

## Blood Relation

Relation	Explanation
Sibling	Children of the same Parent.
Spouse	Partner.
Nephew	Brother or Sister's Son.
Niece	Brother or sister's Daughter.
Maternal Grandmother/Grandfather	Mother's Mother/ Father.
Paternal Grandmother/Grandfather	Father's Mother/ Father.
Uncle	Parent's Brother. Husband of Parent's Sister.
Aunt	Parent's Sister. Wife of Parent's Brother.
Brother-in-law	Partner's Brother. Sister's Husband.
Sister-in-law	Partner's Sister. Brother's Wife.
Father-in-law	Partner's Father.
Mother-in-law	Partner's Mother.
Son-in-law	Daughter's Husband.
Daughter-in-law	Son's Wife.
Cousin	Uncle or Aunt's Children.

Q) 1) How is Kanchan's sister's only brother's wife's mother -in-law related to Kanchan?

- a) Sister      b) Mother      c) wife  
d) Aunt      e) Mother-in-law

2) A met B in a train and B recognise A as the person who is the daughter of his mother's only brother's father's daughter-in-law. How is B related to A?

- a) cousin      b) Niece      c) Nephew  
d) uncle      e) brother

3) Ajay and Vijay are looking at wedding photograph of Namita, who is daughter of their paternal uncle. In that photograph Vijay is standing with Namita's only brother Anuj and Anuj's wife Pallavi. How is Pallavi's father-in-law related to Ajay?

- a) Father      b) Father-in-law      c) uncle  
d) Grandfather      e) Not Related

4) Ms. Vidya's boss Mr. Gupta is the only child of his parents and he has two sons, who are the siblings of Vidya. How is Ms. Vidya's related to Mr. Gupta?

- a) Niece      b) Daughter      c) Cousin  
d) Wife      e) Granddaughter

5) Sana and Vinay went for shopping in a mall and there they meet Bipin who is husband of Sana's mother's father-in-law's only daughter, who is mother of Vinay. How is Bipin related to Vianey?

- a) Uncle      b) Father      c) Brother  
d) Nephew      e) Son

### Directions for Questions 1 to 5

Study the following information and answer the questions given below.

A, B, C, D, E, F, G and H are eight members of a family. They belong to three different generations. There are three married couples. All of them are sitting around a circular table, facing the centre but not necessarily in the same order.

D and F are married couples. D, the wife of F, sit second to the left of her husband.

C and A are offspring of D. A is not an immediate neighbour of his mother.

There is only one person sitting between C and his niece G, but that person is not G's father.

E, a bachelor, sits third to the right of his uncle A, but neither to the opposite nor to the immediate left of his father.

G is not an immediate neighbour of her aunt B. No three females are sitting together.

C and his sister-in-law are immediate neighbour.

1) Who among the following is G's father?

- a) F      b) A      c) H      d) B      e) Can't be determine

2) How many females are there in the family?

- a) 2      b) 3      c) 5      d) Can't be determine

e) None of these

3) What is the position of D with respect to her granddaughter?

- a) 2nd to the left      b) 4th to the right      c) 3rd to the right      d) 4th to the left      e) Immediate Left

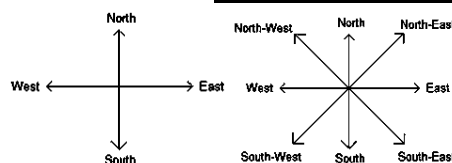
4) Who among the following is the aunt of D?

- a) B      b) D      c) G      d) H      e) Can't be determine

5) Which of the following represent the male member in the family?

- a) EB      b) FG      c) CG      d) FA      e) Can't be determine

## Direction Sense



### Questions:

1) A person starts walking in east direction and walks 20m. After that he turn to his right and walks 10m and then turn to his left and walks 15m and reached at a point A. Find the distance between A and initial point.

- a)  $5\sqrt{51}$       b)  $5\sqrt{53}$       c)  $5\sqrt{57}$       d)  $5\sqrt{59}$       e) None of these

2) Neeru started from her friend's house and travel 5 km towards the east followed by 6 km towards the south and 5 km towards the east before travelling another 6 km towards the south, she then travelled 25 km towards the east and finally 24 km towards the north and reached her house. What is the shortest distance between Neeru's house and her friend's house?

- a) 35 km      b) 37 km      c) 24 km  
d) 47 km      e) 25 km

3) A wall clock is place in such a way that at 12 o'clock the minute hand points towards the south. In which direction does the hour hand point at 3 o'clock?

- a) East      b) West      c) North  
d) North-West      e) South-West

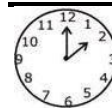
4) One evening, Bipin and Lalit were standing facing each other, it was observed that the shadow of Bipin was falling to his left. Which direction was Lalit Facing?

- a) South      b) North      c) East  
d) West      e) Cannot be determine

5) Akash walked 30 ft towards north, then took a left turn and walked 15 ft. He again took a left turn and walked 30 ft. How far and in which direction is Akash from the starting point?

- a) 15 ft to the West      b) 45 ft to the South  
c) 30 ft to the East      d) 15 ft to the North

## Clocks



Minute Hand	Hour Hand
In 1 hour Minute hand covers $360^\circ$ .	In 24 hours Hour hand covers $360^\circ$ .
In one minute it covers $6^\circ$ .	In one hour(60 minutes) it covers $30^\circ$ .
	In one minute it covers $1/2^\circ$

Formula to find out angle between Minute and Hour Hand:

M= Number of Minutes

H= Number of Hours

$\theta$  = Angle between Minute Hand and Hour Hand

$$\theta = \left| \frac{11}{2}M - 30H \right|$$

Angle between Minute hand Hour Hand	Number of times in one hour time period
0	11 times
180°	11 times
90° or any other angle	22 times

### Questions:

1) What is the angle between the two hands of a clock when the time shown by the clock is 6:30 p.m.?

- a) 0°      b) 50°      c) 30°      d) 15°

2) What is the angle between the two hands of a clock when the time shown by the clock is 2:34 p.m.?

- a) 144°    b) 172°    c) 127°    d) 90°

3) At what time between 3 and 4 o'clock will the minute hand and the hour hand are on the same straight line but facing opposite directions.

- a) 3:49      b) 3:15      c) 3:39  $\frac{1}{11}$       d) 3:49  $\frac{1}{11}$

4) By how many degrees does the minute hand move in the same time, in which the hour hand move by 28° ?

- a) 168°      b) 336°      c) 196°      d) 376°

5) what time between 8 and 9 o'clock will the angle between minute hand and the hour hand is 36°?

- a) 8:50  $\frac{2}{11}$       b) 8:36  $\frac{3}{11}$       c) 8:37  $\frac{1}{11}$       d) Both a and c

## Calendar

Number of Days	0	1	2	3	4	5	6
Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat

**Concept of 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.

**Leap Year:** (i). Every year divisible by 4 is a leap year, if it is not a century. (ii). Every 4th century is a leap year and no other century is a leap year.

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

**Counting of Odd Days:** 1 ordinary year = 365 days = (52 weeks + 1 day.) . 1 ordinary year has 1 odd day.

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

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.

Day of the Week Related to Odd Days (Assuming that 1AD January 1st is a Monday):

### Question:

1) Given that on 27th February 2003 is Thursday. What was the day on 27th February 1603?

- a) Monday      b) Thursday      c) Sunday      d) Tuesday

2) January 1, 2005 was Saturday. What day of the week lies on Jan. 1, 2006?

- a) Wednesday    b) Tuesday      c) Saturday      d) Sunday

3) It was Monday on Jan 1, 2007. What was the day of the week Jan 1, 2011?

- a) Monday      b) Friday      c) Saturday      d) Wednesday

4) Today is Friday. After 57 days, it will be:

- a) Monday      b) Tuesday      c) Saturday      d) Sunday

5) Today is Sunday. After 94 days, it will be:

- a) Wednesday    b) Sunday      c) Tuesday      d) Saturday

6) Which of the following is not a leap year?

- a) 500      b) 400      c) 1600      d) 2000

7) On 16<sup>th</sup> Nov, 2010 Thursday falls. What day of the week was it on 16<sup>th</sup> Nov, 2009?

- a) Monday      b) Friday      c) Wednesday    d) Tuesday

8) January 1, 2010 was Friday. What day of the week lies on Jan. 1, 2011?

- a) Monday      b) Sunday      c) Saturday      d) Wednesday

9) On 14<sup>th</sup> Feb, 2009 it was Saturday. What was the day of the week on 14<sup>th</sup> Feb, 2008?

- a) Friday      b) Sunday      c) Tuesday      d) Thursday

10) January 1, 2008 is Tuesday. What day of the week lies on Jan 1, 2009?

- a) Monday      b) Wednesday    c) Thursday      d) Sunday

11) The calendar for the year 2011 will be the same for the year:

- a) 2015      b) 2020      c) 2021      d) 2022

12) Which of the following is not a leap year?

- a) 500      b) 400      c) 1600      d) 2000

13) On 5<sup>th</sup> December 1993, Nirmala and Raju celebrated their anniversary on Sunday. What will be the day on their anniversary in 1997?

- a) Wednesday    b) Thursday      c) Friday      d) Tuesday

## Coding Decoding

### Direction for questions 1 to 5

These questions are based on the following information.

In the table given bellow, a group of words written in column 1 and their respective codes are written in column 2 against each group. Each word has a unique code. Compare the groups of words and their respective codes and answer the following questions.

Column 1	Column 2
This is not too good	pa ni si la ri
You are not bad	ka la ma bi
It is too hot	da ri ta ni
We are not good	ka fa pa la
This is not you	la bi ni si

1) What is the code for 'you'?

- a) la    b) ma    c) bi    d) si    e) ka

2) What is the code for 'hot'?

- a) ri    b) ta    c) da    d) ni    e) Cannot be determine

3) Which word is coded as 'ri'?

- a) this    b) too    c) is    d) it    e) hot

4) What is the code for 'too bad'?

- a) la ka    b) la bi    c) ma ni    d) fa ri    e) ma ri

5) What can be the code for 'this is cold'?

- a) si ri ta      b) si ni da      c) si gi fa  
d) ni ma ga    e) si ni ga

### Direction for questions 6 to 10

- 6) In a certain code ALPHABET is written as YJNFYZCR, then how will CHILDREN be written in the same language?  
a) EJKNFTGP                      b) AFGJBPCCL  
c) DIJMESFO                      d) AFJGBPCCL
- 7) In a certain code BUSINESS is written as FSWGRCWQ, then how will BANGALORE be written in the same language?  
a) FYREEJSPI                      b) ZELKXPMVC  
c) YFERJEPSI                      d) DCPICNQTG
- 8) In a certain code GUNPOWDER is written as DEGNOPRUW, then how will HOSTPITAL be written in the same language?  
a) AIOHLPST                      b) HLPSTAIO  
c) TSPOLIHA                      d) AHILOPST
- 9) In a certain code REASONING is written as ASREONGNI, then how will FRIZZLING be written in the same language?  
a) GNILZZIRF                      b) ZIRFZGNIL  
c) IZFRZNGLI                      d) FIRZZLNIG
- 10) In a certain code SENSITIVE is written as HVMHRGREV, then how will HYDROGEN be written in the same language?  
a) SBWILTVM                      b) MVTLIWBS  
c) IZESPHFO                      d) SBWLITVM
- 11) In a certain code BIOLOGY is written as XFNKNHA, then how will CHEMISTRY be written in the same language?  
a) XQSRLHDB                      b) WPRGQKCA  
c) WPRQGKCA                      d) XQSRHLDB
- 12) If QKKQUGQL is the code for OMISSION, which word is coded as RYVIWZB?  
a) PATKUBZ                      b) BZWIVYR                      c) BZWVIYR  
d) PTAKBZU                      e) BZIWYVR

## Data Sufficiency

### Directions for questions

Each problem contain a question and two statements 1 and 2 giving certain data. You have to select the correct answer from options 'a' to 'e' depending on the sufficiency of the data given in the statements to answer the question. Mark your answer as.

- a) If statement 1 alone is sufficient to answer the question but not 2 alone.  
b) If statement 2 alone is sufficient to answer the question but not 1 alone.  
c) If each statement alone is sufficient to answer the question.  
d) Both statements together are required to answer the question but not 1 and 2 alone  
e) If 1 and 2 together are not sufficient to answer the question and additional data is required.

## Quant Data Sufficiency

- 1) Will the sum becomes eight times of itself within fifteen years?  
i) The sum becomes twice of itself in two years.  
ii) The type of interest is compound interest, compounded annually.
- 2) Mr. Bipin divided his property among Vineeth, Vipin, and Vikram. Who got the least share of property?  
i) Vineeth's share is Rs.80000 more than that of Vipin.  
ii) Vipin's share is Rs. 50000 less than that of Vikram
- 3) Is 500 the average (Arithmetic mean) score on the GMAT?  
i) Half of the people who take GMAT score above 500 and half of the people score below 500.  
ii) The highest GMAT score is 800 and the lowest score is 200.
- 4) What is the area of the rectangle?  
i) When the length is increase by 20% and the breadth is decrease by 10% then the area increases by 8%.  
ii) The length of rectangle is 14 cm.

- 5) Which of the two trains, A or B is faster?  
i) The ratio of the time taken by the trains A and B in crossing a platform is 5:6  
ii) The length of the trains A and B are in the ratio of 7:6
- 6) Is  $x=y$ ?  
i)  $(x+y)(\frac{1}{x}+\frac{1}{y})=4$   
ii)  $(x-50)^2=(y-50)^2$
- 7) What are the values of M and N?  
i) N is an even positive integer, M is an odd positive integer and M is greater than N.  
ii) Product of M and N is 30.
- 8) One side of a rectangle is 9 cm. Find the area of the rectangle?  
i) One side is square of the another side.  
ii) Length of rectangle is 9 cm.
- 9) Distance between point A and B is 9 cm and point B and C is 5 cm. What is the Distance between point A and C?  
i) Point A, B and C are collinear.  
ii) Point A, B and C are non-collinear.
- 10) Is  $x^3 > x^2$ ?  
i)  $x > 0$   
ii)  $x < 1$

## LR Data Sufficiency

- 1) Is X is a leap year?  
i) Four years after X there is a leap year.  
ii) Four years before X there is a leap year
- 2) K, L, M, N and P are standing in a queue. Who stand exactly in the middle or the queue?  
i) M and N stand between L and P.  
ii) N stand just behind K
- 3) A, B, C, D and E live in an apartment (ground floor is named as first floor, the floor above ground floor in named as second floor and so on). On which floor does E live?(Note: Only one person is living on one floor)  
i) D lives on the bottom floor. C does not live on the top floor.  
ii) The number of floors above B's floor is equal to the number of floors below A's floor.
- 4) K, L, M, N, O and P are sitting around circular table facing towards centre and all person are sitting equidistance, Who sits second to the left of O?  
i) L and P are sitting opposite to each other. N is two places away from M.  
ii) M and L are immediate neighbours.
- 5) What is the code for 'or' in the code language?  
i) 'nik sa te' means 'right or wrong', 'ro da nik' means 'he is right' and 'fe te ro' means 'that is wrong'.  
ii) 'pa nik la' means 'that right man', 'sa ne pa' means 'this or that' and 'ne ka re' means 'tell this there'.
- 6) Madan is elder than Kamal and Sharad is younger than Arvind. Who among them is the youngest?  
i) Sharad is younger than Madan.  
ii) Arvind is younger than Kamal.
- 7) On which date in August was Kapil born?  
i) Kapil's mother remembers that Kapil was born before nineteenth but after fifteenth.  
ii) Kapil's brother remembers that Kapil was born before seventeenth but after twelfth.
- 8) Amol is in which direction if Amit?  
i) Amol is to the north of Vikas, Vikas is to the west of Naman and Naman is to the south of Amit  
ii) Distance between Amol and Vikas, Vikas and Naman and Naman and Amit is same.



- 9) How many persons are there in the row if Ram is 10<sup>th</sup> from the left and shyam is 6<sup>th</sup> from the right ?  
(Note : All the persons in the row are facing toward north)  
i) In between Ram and Shyam 10 persons are there.  
ii) In between Ram and Shyam 3 persons are there.  
10) How is A related to B?  
i) B is A's father's only brother's wife.  
ii) B is the wife of X who is brother of Y who is father of A.

## Decision Making

Following are the criteria to be fulfilled to get admission into MBA course in college X, in Maharashtra.

The candidate should

- (a) Have been born and brought up in the state of Maharashtra.  
(b) Have scored at least 65% marks in graduation.  
(c) Have scored at least 60% marks in the entrance examination conducted by the collage.  
(d) Not be more then 22 years old, as on 1st June 2014. If all the criteria (a) to (d) are fulfilled, then a candidate may get admitted in to the course.

If a candidate satisfies all the criteria except,

- (e) Criterion (a)only, but if the candidate has done his graduation in Maharashtra, then he/she is to be referred to the Chairman of the college.  
(f) Criterion (d)only, but if the candidate has experience of at least six months as a team leader in any corporate company, then he/she is to be referred to the Principal of the college.

Based on above criteria and the data given in each question decide the action to be taken in each case. Do not assume anything beyond given information. If you feel that given information is not sufficient to decide any action, then mark your answer as data inadequate.

Mark your answer as,

- 1) If candidate may be admitted in to the course.  
2) If candidate is to be referred to the Chairman of the college.  
3) If the candidate is to be referred to the Principal of the college.  
4) If the candidate would not get admission.  
5) If the data is inadequate.

### Questions :

- 1) Girish is born and brought up in the state of Kerala. He scored 70% marks in the entrance examination conducted by the college as well as in his graduation. Girish was born in 1994 and he did his graduation in the state of Delhi.  
2) Prachi is born and brought up in Mumbai(Capital of Maharashtra). She scored 80% marks in her graduation as well as in the entrance examination conducted by the college. Her date of birth is 22nd June, 1993.  
3) The date of birth of Arun is August 7th, 1993. He is born and brought up in Maharashtra. He has scored 70% marks in his graduation and 80% marks in the entrance examination conducted by the college.  
4) Romeo has work experience of one year in a corporate company as a Team Leader. He is born and brought up in the Maharashtra. He scored 65% marks in his graduation and 80% marks in the entrance examination conducted by the college.  
5) Sarathi was born in the state of Uttar Pradesh in the year 1994. He did his graduation in the state of Maharashtra. He scored 70% marks in graduation and 85% marks in the entrance examination conducted by college X.

## Inequality

Directions for Question Number 1 to 5

Study the following information to answer the given questions

A\$B means A is not smaller than B

A@B means A is neither smaller than nor equal to B

A#B means A is neither greater than nor equal to B

A&B means A is neither greater than nor smaller than B

A\*B means A is not greater than B

1) Statements: O & A, A \$ R, R # S, S \* Q

Conclusions:

I. Q @ R      II. S @ O      III. R & O      IV. R # O

A. Only I is true

B. Only III is true

C. Only IV is true

D. Either III or IV is true

E. Either III or IV and I are true

2) Statements: A \* E, E \$ F, F # O, O @ L

Conclusions:

I. L # F

II. E @ O

III. A # O

IV. E @ L

A. None is true

B. Only I is true

C. Only II is true

D. Only III is true

E. Only IV is true

3) Statements: B @ Q, Q # A, A & L, L \* N

Conclusions:

I. N \$ A

II. L @ Q

III. B @ N

IV. Q # N

A. I, II and III are true

B. I, II and IV are true

C. I, III and IV are true

D. I, III and IV are true

E. All are true

4) Statements:

E # M, M \* N, N @ O, O \$ P

Conclusions:

I. P # M

II. P # N

III. M # O

IV. N @ E

A. II and III are true

B. II and IV are true

C. III and IV are true

D. I, and IV are true

E. All are true

5) Statements: A \$ E, E @ F, F \* G, G # H

Conclusions:

I. H @ E

II. A \$ G

III. E @ H

IV. A @ F

A. None is true

B. Only I is true

C. Only II is true

D. Only III is true

E. Only IV is true

## Input Output

Directions for questions

These questions are based on the following information

A word and number arrangement machines when given an input line of words and numbers, arranges them following a particular rule. Following is an illustration of an input and its arrangement.

Input : we 16 93 you people quest 29 63 45 lack

Step 1 : you we 16 93 people quest 29 63 45 lack

Step 2 : you we 16 people quest 29 63 45 lack 93

Step 3 : we you 16 people quest 29 63 45 lack 93

Step 4 : we you 16 people quest 29 45 lack 63 93

Step 5 : quest we you 16 people 29 45 lack 63 93

Step 6 : quest we you 16 people 29 lack 45 63 93

Step 7 : people quest we you 16 29 lack 45 63 93

Step 8 : people quest we you 16 lack 29 45 63 93

Step 9 : lack people quest we you 16 29 45 63 93

Step 9 is the last step.

Based on the rules followed in the above steps, find the appropriate steps for the following input and answer the questions followed.

**Input for the questions:**

53 54 29 jam can man ban 15 86 90 63 van tan den

(All the numbers in the arrangement are two-digit numbers)

**Questions:**

1) Which of the following is the last step for the given input?

a) Step 10

b) Step 9

c) Step 11

d) Step 13

e) None of these

2) Which is the fourth element from the left end in step 7?

a) can

b) tan

c) van

d) 53

e) 54

- 3) How many elements are there between 'tan' and 'can' in step 10 of the given input?  
a) two b) five c) seven d) nine e) None of these
- 4) Which step number is the following rearrangement?  
'jam man tan van 53 54 29 can ban 15 den 63 86 90'  
a) Step 5 b) Step 7 c) Step 8  
d) Step 9 e) No such step
- 5) In the second last step, in a certain way 'den' is related to '86' and 'tan' is related to '53' in the same way, 'van' is related to.  
a) 54 b) man c) 29 d) 15 e) ban

## Letter and Number Series

### Direction for Questions 1 to 5

Find Out the Missing number in the following series.

- 1) 343, 64, 81, 100, 1331, 144, 2197, 196, \_\_\_\_  
a) 215 b) 625 c) 225 d) 285 e) 345
- 2) 2000, 1996, 1980, 1944, 1880, \_\_\_\_  
a) 1680 b) 1600 c) 1750 d) 1780 e) None of these.
- 3) 2, 10, 24, 98, 200, \_\_\_\_, 1608  
a) 802 b) 815 c) 928 d) 718 e) None of these.
- 4) NQF, LOD, JMB, HKZ, \_\_\_\_  
a) FGY b) FIX c) GJX d) IGY e) GIY
- 5) TMCI, VJGD, XGKY, ZDOT, \_\_\_\_  
a) BYSQ b) BATO c) BASP  
d) BASQ e) BATP

### Direction for Questions 6 and 7

Each of these Questions consist a series with one wrong number. Find the wrong number.

- 6) 16, 24, 40, 64, 98, 136  
a) 98 b) 64 c) 40 d) 24 e) None of these
- 7) 78, 81, 86, 93, 102, 117  
a) 78 b) 86 c) 117 d) 102 e) 93

### Questions 8 to 10

- 8) Ajay is sitting in a row of thirty six people. He shifted seven places towards the left end. Now he becomes sixth from the left end. What is his present position from the right end?  
a) 30 b) 31 c) 24 d) 25 e) 23
- 9) In a row of boys facing south, Ravi is 8th from the left end and Raghav is 5th to the left of Ravi and 16th from the right end of the row. What is the total number of boys in the row?  
a) 27 b) 25 c) 23 d) 18 e) 16
- 10) In a queue, nine members are standing behind Anjali, seven members are ahead of Meena and six members are in between Anjali and Meena. How many members are standing in the queue?  
a) 20 b) 10 c) 24 d) 22 e) Cannot be determine

## Puzzles

### Directions for Questions 1 to 5

Study the following information and answer the questions given below.

A, B, C, D, E, F, G and H are eight students of a school. They study in Std VI, VII and VIII with not more than three in any Std. Each of them has a favourite subject from Physics, Geography, English, Marathi, Mathematics, Chemistry, Biology and Economics not necessarily in the same order.

D likes Chemistry and studies in Std VIII with only H. B does not study in Std VII. E and A study in the same Std but not with B. C and F study in the same Std. Those who study in Std VI do not like Mathematics or Biology. F likes Physics. The one who studies in Std VIII likes English. C does not like Geography. A's favourite subject is Marathi and G does not like Biology.

- 1) Which subject does H like?  
a) English b) Marathi c) Science

- d) Data inadequate e) None of these
- 2) What is G's favourite subject?  
a) Biology b) Physics c) Marathi  
d) Data inadequate e) None of these
- 3) What is C's favourite subject?  
a) Economics b) Biology c) English  
d) Geography e) Data inadequate

4) Which of the following combinations of student-Std Subject is correct?

- a) C-VII-Economics b) D-VI-Chemistry  
c) G-VII-Physics d) B-VIII-Mathematic e) None of these
- 5) Which of the following groups of students study in Std VII?  
a) EAF b) ECG c) EAG  
d) Data inadequate e) None of these

### Directions for Questions 6 to 10

Answer the questions on the basis of the information given below. Seven people P, Q, R, S, T, U and V live on separate floors of a 7-floor building. Ground floor is numbered 1, first floor is numbered. 2 and so on until the topmost floor are numbered 7. Each one of these is travelling to a different city, namely Delhi, Mumbai, Patna, Chennai, Kolkata, Bangalore and Lucknow but not necessarily in the same order. Only three people live above the floor on which P lives. Only one person lives between P and the one travelling to Bangalore. U lives immediately below the one travelling to Mumbai. The one travelling to Mumbai lives on an even-numbered floor. Only three people live between the ones travelling to Bangalore and Patna. T lives immediately above R. T is not travelling to Patna. Only two people live between Q and the one travelling to Kolkata. The one travelling to Kolkata lives below the floor on which Q lives. The one travelling to Delhi does not live immediately above or immediately below Q. S does not live immediately above or immediately below P. V does not travel to Chennai.

6) Which of the following is true with respect to V as per the given information?

- a) The one who lives immediately below V is travelling to Mumbai  
b) V lives on floor no. 7  
c) V lives immediately below T  
d) V lives on the lowermost floor  
e) V is travelling to Bangalore
- 7) Who among the following lives on floor no number 3?

- a) The one travelling to Chennai  
b) The one travelling to Kolkata  
c) R d) V e) T

8) Who lives on the floor immediately above T?

- a) P b) Q c) S d) V e) U

9) To which of the following cities is S travelling?

- a) Mumbai b) Bangalore c) Patna  
d) Kolkata e) Chennai

10) How many people live between the floors on which S and the one travelling to Mumbai live?

- a) None b) Two c) One d) More than three e) Three

### Directions for questions 11 to 13

Answer the questions on the basis of the information given below. Five women decided to go shopping to M.G. Road, Bangalore. They arrived at the designated meeting place in the following order: 1. Archana, 2. Chellamma, 3. Dhenuka, 4. Helen, and 5. Shahnaz. Each woman spent at least Rs. 1000. Below are some additional facts about how much they spent during their shopping spree.

- i. The woman who spent Rs. 2234 arrived before the lady who spent Rs. 1193.  
ii. One woman spent Rs. 1340 and she was not Dhenuka.  
iii. One woman spent Rs. 1378 more than Chellamma.

- iv. One woman spent Rs. 2517 and she was not Archana.  
v. Helen spent more than Dhenuka.  
vi. Shahnaz spent the largest amount and Chellamma the smallest.

11) What was the amount spent by Helen?

- a) Rs. 1193      b) Rs. 1340      c) Rs. 2234      d) Rs. 2517

12) Which of the following amounts was spent by one of them?

- a) Rs. 1139      b) Rs. 1378      c) Rs. 2571      d) Rs. 2718

13) The woman who spent Rs. 1193 is

- a) Archana      b) Chellamma      c) Dhenuka      d) Helen

#### Directions for questions 14 to 16

Study the following information and answer the questions given below.

Five persons - A, B, C, D and E - have collected some money. After counting all the money it is found that B has more money than D, who has more money than C but less than E, who has more money than A but less than B.

14) Who has the highest amount of money?

- a) E      b) B      c) C      d) D

15) Who among the following can have least amount of money?

- a) A      b) D      c) B      d) None of these

16) What is the maximum possible number of persons who can have more money than A?

- a) 3      b) 4      c) 2      d) 1

#### Directions for questions 17 to 19

Study the following information and answer the questions given below.

Seven persons - P, Q, R, S, T, U and V - are sitting in a row not necessarily in the same order. They are sitting left to right in the decreasing order of their heights. No two among them are of equal height.

V is not the tallest but taller than R. S and V are adjacent to each other. S is taller than U, who is shorter than P, who is not the tallest. R and V are taller than Q, who is not the shortest. P and R are adjacent to each other. T is the second shortest. The one who is tallest is 180 cm. Q's height is 160 cm.

17) Which of the following could possibly be the T's height?

- a) 170 cm      b) 160 cm      c) 172 cm      d) 159 cm

18) Which of the following is true with respect to the given information?

- a) Q and U are adjacent to each other.      b) S's height is 180 cm  
c) V is the shortest.      d) Q is the tallest.

19) If the shortest person's height is 14 cm less than that of Q. Which of the following can be T's height?

- a) 140 cm      b) 145 cm      c) 146 cm      d) 149 cm

#### Directions for questions 20 to 22

Study the following information and answer the questions given below.

Age and experience of five people - Vinay, Palak, Sunil, Bipin and Jayesh - working for an organization are compared. The following information is known.

- a) The second oldest person has the least experience and the oldest person is senior most.  
b) No two people are of the same age or have the same experience.  
c) The age of Vinay is more than that of Jayesh's and the experience of Sunil is more than that of Bipin's  
d) The age of each person is more than his experience.  
e) The age and experience of Bipin's is more than age and experience of Jayesh.  
f) The age of Palak is less than experience of Jayesh.

20) Who is older than exactly two other people?

- a) Sunil      b) Vinay      c) Bipin      d) Jayesh

21) Who is the most experienced?

- a) Sunil      b) Palak      c) Vinay      d) Bipin

22) Who is the youngest?

- a) Palak      b) Vinay      c) Bipin      d) Jayesh

#### Directions for questions 23 and 24

Study the following information and answer the questions given below.

Study the following information and answer the questions given below.

X, Y and Z often eat dinner out.

1. Each orders either coffee or tea after dinner.
2. If X orders coffee, then Y orders the drink that Z orders.
3. If Y orders coffee, the X orders the drink that Z doesn't order.
4. If Z orders tea, then X orders the drink that Y orders.

23) Who do you know always orders the same drink after dinner?

- a) X      b) Y      c) Z      d) Cannot be determine

24) In the above question which drink that is always ordered?

- a) Either Tea or Coffee      b) Both Tea and Coffee      c) Only Tea      d) Only Coffee

### Sitting arrangement

#### Directions for questions 1 to 5

Directions: Study the following information to answer the given questions:

Eight people are sitting in two parallel rows containing four people each, in such a way that there is an

equal distance between adjacent persons. In row- 1, Asha, Bheem, Chelsi and Deep are seated (but not

necessarily in the same order) and all of them are facing South. In row-2, Preet, Qureshi, Raunit and

Sana are seated (but not necessarily in the same order) and all of them are facing North. Therefore, in

the given seating arrangement each member seated in a row faces another member of the other row.

Raunit sits second to left of the person who faces Asha. Sana is an immediate neighbour of Raunit.

Only one person sits between Asha and Deep. One of the immediate neighbours of Chelsi faces

Qureshi. Bheem does not sit at any of the extreme ends of the line.

1) Who amongst the following faces Bheem?

- a) Preet      b) Qureshi      c) Raunit      d) Sana      e) Cannot be determine

2) Who amongst the following faces Raunit?

- a) Asha      b) Bheem      c) Chelsi      d) Deep      e) Cannot be determine

3) Which of the following is true regarding Chelsi?

- a) Chelsi sits second to right of Deep

- b) Asha sits immediate right of Chelsi

- c) Sana faces Chelsi

- d) Deep is an immediate neighbour of Chelsi

- e) The person who faces Chelsi is an immediate neighbour of Raunit

4) Four of the following five are alike in certain way based on the given seating arrangement and thus

form a group. Which is the one that does not belong to the group?

- a) Qureshi      b) Raunit      c) Chelsi      d) Preet      e) Cannot be determine

5) Who amongst the following sits second to the right of the person who faces Preet?

- a) Asha      b) Bheem      c) Chelsi      d) Deep      e) Cannot be determine

#### Directions for questions 6 to 10

These questions are based on the following information.

Seven persons A, B, C, D, E, F and G are sitting around a circular table facing either the centre or outside. Each one of them belongs to a different city viz, Hyderabad, Mumbai, Delhi, Pune, Bangalore, Gujarat and Chennai but not necessarily in the same order. G does not belong to Pune. C sits third to the right of G. G



faces the centre. Only one person sit between D and F. Both F and D face the centre. Only one person sit between C and the person who belongs to Pune. Immediate neighbours of C face outside. A belongs to Gujarat and faces the centre. The person who belongs to Bangalore sits to the immediate left of E. Two persons sit between the persons who belongs to Gujarat and Mumbai. The person who belongs to Delhi sits to the immediate left of the person who belongs to Chennai..

6) To which of the following cities does B belong?

- a) Hyderabad    b) Mumbai    c) Pune  
d) Bangalore    e) Chennai

7) who among the following sit exactly between C and the person who belongs to Pune?

- a) The person who belongs to Chennai    b) B  
c) The person who belongs to Mumbai    d) G    e) D

8) How many persons sit between the person who belongs to Chennai and A, when counted from the right hand side of A?

- a) One    b) Two    c) Three    d) Four    e) More than four

9) Who among the following sit between the persons who belongs to Mumbai and Gujarat when counted from the left hand side of the person who belongs Mumbai?

- a) B and D    b) G and F    c) C and E  
d) D and F    e) B and C

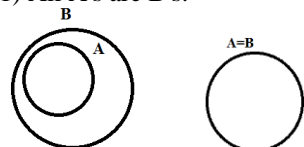
10) Four of the following five are alike in a certain way based on their position in the given arrangement and so form a group. Which is the one that does not belong to that group?

- a) Delhi    b) Gujarat    c) Pune  
d) Chennai    e) Bangalore

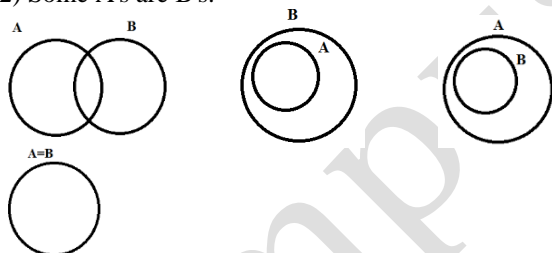
## Deduction

### Positive statements :

- 1) All A's are B's.

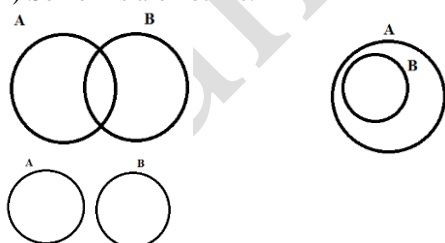


- 2) Some A's are B's.



### Negative Statements :

- 1) Some A's are not B's.



- 2) No A is B.



- "All A's are B's" and "Some A's are not B's" are opposite to each other.  
➤ "Some A's are B's" and "No A is B" are opposite to each other.

**Basic Diagram** - Basic Diagram is Diagram with minimum intersection.

### Basic Diagram for all the Statements.

Positive statements	Negative Statements
<p>All A's are B's.</p>	<p>Some A's are not B's.</p>
<p>Some A's are B's.</p>	<p>No A is B.</p>

### Rules to solve the Questions of Deduction:

- 1) Conclusions are results which are true in all cases.
- 2) Always draw the Basic Diagram i.e. diagram with minimum intersection.
- 3) If Conclusion is **Positive**, Directly check from the Basic Diagram. If it is true then it follows, else not.
- 4) If Conclusion is **Negative**, Check its opposite conclusion. If opposite is true **under any case** then required conclusion does not follow and if opposite **never becomes true** then required conclusion follows.
- 5) If there are exactly two opposite conclusions and neither of them individually follows then mark "Either...or" as the answer.

### Questions:

#### DIRECTIONS for the question 1 to 15:

The question below has either two or three Statements followed by two conclusions I and II. You have to take the two or three given Statements to be true and then decide which of the given conclusions logically follows from the two/three given Statements, disregarding the commonly known facts.

Give your Answer as,

- 1) If only conclusion I follows
- 2) If only conclusion II follows
- 3) If either I or II follows
- 4) If neither I nor II follows
- 5) If both I and II follow.

**Q1 Statements** : All hats are men. All men are taps.

**Conclusions** : I. Some taps are hats.

II. Some taps are men.

**Q2 Statements** : All wine is divine. All divine are tales

**Conclusions** : I. All wine is tale.

II. All tales are wine.

**Q3 Statements** : All cabs are cats. All fish are cats

**Conclusions** : I. All cabs are fish.

II. Some fish are cabs.

**Q4 Statements** : All pans are chicks. All chairs are chicks.

**Conclusions** : I. Some pans are chairs.

II. Some chicks are pans.

**Q5 Statements** : All goods are worms. All worms eat well.

**Conclusions** : I. All those who eat well are goods.

II. All goods eat well.

**Q6 Statements** : Every mine is a stupid. Every stupid is idiot

**Conclusions** : I. Every mine is idiot.

II. Some idiot are stupid.

**Q7 Statements** : All tanks are hens. No cups are hen

**Conclusions** : I. No cups are tanks

II. Some hens are not cups.

**Q8 Statements** : All books are cakes. No locks are cakes.

**Conclusions** : I. Some locks are not books

II. No lock is book.

**Q9 Statements** : All rods are metals. Some metals are books.

**Conclusions** : I. Some books are rods

II. All metals are books.

**Q10 Statements** : All jug are tigers. Some tigers are hosts.

**Conclusions** : I. Some hosts are jugs

II. No host is jug.

**Q11 Statements** : All boards are tall. Some tall are hooks.

**Conclusions** : I. Some boards are hooks

II. Some hooks are tall.

**Q12 Statements** : All artists are actors. No actor is drum.

**Conclusions** : I. All actors are artists

II. Some drums are not actors.

**Q13 Statements** : Some hens are crows. All crows are horses

**Conclusions** : I. Some horses are hens

II. Some hens are horses.

**Q14 Statements** : Some parts are toffees. All toffees are chicks.

**Conclusions** : I. Some chicks are toffees

II. Some toffees are not parts.

**Q15 Statements** : Some kings are quarts. All quarts are beautiful.

**Conclusions** : I. All kings are beautiful

II. All quarts are kings.

#### Directions for Questions 16 to 21

In each question below are given Some statements 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 conclusion and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts.

#### 16) Statements:

1. Some plants are roots. 2. Some roots are Leaves.

3. All leaves are branches.

#### Conclusions:

I. Some plants are branches.

II. Some roots are branches.

III. Some plants are leaves.

IV. No plant is branch.

a) Only II is true

b) Only III is true

c) all are true

d) None of these

5) Only II and Either I or IV

#### 17) Statements:

1. All shirts are Trousers. 2. Some Trousers are Jackets.

3. Some Jackets are clothes.

#### Conclusions:

I. Some Trousers are shirts.

II. Some Jackets are Trousers.

III. Some clothes are Jackets.

a) I and II are true

b) I and III are true

c) II and III are true

d) all are true

e) None of these

#### 18) Statements:

1. Some needles are blades.

2. All blades are knives.

3. No blade is pin.

#### Conclusion:

I. Some pins are blade

II. Some needles are pins.

III. All needles are knives. IV. No pin is blade.

a) EITHER I or IV

b) only II and III true

c) Only III and IV true

d) Only I and IV true

e) Only IV true

#### 19) Statements:

1. Some parrots are sparrows. 2. Some sparrows are peacocks.

3. No parrot is crow.

#### Conclusions:

I. Some sparrows are parrots.

II. Some crows are sparrows.

III. Some peacocks are crows.

a) Only I is true

b) Only II is true

c) Only III is true

d) All are true e) None of these

#### 20) Statements:

1. All greens are plants. 2. All bloods are red.

3. Some bloods are green.

#### Conclusions:

I. Some reds are blood.

II. All red are plants.

III. All blood are green.

IV. Some plants are green.

a) only I is true

b) only II is true

c) only III and IV true

d) Only I and III true

e) Only I and IV true

#### 21) Statements:

1. Some blankets are Towels.

2. All Towels are cloths.

3. No blanket is kerchief.

#### Conclusions:

I. Some kerchiefs are cloths.

II. Some blankets are cloths.

III. All kerchiefs are towels.

IV. No kerchief is cloth

a) Only I is true

b) Only II is true Either I or IV

c) only III is true

d) Only I and II are true

e) only II and III are true

## Venn Diagram

#### Direction for the questions 1 to 5

Read the following information carefully and answer the following question.

In a batch of 300 candidates, 45% of the candidates are appearing for SSC exam, 43% of the candidates are appearing for PO exam and 40% of the candidates are appearing for UPSC exam. 10% candidates are appearing for both SSC and PO, 12% candidates are appearing for both UPSC and PO, 15% candidates are appearing for both SSC and UPSC. 5% candidates are not appearing for any exam.

1) How many candidates are appearing for all the three exams?

a) 12 b) 13 c) 14 d) 15 e) 16

2) How candidates are appearing for exactly one exam?

a) 200 b) 216 c) 198 d) 194 e) 208

3) What is the percentage change in number of candidates appearing for exactly two exams when total changes from 300 to 450?

a) 10% b) 20% c) 30% d) 40% e) 50%

4) What is the ratio of the number of candidates appearing for SSC but not for PO to the number of candidates appearing for PO but not for SSC?

a) 33:35 b) 35:33 c) 31:33

d) 33:31 e) 35:31

5) What percent of candidates are appearing for at least two exams?

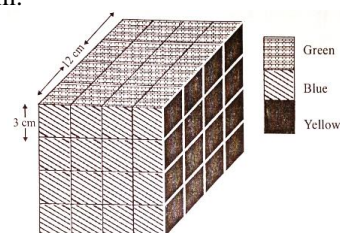
a) 25% b) 29% c) 27% d) 31% e) 26%

6) How many candidates are appearing for at most two exams?

a) 94% b) 91% c) 90% d) 71% e) 95%

## Cubes

**Direction :** A solid cube of 12 cm been painted green , blue and yellow on pairs of opposite faces . it is then cut in cubical blocks of each side 3 cm.



1. How many cubes have only one face painted?

1) 8

2) 16

3) 24

4) 28



2. How many cubes have only two faces painted?  
1) 8                      2) 16                      3) 20                      4) 24
3. How many cubes have only three faces painted?  
1) 0                      2) 4                      3) 6                      4) 8
4. How many cubes have no face painted?  
1) 0                      2) 4                      3) 8                      4) 12

5. How many cubes have at most one face painted?  
1) 24                      2) 32                      3) 30                      4) 36
6. How many cubes have two faces painted yellow and green and all other faces unpainted?  
1) 4                      2) 8                      3) 16                      4) 32

## Data Interpretation

### Directions for questions 1 to 5

These questions are based on the following information.

The total population of village Satana is 3550, out of which 36% people are below poverty line. The total population of Satana is  $11\frac{1}{4}\%$  less than the total population of Amin, while there are 29% people in Amin who live below poverty line. In Nilokheri the people living below poverty line are 40 more than that in Amin which is 40% of the total population of this village. The average population of Gharaunda and Samalkha is equal to the average population of Amin and Nilokheri, while the difference between their population is 1800 (Village Samalkha is more populated). 47% of the population of Gharaunda are below poverty line.

Overall 46% of the population of all villages; together live below poverty line

- 1) What percentage of population of Samalkha lives above poverty line? (Approximate)  
a) 26%                      b) 27%                      c) 28%                      d) 29%  
e) 30%

### Directions for questions 6 to 10

These questions are based on the following data.

The following tables give the information about the number of students applied, appeared and passed from various schools in different years.

Year	2000			2001			2002			2003		
School	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
A	200	180	160	240	200	175	280	270	250	300	240	235
B	300	250	240	360	300	240	400	370	350	500	400	380
C	250	250	200	200	180	180	250	210	190	300	270	240
D	240	230	200	180	150	105	200	190	180	240	160	90
E	160	150	125	300	260	240	250	220	200	300	230	220

X - Applied; Y - Appeared; Z - Passed

$$\text{Passed Percentage} = \frac{\text{No. of students passed}}{\text{No. of students Appeared}} \times 100$$

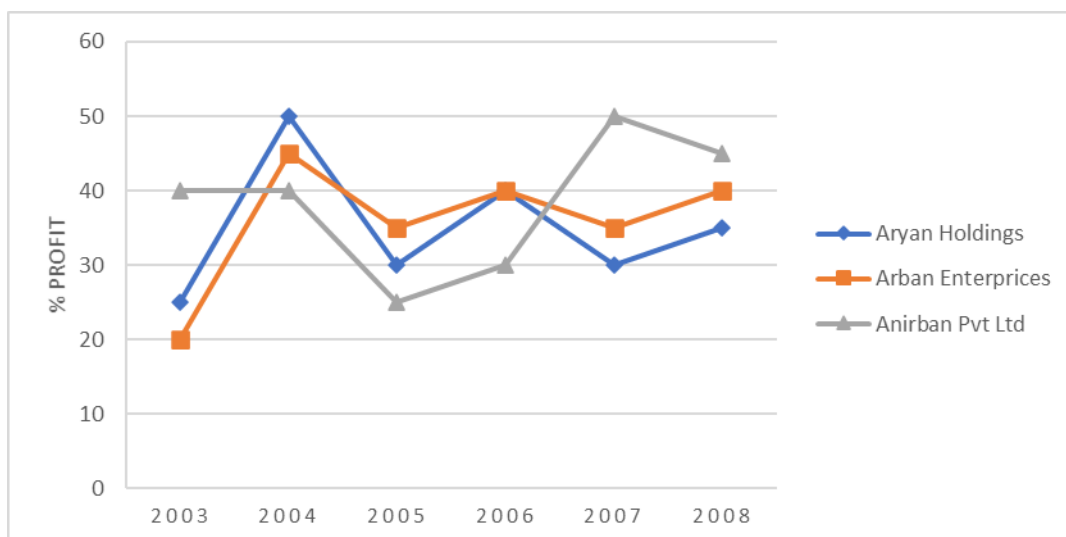
$$\text{Percentage of Attendance} = \frac{\text{No. of Students Appeared}}{\text{No. of students Applied}} \times 100$$

### Directions for questions 11 to 15

The following graph shows the profit percentage earned by three companies Aryan Holding, Arban Enterprises and Anirban Pvt Ltd over the given years.

- 2) Find the approximate average number of people below poverty line in the given villages.  
a) 1610                      b) 1620                      c) 1615                      d) 1320  
e) 1730
- 3) If 35% of the BPL population of Nilokheri are children, while 30% of the overall population of this village are children. Then what percent of population above poverty line are children?  
a) 25%                      b) 30%                      c)  $26\frac{1}{3}\%$                       d)  $26\frac{2}{3}\%$   
e) None of these
- 4) What is the difference between total population of Nilokheri and that of Gharaunda?  
a) 300                      b) 200                      c) 250                      d) 400  
e) None of these
- 5) If in the next year the total population of Amin would increase by 20%, while BPL population would decrease by 25%, then what percent of population in next year would be below poverty line?  
a) 18.125%                      b) 18.325%                      c) 18.225%                      d) 18.525%  
e) None of these

- 6) In 2001, which school has the least pass percentage?  
a) A                      b) B                      c) C                      d) D  
e) E
- 7) For B, in which year the percentage of attendance the least?  
a) 2000                      b) 2001                      c) 2002                      d) 2003  
e) Cannot be determined
- 8) The ratio of total number of students who passed in 2000 to that in 2003 in all the schools is.  
a) 104:132                      b) 185:233                      c) 4:7                      d) 7:11  
e) None of these
- 9) In how many instances is the pass percentage of any school in any year less than 80%?  
a) 0                      b) 1                      c) 2                      d) 3  
e) 4
- 10) The number of students who passed in 2002 from school B is approximately how many times that in 2000 from A?  
a) 2                      b) 2.2                      c) 3                      d) 2.6  
e) 1.8



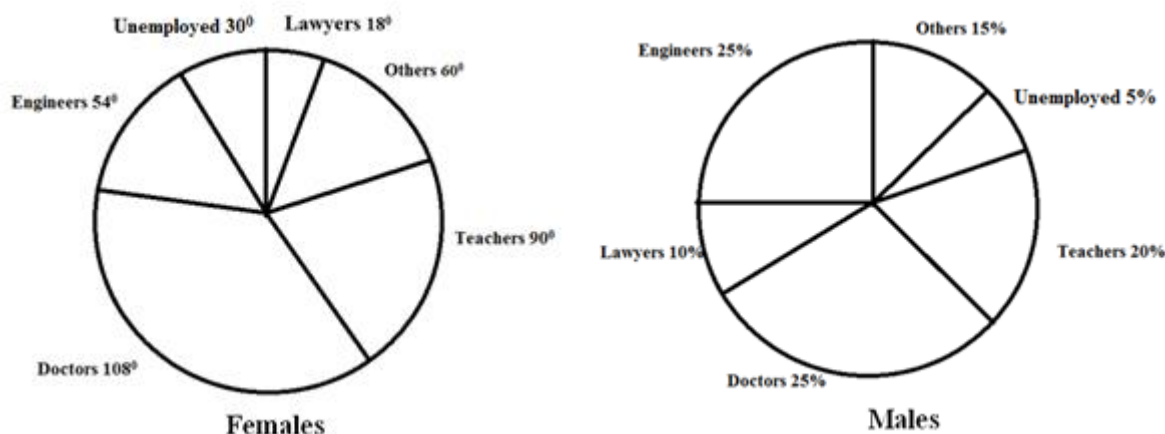
Note : Formula for % Profit is given below,

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

- 11) If the income of Arban Enterprises in 2005 was Rs. 12 lakh, what was the approximate profit earned, in lakh rupees, in that year?  
a) 8                      b) 3                      c) 16                      d) 11.5                      e) 2.5
- 12) If the expenditure of Arban Enterprises in 2007 is equal to that of Anirban Pvt Ltd in 2008, what was the ratio of the income of Arban Enterprises in 2007 to that of Anirban Pvt Ltd in 2008?  
a) 4:5                      b) 39:40                      c) 27:29                      d) 3:4                      e) None of these
- 13) Income of Anirban Pvt Ltd in 2003 and 2005 were equal. What was ratio of its expenditure in 2003 to that in 2005?  
a) 28:25                      b) 1:5                      c) 16:23                      d) 9:7                      e) 25:28
- 14) Income of Aryan Holdings in 2006 is equal to its expenditure in 2007. What is the ratio of its income in 2007 to that in 2005?  
a) 3:7                      b) 1:1                      c) 91:50                      d) 10:13                      e) Cannot be determined
- 15) In which year is the percentage rise /fall in the percentage of profit earned by Aryan Holdings the best?  
a) 2004                      b) 2006                      c) 2008                      d) 2005                      e) 2007

#### Directions for questions 11 to 15

This questions are based on the pie-charts given below.



The above two pie chart gives the distribution of the adults in the city .

The total number of adults = 98000

The ratio of number of males to that of females among the adults in the city is 25:24.

- 16) What is the difference between the number of male lawyers and female lawyers?  
a) 2600                      b) 2400                      c) 2480                      d) 2530                      e) 2440
- 17) What is the number of females lawyers in the city?  
a) 1200                      b) 1800                      c) 2400                      d) 1250                      e) 1600
- 18) What is the total number of engineers in the city?  
a) 12500                      b) 7200                      c) 19500                      d) 20700                      e) None of these
- 19) The number of males who are unemployed as the percentage of total unemployed person in the city is.  
a) 40%                      b) 50.5%                      c) 56.5%                      d) 38.5%                      e) 34.5%
- 20) What is the ratio of total number of engineers to that of teachers in the city?  
a) 146:201                      b) 79:84                      c) 35:43                      d) 197:220                      e) 211:233