?
    a) G4T b) J1OR c) M2OP d) P43N

45. A, Z, X, B, V, T, C, R, __, __
    a) P, D b) E, O c) Q, E d) O, Q e) Q, O

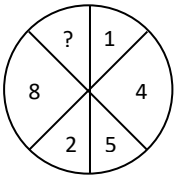
46. Z, L, X, J, V, H, T, F, __, __
    a) R, D b) R, E c) S, E d) Q, D e) F, H

47. AZ, CX, FU, ____
    a) IR b) IV c) JQ d) KP

48. CMM, EOO, GQQ, _____, KUU
    a) GRR b) GSS c) ISS d) ITT

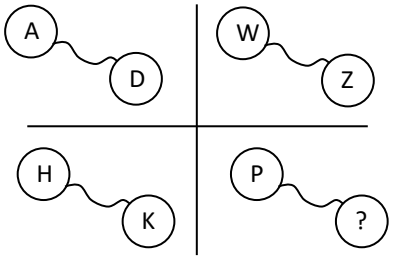
49. ZA5, Y4B, XC6, W3D, _____
    a) E_7V b) V_2E c) VE_5 d) VE_7

50. Find the missing value



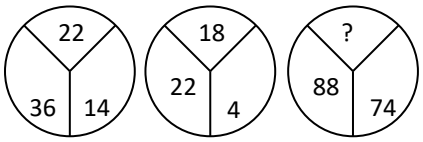
    a) 10 b) 15 c) 32 d) 12

51. Which letter will replace the question mark?



    a) r b) Q c) S d) R

52. Find the missing value

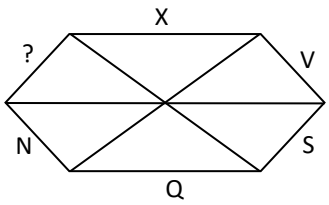


a) 44 b) 55 c) 80 d) 14

53. D – 23 F – 21 H – 19 J – 17 ? ?

a) K – 18 b) M – 18 c) O – 21 d) L – 15

54.



a) Y b) W c) L d) M

55.

F	I	L	O	R
E	H	K	N	Q
IL	O	R	U	
K	N	Q	?	W

a) S b) T c) X d) Y e) M

LOGICAL REASONING

Each problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

1. Tanya is older than Eric.
   Cliff is older than Tanya.
   Eric is older than Cliff.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

2. All Lamels are Signots with buttons.
   No yellow Signots have buttons.
   No Lamels are yellow.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

3. Blueberries cost more than strawberries.
   Blueberries cost less than raspberries.
   Raspberries cost more than strawberries and blueberries.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

4. The hotel is two blocks east of the drugstore.
   The market is one block west of the hotel.
   The drugstore is west of the market.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

5. All the trees in the park are flowering trees.
   Some of the trees in the park are dogwoods.
   All dogwoods in the park are flowering trees.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

6. Joe is younger than Kathy.
   Mark was born after Joe.
   Kathy is older than Mark.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

7. Mara runs faster than Gail.
   Lily runs faster than Mara.
   Gail runs faster than Lily.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

8. The temperature on Monday was lower than on Tuesday.
   The temperature on Wednesday was lower than on Tuesday.
   The temperature on Monday was higher than on Wednesday
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

9. Apartments in the Riverdale Manor cost less than apartments in The Gaslight Commons.
   Apartments in the Livingston Gate cost more than apartments in the Gaslight Commons.
   Of the three apartment buildings, the Livingston Gate costs the most.
   If the first two statements are true, the third statement is
   a. True b. False c. Uncertain

10. Taking the train across town is quicker than taking the bus.
    Taking the bus across town is slower than driving a car.
    Taking the train across town is quicker than driving a car.
    If the first two statements are true, the third statement is
    a. True b. False c. Uncertain

11. Three sisters – Anusha, Bhavya and Charu, work as an architect, a builder and a cook, not necessarily in the same order. They married Adam, Bob & Chris. For each of the 3 sisters the first letter of her name, the name of her profession and the name of her husband are different. If Chris's wife is not a builder, then who is Bob's wife?

a. Anusha b. Charu c. Bhavya d. CBD

12. In an Island the natives lie and visitors speak truth. A man want to know whether a salesman besides him in a bar is a native or visitor. He asked him to ask a woman besides him whether she is a native or visitor. He replied "She says she is a visitors", then he knew that the salesman is a native or visitor. Find out salesman in which category, native or visitor?

a) Native b) Visitor c) Both native & visitor d) Neither native nor visitor

13. An island is inhabited only by knights and knaves. Knights always tell the truth and Knaves always lie. As I approached the island, I spotted three inhabitants on the shore.

I called out them " Are you knights or knaves"

The first, whose name is Ram said something but I could not hear what he said so I asked Shyam, What did he say?"

Shyam said, "He says he is a knight, he is and so am I"

The third inhabitant, whose name was Mohan said, " Ram said that he is a knave, but I am a knight."

Who is / are knights among them?

a. Ram b. Shyam c. Mohan d. Both Ram & Shyam

14. An island is inhabited by 3 tribes. Truth tellers who always speak truth, liars who always lie and alternators who alternately speak truth. It is known that A, B and C, the 3 citizens of that island belong to those 3 different tribes in any order. When asked about their tribes, they came up with the following replies:

A said – I am a truth teller. B is a liar

B said – I am an alternator. C is a liar

C said – I am a truth teller. B is a liar

1. Who among them is a liar?

a. A b. B c. C d. Cannot be determined

2. Who among them is an alternator?

a. A b. B c. C d. Cannot be determined

DATA INTERPRETATION

Table Chart #1

Number of Candidates Appeared and Qualified in a Competitive Examination from Different States over the Years.

State	Year									
	1997		1998		1999		2000		2001	
	App.	Qual.	App.	Qual.	App.	Qual.	App.	Qual.	App.	Qual.
M	5200	720	8500	980	7400	850	6800	775	9500	1125
N	7500	840	9200	1050	8450	920	9200	980	8800	1020
P	6400	780	8800	1020	7800	890	8750	1010	9750	1250
Q	8100	950	9500	1240	8700	980	9700	1200	8950	995
R	7800	870	7600	940	9800	1350	7600	945	7990	885

1. Total number of candidates qualified from all the states together in 1997 is approximately what percentage of the total number of candidates qualified from all the states together in 1998?

A. 72% **B.** 77%

C. 80% **D.** 83%

2. What is the average candidates who appeared from State Q during the given years?

A. 8700 **B.** 8760

C. 8990 **D.** 8920

3. In which of the given years the number of candidates appeared from State P has maximum percentage of qualified candidates?

A. 1997 **B.** 1998

C. 1999 **D.** 2001

4. What is the percentage of candidates qualified from State N for all the years together, over the candidates appeared from State N during all the years together?

A. 12.36% **B.** 12.16%

C. 11.47% **D.** 11.15%

5. The percentage of total number of qualified candidates to the total number of appeared candidates among all the five states in 1999 is?

A. 11.49% **B.** 11.84%

C. 12.21% **D.** 12.57%

Table Chart #2

The following table gives the sales of batteries manufactured by a company over the years.

Number of Different Types of Batteries Sold by a Company Over the Years (Numbers in Thousands)

Year	Types of Batteries					
	4AH	**7AH**	**32AH**	**35AH**	**55AH**	**Total**
1992	75	144	114	102	108	543
1993	90	126	102	84	126	528
1994	96	114	75	105	135	525
1995	105	90	150	90	75	510
1996	90	75	135	75	90	465
1997	105	60	165	45	120	495
1998	115	85	160	100	145	605

1. What was the approximate percentage increase in the sales of 55AH batteries in 1998 compared to that in 1992?

A. 28% B. 31% C. 33% D. 34%

2. The total sales of all the seven years is the maximum for which battery?

A. 4AH B. 7AH C. 32AH D. 35AH

3. What is the difference in the number of 35AH batteries sold in 1993 and 1997?

A. 24000 B. 28000 C. 35000 D. 39000

4. The percentage of 4AH batteries sold to the total number of batteries sold was maximum in the year?

A. 1994 B. 1995 C. 1996 D. 1997

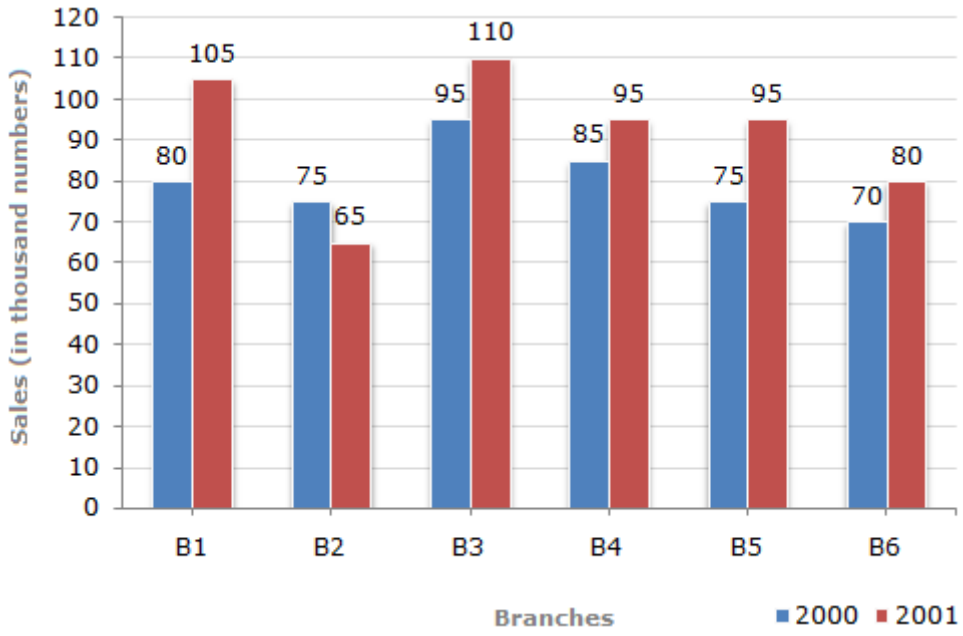
5. In case of which battery there was a continuous decrease in sales from 1992 to 1997?

A. 4AH B. 7AH C. 32AH D. 35AH

Bar graph #1

The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



1. What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

A. 2:3 **B.** 3:5

C. 4:5 **D.** 7:9

2. Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?

A. 68.54% **B.** 71.11%

C. 73.17% **D.** 75.55%

3. What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?

A. 75% **B.** 77.5%

C. 82.5% **D.** 87.5%

4. What is the average sale of all the branches (in thousand numbers) for the year 2000?

A. 73 **B.** 80

C. 83 **D.** 88

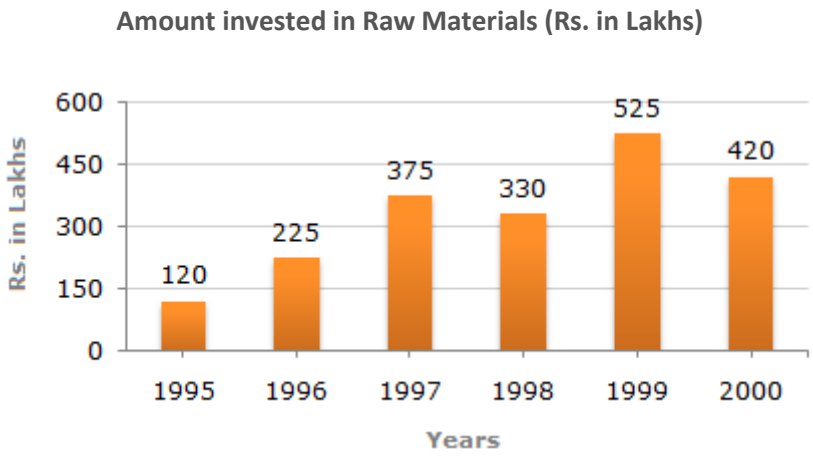
5. Total sales of branches B1, B3 and B5 together for both the years (in thousand numbers) is?

A. 250 **B.** 310

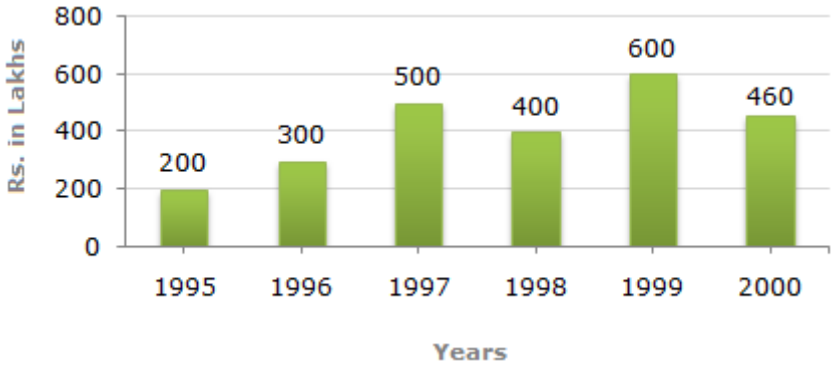
C. 435 **D.** 560

Bar Graph #2

Out of the two bar graphs provided below, one shows the amounts (in Lakh Rs.) invested by a Company in purchasing raw materials over the years and the other shows the values (in Lakh Rs.) of finished goods sold by the Company over the years.



Value of Sales of Finished Goods (Rs. in Lakhs)



1. The maximum difference between the amount invested in Raw materials and value of sales of finished goods was during the year?

A. 1995 B. 1996 C. 1997 D. 1998

2. The value of sales of finished goods in 1999 was approximately what percent of the sum of amount invested in Raw materials in the years 1997, 1998 and 1999?

A. 33% B. 37% C. 45% D. 49%

3. What was the difference between the average amount invested in Raw materials during the given period and the average value of sales of finished goods during this period?

A. 62.5 L B. 68.5 L C. 71.5 L D. 77.5 L

4. In which year, the percentage change (compared to the previous year) in the investment on Raw materials is same as that in the value of sales of finished goods?

A. 1996 B. 1997 C. 1998 D. 1999

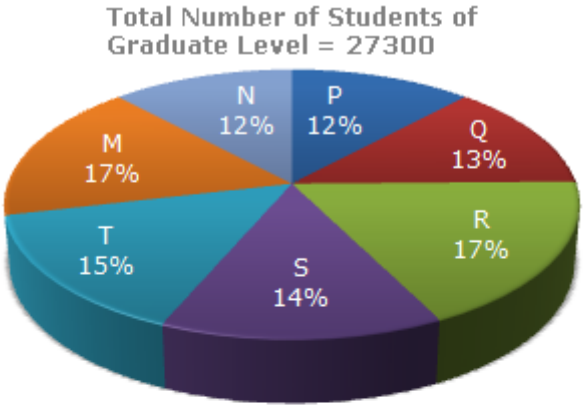
5. In which year, there has been a maximum percentage increase in the amount invested in Raw materials as compared to the year?

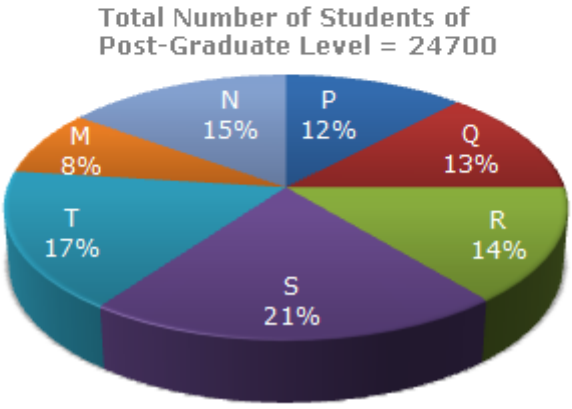
A. 1996 B. 1997 C. 1998 D. 1999

PIE CHART #1

The following pie-charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town.

Distribution of students at graduate and post-graduate levels in seven institutes:





1. What is the total number of graduate and post-graduate level students is institute R?

A. 8320 **B.** 7916

C. 9116 **D.** 8099

2.What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

A. 14 : 19 **B.** 19 : 21

C. 17 : 21 **D.** 19 : 14

3. How many students of institutes of M and S are studying at graduate level?

A. 7516 **B.** 8463

C. 9127 **D.** 9404

4. What is the ratio between the number of students studying at post-graduate level from institutes S and the number of students studying at graduate level from institute Q?

A. 13 : 19 **B.** 21 : 13

C. 13 : 8 **D.** 19 : 13

5. Total number of students studying at post-graduate level from institutes N and P is

A. 5601 **B.** 5944

C. 6669 **D.** 8372

Pie Chart #2

The following pie-chart shows the sources of funds to be collected by the National Highways Authority of India (NHAI) for its Phase II projects. Study the pie-chart and answers the question that follow.

Sources of funds to be arranged by NHAI for Phase II projects (in crores Rs.)

1. Near about 20% of the funds are to be arranged through:

A. SPVS B. External Assistance C. Annuity D. Market Borrowing

2. If NHAI could receive a total of Rs. 9695 crores as External Assistance, by what percent (approximately) should it increase the Market Borrowing to arrange for the shortage of funds?

A. 4.5% B. 7.5% C. 6% D. 8%

3. If the toll is to be collected through an outsourced agency by allowing a maximum 10% commission, how much amount should be permitted to be collected by the outsourced agency, so that the project is supported with Rs. 4910 crores?

A. Rs. 6213 C B. Rs. 5827 C C. Rs. 5401 C D. Rs. 5316 C

4. The central angle corresponding to Market Borrowing is

A. 52® B. 137.8® C. 187.2® D. 192.4®

5. The approximate ratio of the funds to be arranged through Toll and that through Market Borrowing is

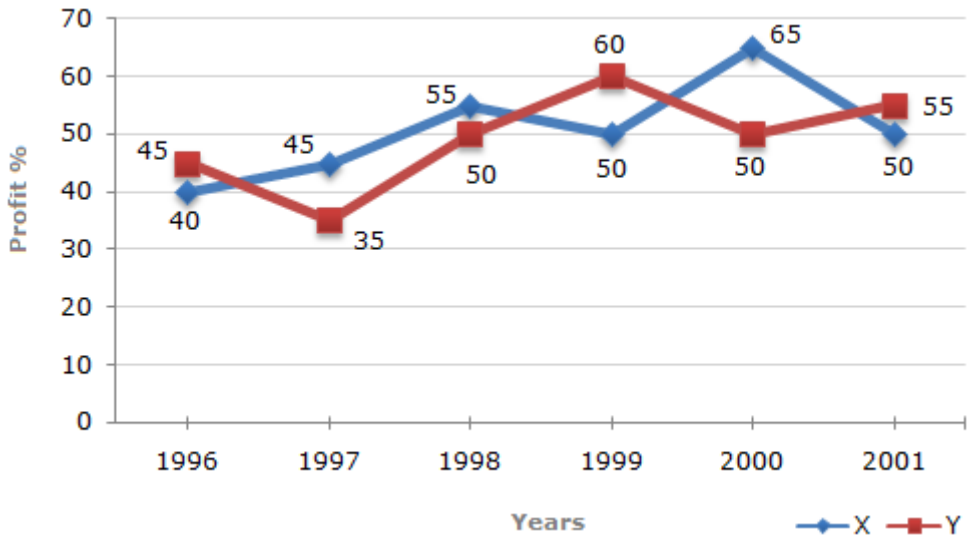
A. 2:9 B. 1:6 C. 3:11 D. 2:5

LINE CHART #1

The following line graph gives the percent profit earned by two Companies X and Y during the period 1996 - 2001.

Percentage profit earned by Two Companies X and Y over the Given Years

$$\%\text{Profit} = \frac{\text{Income - Expenditure}}{\text{Expenditure}} \times 100$$



1. The incomes of two Companies X and Y in 2000 were in the ratio of 3:4 respectively. What was the respective ratio of their expenditures in 2000 ?

A. 7:22 **B.** 14:19

C. 15:22 **D.** 27:35

2. If the expenditure of Company Y in 1997 was Rs. 220 crores, what was its income in 1997 ?

A. Rs. 312 crores **B.** Rs. 297 crores

C. Rs. 283 crores **D.** Rs. 275 crores

3. If the expenditures of Company X and Y in 1996 were equal and the total income of the two Companies in 1996 was Rs. 342 crores, what was the total profit of the two Companies together in 1996 ? (Profit = Income - Expenditure)

A. Rs. 240 crores **B.** Rs. 171 crores

C. Rs. 120 crores **D.** Rs. 102 crores

4. The expenditure of Company X in the year 1998 was Rs. 200 crores and the income of company X in 1998 was the same as its expenditure in 2001. The income of Company X in 2001 was ?

A. Rs. 465 crores **B.** Rs. 385 crores

C. Rs. 335 crores **D.** Rs. 295 crores

5. If the incomes of two Comapanies were equal in 1999, then what was the ratio of expenditure of Company X to that of Company Y in 1999 ?

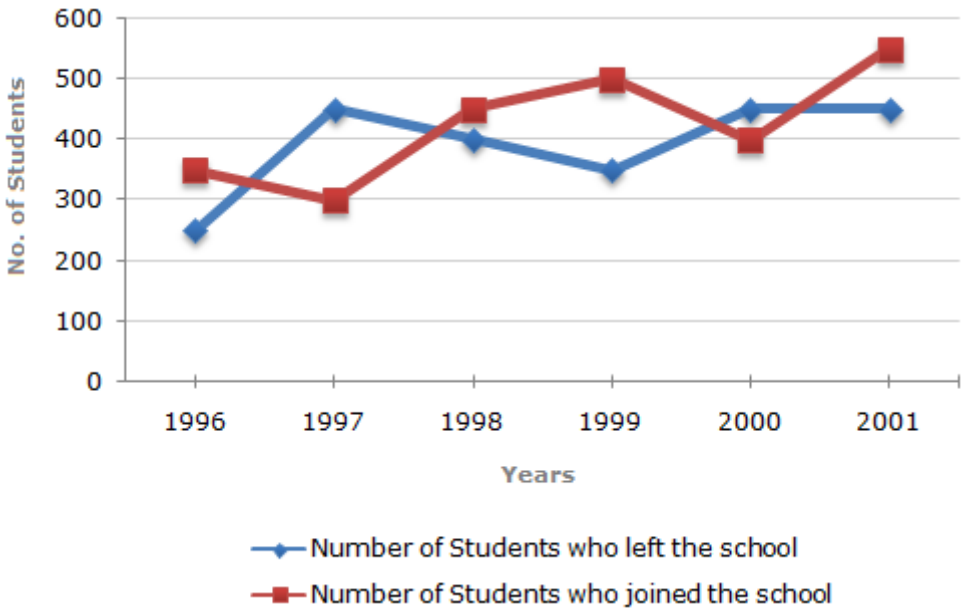
A. 6:5 **B.** 5:6

C. 11:6 **D.** 16:15

Line Chart #2

Study the following line graph which gives the number of students who joined and left the school in the beginning of year for six years, from 1996 to 2001.

Initial Strength of school in 1995 = 3000.



1. The number of students studying in the school during 1999 was?

A. 2950 B. 3000 C. 3100 D. 3150

2. For which year, the percentage rise/fall in the number of students who left the school compared to the previous year is maximum?

A. 1997 B. 1998 C. 1999 D. 2000

3. The strength of school increased/decreased from 1997 to 1998 by approximately what percent?

A. 1.2% B. 1.7% C. 2.1% D. 2.4%

4. The number of students studying in the school in 1998 was what percent of the number of students studying in the school in 2001?

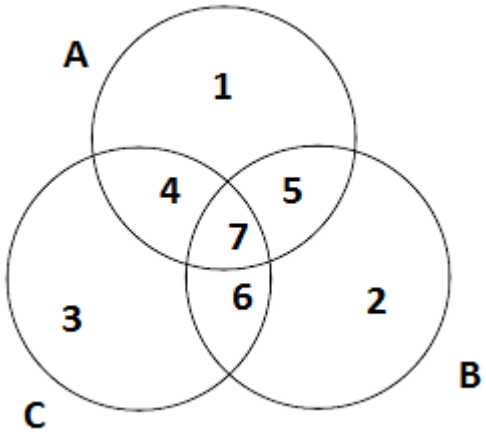
A. 92.13% B. 93.75% C. 96.88% D. 97.25%

5. The ratio of the least number of students who joined the school to the maximum number of students who left the school in any of the years during the given period is?

A. 7:9 B. 4:5 C. 3:4 D. 2:3

VENN DIAGRAM

REPRESENTING REGIONS



Assume the following:

n(A) = p n(B) = q n(C) = r

n(A ∩ B) = x n(B ∩ C) = y

n(C ∩ A) = z

n(A ∩ B ∩ C) = t

Region	Representation for	Set Relation	No. of elements
7	A, B and C	A ∩ B ∩ C	t
6	Both B and C, but not in A	B ∩ C - A ∩ B ∩ C	y – t
5	Both A and B, but not in C	A ∩ B - A ∩ B ∩ C	x - t
4	Both A and C, but not in B	C ∩ A - A ∩ B ∩ C	z - t
3	Only C	Set C – Region(4 + 7 + 6)	r – (z + y – t)
2	Only B	Set B – Region (5 + 7 + 6)	q – (y + x – t)
1	Only A	Set A – Region (5 + 7 + 4)	p – (x + z – t)

PROBLEMS

1. In a coaching institute, 40 students are selected in banking exam coaching, 30 students are selected in staff selection exam coaching and 20 students are selected in both the examinations coaching.

(i) How many students are there in the institute?

a. 40 b. 30 c. 50 d. NOTA

(ii) How many students are selected in Bank exam coaching only?

a. 20 b. 30 c. 10 d. NOTA

(iii) How many students are selected in Staff selection exam coaching only?

a. 20 b. 30 c. 10 d. NOTA

2. In a class, 50 students play cricket, 20 students play football and 10 play both cricket and foot ball. How many play at least one of these two games?
   a. 75 b. 60 c. 55 d. CBD

3. 65% of students in a class like cartoon movies, 70% like horror movies and 75% like war movies. What is the smallest percent of students liking all the three type of movies?
   a. 8% b. 10% c. 12% d. CBD

4. In a class of 150 students, 40 passed in History and Geography, 40 in History and Civics, 30 in Civics and Geography, and 10 students passed in all the three subjects. No students have failed in all the three subjects. Find the total number of students who passed in History only, Geography only and Civics only.
   a. 60 b. 70 c. 50 d. CBD

5. In a class of 100 students, the number of students passed in English only is 46, in Maths only are 46 and in Commerce only are 58. The number who passed in English and Maths is 16, Maths and Commerce is 24 and English and Commerce is 26, and the number who passed in all the subjects is 7. Find the number of students who failed in all the three subjects.
   a. 9 b. 11 c. 10 d. NOTA

6. In a residential complex of 25 houses, each house has either a colour TV or a scooter, or both. The number of houses that have only colour TV is in excess of these with colour TV and scooter by three. The number of houses with scooter alone is less than the number with colour TV alone by 2. Find
   (i)How many houses have both colour TV and scooter?

   (ii) What percent of the houses have only scooter?

   (iii) The decrease in the number of houses having both colour TV and scooter, if the number of houses with only colour TV is increased by 10% while the number of houses with only scooter remaining the same.

7. In a survey of payments of electrical bills of a residential complex of 125 houses, it is found that 50 houses defaulted on their payment of electrical bills in January, 60 houses in February and 40 in March. Some houses can default in consecutive months only. 20 defaulted in January and February, 10 defaulted in February and March. How many houses defaulted in all the three months?
   a. 4 b. 5 c. 6 d. 7

8. A charitable coaching institute for poor children is imparting coaching for engineering entrance examinations on three afternoons. The table below shows the number of candidates attending the same.

Days	I day only	I day	II day	III day	I & II day	II & III day	III & I day
No. of candidates	60	100	70	46	30	23	28

i) Find the number of candidates attended on all the three days.

a. 16 b. 18 c. 20 d. NOTA

ii) What percent of the candidates attended on any one day only.

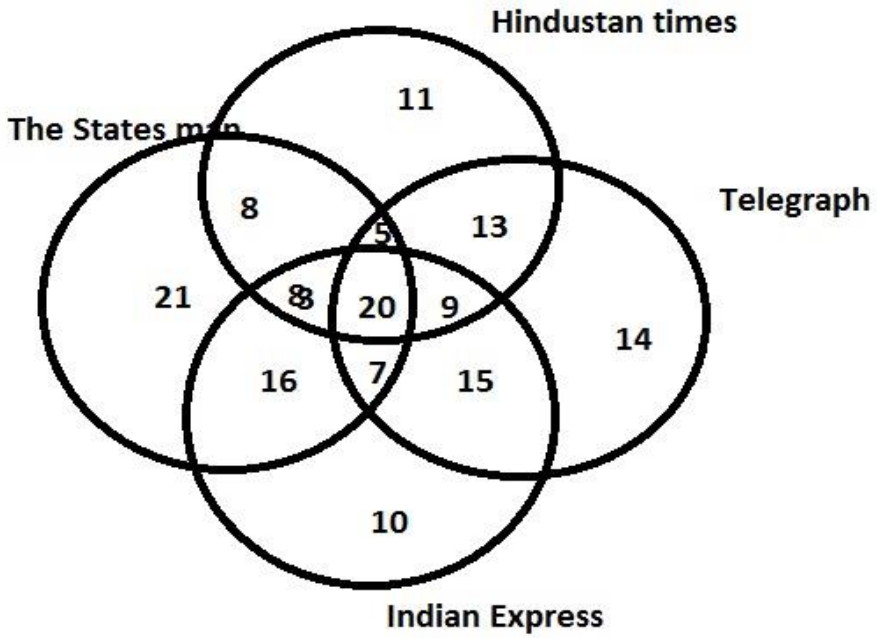
a. 63% b. 71% c. 85% d. 79%

9. A shop has only red, green and blue carpets. 60% of the carpets have red colour, 30% of have green colour and 50% have blue colour. If no carpet has all the three colours, what percent of the carpets have only one colour?

a. 40% b. 50% c. 60% d. 70%

Directions (10 – 14): Refer the diagram below:

10. Which newspaper has the maximum readership?
11. How many persons read Hindustan times or The Statesman or The Indian Express?
12. How many persons read Hindustan times and Telegraph among the other newspapers?
13. How many persons read any three of the above newspapers?
14. How many persons in total read The Statesman along with at least one of the remaining news papers?



DATA SUFFICIENCY

In each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

Give answer

- (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- (C) If the data either in statement I alone or in statement II alone are sufficient to answer the question
- (D) If the data given in both statements I and II together are not sufficient to answer the question and
- (E) If the data in both statements I and II together are necessary to answer the question.

1. **Question:** In which year was Rahul born ?

   Statements:

I. Rahul at present is 25 years younger to his mother.
II. Rahul's brother, who was born in 1964, is 35 years younger to his mother.

2. **Question:** What will be the total weight of 10 poles, each of the same weight?

Statements:

I. One-fourth of the weight of each pole is 5 kg.
II. The total weight of three poles is 20 kilograms more than the total weight of two poles.

3. **Question:** How many children does M have ?

Statements:

I. H is the only daughter of X who is wife of M.
II. K and J are brothers of M

4. **Question:** The last Sunday of March, 2006 fell on which date?

Statements:

I. The first Sunday of that month fell on 5th.
II. The last day of that month was Friday.

5. **Question:** Is the LCM of x/y and p/q an integer**?**

Statements:

I. x = p
II. y and q have no common factors.

6. **Question:** What is the code for 'sky' in the code language ?

Statements:

I. In the code language, 'sky is clear' is written as 'de ra fa'.
II. In the same code language, 'make it clear' is written as 'de ga jo'.

7. **Question:** How is T related to K?

Statements:

I. R's sister J has married Ts brother L, who is the only son of his parents.
II. K is the only daughter of L and J.

8. **Question:** Among T, V, B, E and C, who is the third from the top when arranged in the descending order of their weights ?

Statements:

I. B is heavier than T and C and is less heavier than V who is not the heaviest.
II. C is heavier than only T.

9. **Question:** By selling a product for RS. 100/- how much profit was earned?

Statements:

I. 20% profit would have been earned if it were sold for Rs. 90/-.
II. The profit was one third of the purchase price.

10. Question: A,B and C are running a business firm in partnership. What is B’s share in the profit earned by them?

Statements:

I. A, B and C invested amounts in the ratio of 2:4:7
II. C's share in the profit is Rs. 8750/-

11. **Question:** In a certain code language, '13' means 'stop smoking' and '59' means 'injurious habit'. What is the meaning of '9' and '5' respectively in that code language?

Statements:

I. '157' means 'stop bad habit'
II. '839' means 'smoking is injurious'

12. What is the speed of the train whose length is 210 metres?

Statements:

I. The train crosses another train (Howrah Express/12869) of 300 metres length running in opposite direction in 10 seconds.
II. The train crosses another train (Howrah Express/12869) running in the same direction at the speed of 60 km/hr in 30 seconds.

13. What is the length of a running train crossing another 180 metre long train running in the opposite direction?

Statements:

I. The relative speed of the two trains was 150 kmph.
II. The trains took 9 seconds to cross each other.

Answer the following and give the correct options

14. What is the speed of the train?
    I. The train crosses a signal pole in 18 seconds.
    II. The train crosses a platform of equal length in 36 seconds
    III. Length of the train is 330 metres.

A. I and II only B. II and III only C. I and III only
D. III and either I or II only E. Any two of the three

15. What is the percent profit earned by the shopkeeper on selling the articles in his shop?
    I. Labelled price of the articles sold was 130% of the cost price.
    II. Cost price of each article was Rs. 550.
    III. A discount of 10% on labelled price was offered.

A. I only B. II only C. I and III only
D. All the three E. CBD

16. What is the area of the given rectangle?
    I. Perimeter of the rectangle is 60 cm.
    II. Breadth of the rectangle is 12 cm.
    III. Sum of two adjacent sides is 30 cm.

A. I only
B. II only
C. I and II only
D. II and III only
E. II and either I or III

17. What is the cost painting the two adjacent walls of a hall at Rs. 5 per m^2 which has no windows or doors?
    I. The area of the hall is 24 sq. m.
    II. The breadth, length and height of the hall are in the ratio of 4 : 6 : 5 respectively.
    III. Area of one wall is 30 sq. m.

A. I only
B. II only
C. III only
D. Either I or III only
E. All I, II and III

18. What is the principal sum in Simple Interest?
    I. The sum amounts to Rs. 690 in 3 years at S.I.
    II. The sum amounts to Rs. 750 in 5 years at S.I.
    III. The rate of interest is 5% p.a.

A. I and III only
B. II and III only
C. I and II only
D. I and III only or II and III only
E. Any II of the three

SYLLOGISMS

In each of the following questions statements are followed by conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer

A. If only (1) conclusion follows
B. If only (2) conclusion follows
C. If either (1) or (2) follows
D. If neither (1) nor (2) follows and
E. If both (1) and (2) follow.

1. Statement :

1. All men are girls.
2. Some girls are students.

Conclusions :

1. All girls are men.
2. Some girls are not students.

2. Statement:

I. Some boys are students.
II. All students are teenagers.

Conclusions

I. All teenagers are students.
II. Some boys are teenagers.

3. **Statement:**

I. Some boys are thieves.
II. All thieves are dacoits.

Conclusions

I. Some boys are dacoits.
II. All dacoits are boys.

4. Statement:

I. All Lotus are flowers.
II. No Lily is a Lotus.

Conclusions

I. No Lily is flowers.
II. Some Lilies are flowers.

5. Statement:

I. All gardens are schools.
II. All schools are colleges.

Conclusions

I. All gardens are colleges.

II. Some gardens are not colleges.

6. Statement:

I. Some pubs are cows.

II. No kitten are pubs.

Conclusions

I. No pubs are kitten.

II. Some cows are kitten.

7. **Statement:**

I. Some cups are spoons.

II. Some spoons are saucers.

Conclusions

I. All cups are saucers.

II. Some saucers are cups.

8. **Statement:**

I. No flower is mango.

II. No mango is cherry.

Conclusions

I. No flower is cherry.

II. Some cherries are mangoes.

9. **Statements**

I. Some cameras are radios.

II. Some statues are cameras.

Conclusions

I. Some ratios are statues.

II. No radio is statue.

10. Statements

I. All vegetables are green.

II. Some greens are fruits.

Conclusions

I. Some fruits are vegetables.

II. No fruit is vegetable.

In each of the questions given below there are three statements followed by three conclusions numbered I, II and III, you have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known, facts.

11. Statements

I. All halls are tyres.
II. Some tyres are wheels.
III. All wheels are cars.

Conclusions

I. Some cars are wheels.
II. Some cars are tyres.
III. Some wheels are halls.

(a) None follows
(b) Only I follows
(c) Only I and II follow
(d) Only III follows

12. **Statements**:

I. Some pictures are frames.
II. Some frames are idols.
III. All idols are curtains.

Conclusions

I. Some curtains are pictures.
II. Some curtains are frames.
III. Some idols are frames.

(a) Only I and II follow
(b) Only II and III follow
(c) Only I and III follow
(d) All follow

13. **Statements**:

I. Some ice are rings.
II. No ring is paint.
III. Some rings are gold.

Conclusions :

I. No gold is paint.
II. No ice is gold.
III. Some rings are paints.
IV. All golds are rings.

(a) Only I and III follow
(b) Only I and II follow
(c) Only III and IV follow
(d) None follows

14. Choose the answer option where the first 2 statements logically lead to the third.

Statements

A. No nails are wires
B. Some hooks are wires
C. All hooks are nails

D. Some wires are not nails
E. No wire is a hook
F. All nails are hooks

(A) AED (B) BCF (C) BEF (D) ACE

15. The question below contains 3 statements followed by four conclusions. You have to determine which of the conclusions follow from two or more of the statements.

Statements

A. Some apples are flowers
B. No flower is a papaya
C. All papayas are baskets

Conclusions

(i) Some apples are baskets
(ii) Some baskets are papayas
(iii) Some baskets are apples
(iv) Some flowers are apples

a) All follows
b) None follows
c) Only II and IV follows
d) Only II and III follows

KEY

CALENDARS

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1	C	FRIDAY
2	D	SUNDAY
3	C	WEDNESDAY
4	B	SATURDAY
5	B	TUESDAY
6	D	SUNDAY
7	A	1^{st}, 8^{th}, 15^{th}, 22^{nd}, 29^{th}
8	B	8X
9	A	1800
10	D	FRIDAY

CLOCKS

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1	D	197 ½ ®
2	C	155®
3	D	5 5/11 MIN PAST 7
4	B	10®
5	C	67.5®
6	C	130®

CODING DECODING

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1	B	RDFLDMS
2	D	NOITIBIHXE
3	C	AAEGMNR
4	E	122112
5	B	024406
6	C	ENIESTMNT
7	B	GREEN

8	B	SFEVDUJPO
9	B	165
10	B	FPJTBGX
11	E	B
12	A	W
13	D	X
14	C	J
15	E	D
16	B	202392020518
17	A	EKZUNTQ
18	A	DSRGV
19	A	43957218
20	C	59
21	D	8880
22	A	AIAKE
23	A	TCQH
24	C	28
25	A	MDCTHP

BLOOD RELATIONS

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1	D	BROTHER
2	C	GRANDSON
3	B	FATHER IN LAW
4	A	BROTHER
5	D	FATHER IN LAW
6 – I	B	LECTURER
6 – II	B	3
6 – III	A	JYOTSNA AND MANOJ
6 – IV	A	-
6 – V	B	NIDHI GOPAL
7 – I	A	BROTHER
7 – II	B	SISTER IN LAW
7 – III	A	NEPHEW
7 – IV	D	CBD

8 – I	A	RAO
8 – II	C	REDDY
8 – III	B	MOTHER IN LAW
8 – IV	D	BROTHER IN LAW
8 – V	A	GRAND FATHER
9	C	BROTHER
10	B	GREAT GRAND DAUGHTER
11	A	MOTHER
12	D	CBD
13	C	GRAND FATHER
14	C	D*F+E
15	A	Q IS FATHER OF P
16	B	P IS THE UNCLE OF Q
17	A	C IS THE MOTHER OF A
18	B	A IS THE UNCLE OF C
19	A	A IS THE NIECE OF C
20	C	S×M+T
21	C	T+M×S-K
22	D	A/D×B
23	B	S IS FATHER OF P
24	D	S IS DAUGHTER OF B
25	B	GRAND MOTHER
26	A	R IS THE MOTHER OF P
27	C	P IS THE SON OF R
28	A	P IS THE NIECE OF R

SEATING ARRANGEMENT

1.

Q.NO	ANS.OPTION	ANSWER
1	C	S
2	A	P
3	B	T & R
4	B	Q

2.

Q.NO	ANS.OPTION	ANSWER
1	A	3
2	C	BFC
3	C	G
4	A	BENCH – I

3.

Q.NO	ANSWER OPTION	ANSWER
I	C	FARGO AND MERCEDES
II	A	-
III	B	-

QUESTION NUMBER	ANSWER CHOICE	ANSWER
4	B	R
5	A	THIRD TO THE RIGHT
6	B	3 ONLY
7	A	Q
8	B	N
9	A	Q
10	D	AM
11	B	A
12	B	A
13	C	R is second to the left of T
14	C	VT
15	D	To the immediate right of V
16	B	T
17	C	J
18	D	Both are male
19	C	3
20	C	E, H and G
21	C	K
22	D	C6
23	E	None
24	A	B1
25	B	B6
26	B	P
27	C	P and her husband
28	A	P and Q

29	D	A and C

ANALYTICAL REASONING

QUESTION NO.	ANSWER OPTION	QUESTION NO.	ANSWER OPTION
1	C	2	C
3	D	4	B
5	C	6	A
7	B	8	A
9	C	10	D
11	B	12	A
13	C	14	C
15	C	16	B
17	C	18	D
19	D	20	E
21	E	22	C
23	B	24	E
25	C	26	A
27	C	28	B
28	E	30	D
31	D	32	A
33	C	34	D
35	A	36	C
37	B	38	D
39	B	40	C
41	B	42	D
43	A	44	D
45	E		

ABSTRACT REASONING

QUESTION NUMBER	ANSWER / ANSWER CHOICE
1	28
2	24
3	13
4	29
5	40 TRIANGLES AND 7 SQUARES
6	C

7	C
8	C
9	B
10	B
11	D
12	C
13	A
14	C
15	D
16	C
17	B
18	2
19	4
20	1
21	4
22	2

SERIES AND ANALOGY

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1	B	1331
2	A	1728
3	E	576
4	C	O
5	D	QYSAW
6	E	IGIESUSD
7	E	OQWSTU
8	C	TEKCOP
9	C	10J
10	D	FGH
11	E	X
12	D	APJW
13	D	ZMKEV

14	B	ALVKU
15	B	OTUNIST
16	A	312
17	C	248
18	B	81
19	C	46
20	B	127
21	C	558
22	D	59
23	D	456
24	C	13, 17
25	A	101
26	B	3649
27	A	375
28	D	3
29	A	550
30	D	146
31	A	4443
32	D	914
33	C	250
34	B	K
35	C	K
36	D	DW
37	A	I,m
38	C	SH
39	D	UX
40	D	SXI
41	D	LIC
42	D	Stq
43	E	DCBA
44	B	J10R
45	A	P,D

46	A	R,D
47	C	JQ
48	C	ISS
49	D	VE7
50	A	10
51	C	S
52	D	14
53	D	L-15
54	D	M
55	B	T

LOGICAL REASONING

QUESTION NUMBER	ANSWER CHOICE
1	B
2	A
3	A
4	A
5	A
6	A
7	B
8	C
9	A
10	C
11	A
12	B
13	D
14-1	C
14-2	B

DATA INTERPRETATION

TABLE CHART - 1

Q. NO	ANSWER
1	C
2	C
3	D
4	D
5	B

TABLE CHART - 2

Q. NO	ANSWER
1	D
2	C
3	D
4	D
5	B

BAR GRAPH – 1

Q. NO	ANSWER
1	D
2	C
3	D
4	B
5	D

BAR GRAPH - 2

Q. NO	ANSWER
1	C
2	D
3	D
4	B
5	A

PIE CHART - 1

Q. NO	ANSWER
1	D
2	D
3	B
4	D
5	C

PIE CHART - 2

Q. NO	ANSWER
1	B
2	C
3	C
4	C
5	B

LINE GRAPH – 1

Q. NO	ANSWER
1	C
2	B
3	D
4	A
5	D

LINE GRAPH - 2

Q. NO	ANSWER
1	D
2	A
3	B
4	B
5	D

VENN DIAGRAMS

QUESTION NUMBER	ANSWER CHOICE	ANSWER
1-I	C	50
1-II	A	20
1-III	C	10
2	B	60
3	B	10%
4	A	60
5	A	9
6-I		7
6-II		32%
6-III		1
7	B	5
8-I	B	18
8-II	B	71%
9	A	40
10		TELEGRAPH
11		38
12		47
13		24
14		59

DATA SUFFICIENCY

QUESTION	ANSWER
1	E
2	C
3	D
4	C
5	B
6	D
7	E
8	A
9	C
10	E

11	C
12	E
13	E
14	D
15	C
16	E
17	C
18	E

SYLLOGISMS

Q. NO	**ANSWER**
1	B
2	B
3	A
4	C
5	A
6	A
7	E
8	A
9	C
10	C
11	C
12	B
13	D
14	D
15	C