REASONING

Directions (1–5) : Study the following information carefully to answer the given questions :

Eight persons – A, B, C, D, E, F, G and H – are sitting around a circular table facing outward, but not necessarily in the same order. They are at equidistant. D is third to the right of H. C is an immediate neighbour of both A and H. C is sitting second to the left of B. H is second to the right of A. He is second to the left of E. F is not an immediate neighbour of A.

1. Who is to the immediate left of D ?
   (1) F (2) E
   (3) G
   (4) Cannot be determined
   (5) None of these
2. How many persons are seated between H and F if we go anti-clockwise from H to F ?
   (1) One (2) Two
   (3) Three
   (4) Cannot be determined
   (5) None of these
3. Which of the following is A's position with respect to D ?
   (1) Third to the right
   (2) Third to the left
   (3) Second to the right
   (4) Fourth to the left
   (5) None of these
4. Who amongst the following is sitting just opposite to G?
   (1) E (2) H
   (3) C (4) B
   (5) Either B or E
5. Which of the following statements is **not true** regarding the seating arrangement ?
   (1) There are only three persons between G and B
   (2) D is sitting exactly between E and F
   (3) G is second to the left of D
   (4) B is third to the right of A
   (5) All are true

Directions (6 – 10) : In each question below is given a statement followed by two courses of action numbered I and II. A course of action is a step or administrative decision to be taken for improvement, follow-up or further action in regard to the problem, policy, etc. On the basis of the information given in the statement, you have to assume everything in the statement to be true, then decide which of the suggested courses of action logically follow(s) for pursuing.

Give answer (1) if only course of action I follows.

Give answer (2) if only course of action II follows.

Give answer (3) if either course of action I or II follows.

Give answer (4) if neither course of action I nor II follows.

Give answer (5) if both courses of action I and II follow.

6. **Statement :** Drinking water supply to many parts of town is disrupted due to loss of water because of leakage in pipes supplying water.
   Courses of action :
   I. The government should order an enquiry into the matter.
   II. The civic body should set up a fact-finding team to assess the damage and take effective step.
7. **Statement:** There is an alarming increase in the number of people suffering from malaria in many parts of the city.
   Courses of action :
   I. The municipal corporation has advised all the government hospitals to store adequate supply of malaria drugs.
   II. The municipal corporation has urged people to use mosquito repellants and keep their premises clean.
8. **Statement :** Many people have encroached into the government property and built their houses and business establishments.
   Courses of action :
   I. The government should take immediate steps to remove all unauthorised constructions on government land.
   II. All the encroachers should immediately be put behind bars and also be slapped with a hefty fine.
9. **Statement :** The meteorological department has predicted normal rainfall throughout the country during the current monsoon.
   Courses of action :
   I. The government should reduce the procurement price of foodgrains for the current year.
   II. The government should reduce subsidy on fertilizers for the current year.
10. **Statement :** The number of dropouts in government schools has significantly increased in the urban areas over the past few years.
    Courses of action :
    I. The government should immediately close down all such schools in the urban areas where the dropout goes beyond 20 per cent.
    II. The parents of all the students who dropped out of the government schools in urban areas should be punished.

Directions (11–15) : In each of the questions below are given four statements followed by four Conclusions numbered I, II, III and IV. 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 :
All pens are books.
All books are chairs.
Some chairs are desks.
Some desks are tables.
Conclusions :
I. Some tables are chairs.
II. Some desks are pens.
III. Some chairs are pens.
IV. All pens are chairs.
(1) Only I and II follow
(2) Only I and III follow
(3) Only I and IV follow
(4) Only III and IV follow
(5) None of these

12. Statements :
Some trains are buses.
Some buses are trucks.
Some trucks are boats.
Some boats are cars.
Conclusions :
I. Some trucks are trains.
II. Some cars are trucks.
III. Some boats are buses.
IV. Some boats are trains.
(1) None follows
(2) Only I and II follow
(3) Only III follows
(4) Only IV follows
(5) Only III and IV follow

13. Statements :
All hills are roads.
All roads are stones.
All stones are jungles.
All jungles are rivers.
Conclusions :
I. Some rivers are stones.
II. Some jungles are hills.
III. Some stones are hills.
IV. All rivers are jungles.
(1) Only I and II follow
(2) Only II and III follow
(3) Only I, II and III follow
(4) Only II, III and IV follow
(5) All follow

14. Statements :
Some books are pens.
Some pens are glasses.
Some glasses are plates.
Some plates are bottles.
Conclusions :
I. Some bottles are books.
II. Some glasses are books.
III. Some plates are glasses.
IV. Some bottles are pens.
(1) Only I and II follow
(2) Only III follows
(3) Only I, II and III follow
(4) Only III and IV follow
(5) Only IV follows

15. Statements :
Some petals are flowers.
All flowers are desks.
Some desks are cards.
All cards are trains.
Conclusions :
I. Some desks are flowers.
II. Some desks are petals.
III. Some petals are cards.
IV. Some desks are trains.
(1) Only I and IV follow
(2) Only II, III and IV follow
(3) Only III and IV follow
(4) Only I, II and III follow
(5) Only I, II and IV follow

Directions (16–20) : In the following questions, the symbols %, $, # and @ are used with the following meaning as illustrated below :

'P % Q' means 'P is neither smaller than nor equal to Q'.

'P Q' means 'P is not greater than Q'.

'P $ Q' means 'P is not smaller than Q'.

'P # Q' means 'P is neither greater than nor equal to Q'.

'P @ Q' means 'P is neither greater than nor smaller than Q'.

16. Statements :
D R, R # M, M @ K, K % F
Conclusions
I. F $ M II. K @ R
III. K % R IV. D @ M
(1) None is true
(2) Only I is true
(3) Only II is true
(4) Only III is true
(5) Only IV is true

17. Statements :
R $ M, B @ A, A % K, K # M
Conclusions
I. M % A II. K $ B
III. A % R IV. K # R
(1) Only IV is true
(2) Only I and IV are true
(3) Only II and III are true
(4) Only I, III and IV are true
(5) None is true

18. Statements :
D # M, M $ R, R @ J, W % J
Conclusions
I. W % R II. M $ J
III. R % D IV. W % M
(1) Only II and III are true
(2) Only I and IV are true
(3) Only I and II are true
(4) Only III and IV are true
(5) All are true

19. Statements :
W @ T, T $ N, N # F, V % F
Conclusions
I. V % N II. W $ N
III. T $ F IV. V @ N
(1) Only I and IV are true
(2) Only I and II are true
(3) Only IV is true
(4) Only II, III and IV are true
(5) Only III and IV are true

20. Statements :
B % K, K # D, D N, N @ T
Conclusions
I. N % K II. T $ D
III. K # B IV. T % K
(1) Only I and II are true
(2) Only II and III are true
(3) Only I, II and IV are true
(4) Only III and IV are true
(5) All are true

21. How many such digits are there in the number 836257419, each of which is as far away from the beginning of the number as when the digits are rearranged in ascending order within the number?

(1) None (2) One
(3) Two (4) Three
(5) More than three

Directions (22-25) : Each of the questions below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question.

22. Who amongst P, Q, R, S, T and V, each securing different marks, secured the second lowest marks ?
I. R and T secured more marks than P and Q
II. V secured the highest marks
III. S secured more marks than P but less than Q.
(1) Only I and III
(2) All I, II and III are required to answer the question
(3) Only II and III
(4) Question cannot be answered even with all I, II and III
(5) Only I and II

23. Which village is to the North-East of village R ?
I. Village S is to the South-East of village N which is to the South-West of village P and village P is to the North of village Q.
II. Village T is to the North-West of village Q which is to the south of village P.
III. Village R which is to the North of village S, lies between villages N and Q and village N is to the West of village R.
(1) Only I and II
(2) Only II and III
(3) All I, II and III are not sufficient to answer the question
(4) All I, II and III are required to answer the question
(5) Only I and III or only II and III are required to answer the question

24. What is the rank of Animesh in a class of 17 students ?
I. Nirmal who is thirteenth from the bottom is six rank ahead of Bhumika who is two position below Animesh.
II. Bhumika is four position ahead of Kamal.
III. Bhumika is two position below Animesh and Kamal's rank is 15th.
(1) Only I and III
(2) Only I and II
(3) Only I or II and III together are required to answer the question
(4) Only II is required to answer the question
(5) All I, II and III are not sufficient to answer the question

25. How is 'them' written in a code language ?
I. 'tell them young' is written as 'se me ye' and 'wise young sharp tell' is written as 'me yo na ye' in that code language.
II. 'clever sharp come tomorrow' is written as 'na ki pa lo' and 'bring clever young them' is written as 'ki po se ye' in that code language.
III. 'clever sharp come them no' is written as 'pa na se ki te' and 'yellow come sharp run clever no' is written as 'ki ni pa be te na' in that code language.
(1) Only III is required to answer the question
(2) Only I and II are required to answer the question
(3) Only I or II and III together are required to answer the question
(4) Only II is required to answer the question
(5) All I, II and III are not sufficient to answer the question

Directions (26-30) : In each of the questions below is given a statement followed by a question. Read the statement carefully and answer the question that follows :

26. Statement : A combination of factors have seen the sales volume of the top 25 listed real estate companies almost halve to about 11.8 million square feet in the quarter ended September 2013. It was 20.73 million square feet in the year ago period.
Which of the following may be a **probable reason** for the slump in the real estate business ?
(1) Housing is not a problem in India now-a-days and every family has got a dwelling unit.
(2) The real estate companies have increased the profit margin and hence sales have come down.
(3) High cost of funds have dried up liquidity for the cash-starved companies, which in turn log jammed the construction activity across India.
(4) Residential and commercial units are being developed at the faster pace in comparison to actual demand.
(5) The faulty Housing Policy of the Government is an impediment to the real estate market.

27. Statement : Democracy in the sense of majority rule is not what people are seeking. The middle classes in the Ukraine, Bosnia, Thailand and Venezuela are demanding greater accountability, and are challenging regimes seen as corrupt, out of touch and which form obstacles to a better future.
Which of the following **assumptions** is implicit in the above statement ?
(An assumption is something supposed or taken for granted).
(1) The middle classes want a government that is accountable, responsible and effective in moving their country further into the modern world.

(2) The importance of middle classes has been enhanced in the governance of a democratic country.
(3) The middle classes are capable of overthrowing a corrupt government.
(4) Democracy, in true sense, does not mean the rule of majority which takes into consideration only the numbers.
(5) Except a small number of countries in the world, other countries do not favour democratic form of government.

28. Statement : Should admission to all professional courses be made on the basis of past academic performances rather than through entrance tests ?

Arguments :

I. Yes. It will be beneficial for those candidates who are unable to bear the expenses of entrance tests.

II. Yes. Many deserving candidates securing high marks in their qualifying academic examinations do not perform well on such entrance tests.

III. No. The standard of examinations and assessment conducted by different boards and universities are not comparable and hence there is a need to conduct entrance tests to calibrate them on a common yardstick.

Decide which of the arguments is/are 'strong' argument(s) and which is/are 'weak' argument(s).

(1) Only I and II are strong
(2) Only II and III are strong
(3) Only I and III are strong
(4) Only III is strong
(5) All I, II and III are strong

29. Statement : Although the education system has progressed from the point of view of the number of schools, most of them are ill-equipped and have not achieved excellence in imparting education.

Which of the following **inferences** can be drawn from the above statement ?

(An inference is something which is not directly stated but can be inferred from the given facts).

(1) We need not open any more schools in future.
(2) In future, we should provide good teachers and equipment to these schools.
(3) It is necessary to open more schools to accommodate the increasing number of students.
(4) It is very difficult to manage a large number of schools properly.
(5) Any system develops gradually and we should hope for better outcomes.

30. Statement : Satisfaction with co-workers, promotion opportunities, the nature of work, and pay goes with high performance among those with strong growth needs. Among those with weak growth needs, no such relationship is present – and, in fact, satisfaction with promotion opportunities goes with low performance.

The statement best support the premise that

(1) satisfaction is an inevitable organisational variable
(2) job satisfaction and performance are directly and closely related
(3) relationship between job satisfaction and performance is moderated by growth need
(4) every organisation has few employees having weak growth need
(5) high performance is essential for organisational effectiveness.

Directions (31–35) : Study the following information carefully and answer the given questions :

In a group of students, 21 students like football, 26 students like cricket, 29 students like volleyball, 15 students like cricket and volleyball, 14 students like cricket and football, 12 students like volleyball and football and 8 students like all the three games.

31. How many students are there in the group ?
(1) 45 (2) 48
(3) 43 (4) 44
(5) None of these

32. How many students do like volleyball only ?
(1) 10 (2) 8
(3) 12 (4) 9
(5) None of these

33. How many students do like cricket only ?
(1) 7 (2) 6
(3) 4 (4) 5
(5) None of these

34. How many students do like football only ?
(1) 4 (2) 3
(3) 5 (4) 6
(5) None of these

35. How many students do like both volleyball and football but not cricket ?
(1) 4 (2) 6
(3) 5 (4) 7
(5) None of these

Directions (36–40) : Study the following information carefully to answer the given questions :

Six persons – A, B, C, D, E and F – are sitting in two cars namely X and Y but not necessarily in the same order. Out of six persons two are driving the cars. There are three persons in each car and one person must be on front seat besides the person who is driving the car. In Car X, D is neither driving nor sitting on the back seat. F is sitting on the back seat in Car Y. C is on the driver's seat but not in the Car X. A is neither driving nor travelling in the Car Y. E is not on the driver's seat in any car.

36. Who among the following is on the driver's seat in the Car X ?
(1) D (2) F
(3) B
(4) Cannot be determined
(5) None of these

37. Who among the following is sitting on the front seat in the Car Y ?
(1) E
(2) A
(3) F
(4) Cannot be determined
(5) None of these

38. Which of the following groups of three persons are travelling in the Car X ?
(1) B, E and F (2) B, D and E
(3) A, C and E (4) A, B and D
(5) None of these

39. Which of the following pairs represents the persons sitting on the front seats in the Car X and Car Y respectively ?
(1) D and F (2) D and E
(3) B and E (4) A and C
(5) None of these

40. If D shifts his position to the driver's seat in his car, who will shift his position to the driver's seat in other car ?
(1) E (2) F
(3) A (4) B
(5) C

Directions (41–45) : Study the following information carefully and answer the given questions :

Eight persons – A, B, C, D, E, F, G and H – are travelling in three different Cars namely X, Y and Z, but not necessarily in the same order. There are at least two persons in each Car and each Car has persons of both the sexes. Out of eight persons three are females. All of them like different colours viz, Red, Green, Yellow, Blue, Black, White, Grey and Purple but not necessarily in the same order. One female does not like Grey or White colour. D is travelling with G in the Car Z. G likes Black colour. The persons who like Red and Purple colours, are travelling in the same Car. E does not like Purple colour and he is not travelling with H in the same car. A does not like purple nor Red colour. H is travelling in the Car Y. B, C and H are females in the group. B likes Blue colour and travels with the person who likes Black colour. Red and Green colours are liked by female members. The person who is travelling with H, likes Grey colour. One of the persons travelling in Car Z likes Yellow colour.

41. In which of the following Cars only two persons are travelling?
(1) Car X (2) Car Y
(3) Car Z
(4) Cannot be determined
(5) None of these

42. The female member who is travelling in the Car X likes which colour ?
(1) Green (2) Blue
(3) Yellow (4) Red
(5) None of these

43. Who among the following likes Yellow colour ?
(1) D (2) E
(3) A (4) F
(5) None of these

44. Who among the following is/ are travelling with female member C ?
(1) E and G (2) A and D
(3) E and F (4) D and E
(5) F and G

45. Which of the following combinations of Person-Car-Colour is not correct ?
(1) C – X – Red
(2) F – X – Purple
(3) G – Z – Black
(4) D – Z – Yellow
(5) E – Y – Grey

Directions (46–50) : Study the following information carefully and answer the given questions :

Following are the conditions for selecting candidates for Post Graduation Diploma in Marketing in an institution.

The candidate must

(i) have a Graduation Degree with at least 50 percent marks
(ii) be at least 22 years as on 01.12.2013
(iii) have secured at least 40 per cent marks in the Entrance Test
(iv) have secured at least 50 per cent marks in the Group Discussion and Interview
(v) be capable to pay a fee of Rs. 4 lakh per annum at the time of admission.

In the case of a candidate who fulfills all the conditions EXCEPT

(a) at (iii) above but has secured 30 per cent marks in the Entrance Test and 80 per cent marks in the Graduation, his/ her case is to be referred to the Dean of the Institution
(b) at (v) above but can deposit an amount of Rs. 2.5 lakh in the beginning of the first year, his/ her case is to be referred to the Director of the Institution.

In each question below, details of one candidate are provided. You have to take one of the following courses of actions based on the conditions given above and the information provided in each question and mark the number of that course of action as your answer. You are not to assume anything than the information provided in each question. All these cases are given to you as on 01.12.2013.

Marks answer (1) if the case is to be referred to the Dean of the Institution.

Marks answer (2) if the case is to be referred to the Director of the Institution.

Marks answer (3) if the candidate is to be selected

Marks answer (4) if the candidate is not to be selected

Marks answer (5) if the data provided are inadequate to take a decision.

Now read the information provided in each question and mark your answer accordingly.

46. Anup Bhatnagar was born on 12th June, 1989. He can deposit an amount of Rs. 4 lakh at the time of admission. He secured 85 per cent marks in the Graduation and 55 per cent marks in the Group Discussion and Interview. He secured 35 per cent marks in the Entrance Test.

47. Nisha Desai was born on 8th April, 1991. She secured 80 per cent marks in the Graduation and 60 per cent marks in Group Discussion and Interview. She can pay an amount of Rs. 4 lakh per annum.

48. Subodh Verma was born on 22nd May, 1990. He secured 50 per cent marks in the Graduation and 40 per cent marks in the Entrance Test. He secured 60 per cent marks in Group Discussion and Interview and can deposit an amount of Rs. 4 lakh as fee.

49. Ravindra Sharma was born on 24th September, 1988. He secured 60 per cent marks in the Entrance Test, 60 per cent marks in the Graduation and 65 per cent marks in the Group Discussion and Interview. He can pay Rs. 3 lakh in the beginning of the first year.

50. Rajiv Batra secured 70 per cent marks in the Entrance Test and was born on 5th June, 1991. He secured 50 per cent marks in the Graduation and can pay Rs. 4 lakh at the time of admission. He secured 60 per cent marks in the Group Discussion and Interview.

DATA ANALYSIS AND INTERPRETATION

Directions (51–55) : In the following table, marks obtained by 6 students in 6 different subjects have been given. Read the table carefully and answer the questions. The marks in bracket show maximum marks.

Marks obtained by 6 students in 6 different subjects

Subjects / Students	English (150)	Maths (150)	Physics (150)	Sociology (150)	Psychology (150)	Statistics (150)
Tony	86	78	95	105	72	112
Vicky	97	102	106	115	86	106
Ravi	115	108	87	99	76	69
Shobha	68	76	84	72	66	88
Pallavi	118	106	126	120	112	98
Mahesh	86	99	108	102	78	86

51. Find the respective ratio of the total marks obtained by Vicky and Ravi in Maths and that scored by Pallavi and Mahesh in Sociology ?
(1) 35 : 37 (2) 37 : 32 (3) 39 : 59 (4) 29 : 35
(5) None of these

52. Find the approximate average percentage of marks obtained by all the students in English.
(1) 61 (2) 63 (3) 68 (4) 65 (5) None of these

53. The ratio of total marks scored by Shobha in Sociology and Physics and that scored by Tony in English and Maths is
(1) 37 : 39 (2) 13 : 23 (3) 39 : 41 (4) 23 : 13
(5) None of these

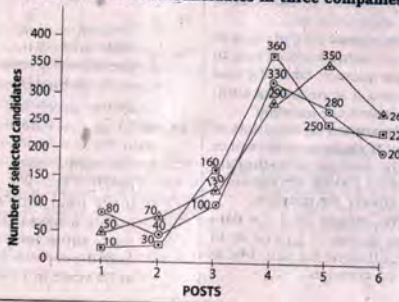
54. What is the average marks scored by all the students in Sociology ?
(1) 99.5 (2) 98.5 (3) 100.5 (4) 102.2
(5) None of these

55. Find the overall percentage of marks obtained by Shobha in Physics, Psychology and Statistics.
(1) 45% (2) 48% (3) 49% (4) 50.2%
(5) None of these

Directions (56–60) : In the following multiple graphs, the number of selected candidates for 6 different posts by three different companies A, B and C has been shown. Read the graph carefully and answer the questions.

Company A —◎—; Company B —⊡—; Company C —△—

Number of Selected Candidates in three companies



POST 1 : HR Officer
POST 2 : IT Officer
POST 3 : Assistant Manager
POST 4 : Advertisement Office Assistant
POST 5 : Office Assistant Operations
POST 6 : Junior Office Administrator

56. What is the ratio between the number of all candidates selected for company A and that selected for the posts of assistant managers and junior office administrators in all three companies ?
(1) 103 : 107 (2) 102 : 107
(3) 103 : 106 (4) 113 : 117
(5) None of these

57. The number of candidates recruited for the post of office assistant operations in company B is approximately what percent of total candidates recruited in that company ?
(1) 28% (2) 24%
(3) 30% (4) 31%
(5) None of these

58. The number of candidates recruited for the posts of assistant manager and advertisement office assistant is what per cent of the candidates recruited for the post of junior office administrator and HR officer by the company C ?
(1) 115% (2) 120%
(3) 135% (4) 141%
(5) None of these

59. The total number of candidates recruited for the post of HR officers in all the companies is what per cent of the total candidates recruited by the company A for all posts ?
(1) 16% (2) 11%
(3) 12% (4) 14%
(5) None of these

60. What is the respective ratio between the average number of candidates selected for all the posts by company A and company C ?
(1) 113 : 115 (2) 115 : 113
(3) 113 : 117 (4) 117 : 113
(5) 103 : 105

Directions (61–65) : In each of the following questions, a number series is given. After the series a number is given followed by (a), (b), (c), (d) and (e). You have to complete the series starting with the number given, following the sequence of the original series and answer the questions that follow the series.

61. 37 19 20 31.5 65 165 21 (a) (b) (c) (d) (e)
What will come in the place of (e) ?
(1) 105 (2) 41
(3) 110 (4) 108
(5) 116

62. 5 6 16 57 244 1245 9 (a) (b) (c) (d) (e)
What will come in the place of (d) ?
(1) 366 (2) 364
(3) 368 (4) 378
(5) 382

63. 7 5 11 49 335 3005 13 (a) (b) (c) (d) (e)
What will come in the place of (b) ?
(1) 31 (2) 27
(3) 29 (4) 28
(5) 30

64. 12 47 152 467 1412 4247 33 (a) (b) (c) (d) (e)
What will come in the place of (d) ?
(1) 3131 (2) 1133
(3) 3311 (4) 3113
(5) 3123

65. 54 50 84 188 496 1456 42 (a) (b) (c) (d) (e)
What will come the in the place of (d) ?
(1) 304 (2) 286
(3) 293 (4) 281
(5) 301

Directions (66–70) : Read the following information carefully to answer the questions.

In a store, there are 600 women. The store is a collection of precious stones namely diamond, ruby and emerald. It is found that 40% of women like diamond, 20% of women like ruby and 10% of women like emerald. 5% of women like diamond and ruby; 3% of women like ruby and emerald and 4% like emerald and diamond. 2% of women like all three stones.

66. Find the number of women who like both ruby and diamond.
(1) 30 (2) 32
(3) 12 (4) 6
(5) 18

67. Find the number of women who like emerald only.
(1) 32 (2) 30
(3) 28 (4) 198
(5) 40

68. Find the number of women who like both diamond and emerald ?
(1) 32 (2) 30
(3) 24 (4) 28
(5) 27

69. Find the number of women who like diamond only.
(1) 60 (2) 240
(3) 120 (4) 198
(5) 84

70. Find the number of women who like only ruby.
(1) 60 (2) 240
(3) 120 (4) 198
(5) 30

Directions (71 – 75) : 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 (1) 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.

Give answer (2) 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.

Give answer (3) if the data **either** in statement I alone or in statement II alone are sufficient to answer the question.

Give answer (4) if the data given in both the statements I and II together are **not** sufficient to answer the question, and

Give answer (5) if the data in both the statements I and II together are necessary to answer the question.

71. What will be the amount at the end of 2 years, if the interest is compounded yearly.
I. The simple interest on the same sum for a period of 2 years is Rs. 400 at the same rate of 5% per annum.
II. The difference between the simple interest and the compound interest for 2 years at the rate of 5% per annum is Rs. 100.

72. Find the average of five consecutive odd numbers.
I. The difference of fifth number and the first number is 7.
II. The sum of the first two numbers is 5 more than the fifth number.

73. Find the ratio of the area of the bigger circle and smaller circle.

I. The radius of the smaller circle is 24 cm.
II. The difference between the radii of bigger and the smaller circles is 3 cm.

74. What is the length of the train ?
I. The train crosses a signal post in 9 seconds.
II. If the train with speed x kmph crosses another train 100m long coming from the opposite direction at 60 kmph in 15 seconds.

75. Find the radius of the semi-circle.

I. The area of semi-circle is equal to the area of the rectangle.

II. The breadth of rectangle is 5 cm less than its length and its perimeter is 50 cm.

Directions (76–80) : In the following table the production of different kinds of toys by a company in different years has been given. Read the table carefully and answer the questions.

Production of 5-different Toys and Percentage of Defective Toys in Various Years

Toys Years	Type-A		Type-B		Type-C		Type-D		Type-E	
	Produ-ction	% defective toys	Production	% defective toys	Production	% defective toys	Production	% defective toys	Production	% defective toys
2006	18000	06	20000	06	12000	04	22000	07	23000	08
2007	21000	05	15000	05	15000	08	20000	08	18000	06
2008	16000	08	18000	04	17000	05	18000	05	17000	05
2009	22000	09	19000	06	20000	07	24000	06	20000	04
2010	24000	04	21000	09	24000	09	27000	08	24000	08
2011	28000	05	20000	05	28000	05	28000	05	27000	09
2012	26000	07	28000	08	31000	02	30000	05	30000	05

76. Find the approximate average number of defect free A,C and E types of toys manufactured in 2007.

(1) 16890 (2) 16980

(3) 16880 (4) 17890

(5) None of these

77. How many defect free C-type of toys were manufactured in 2008 ?

(1) 16250 (2) 16150

(3) 16350 (4) 16450

(5) None of these

78. Find the difference between the number of E-type of toys manufactured in 2008 and the total number of A-type and B-type of toys manufactured in 2009.

(1) 26000 (2) 23000

(3) 24000

(4) 18000

(5) None of these

79. In which year was the maximum number of defective toys of type-A manufactured ?

(1) 2010 (2) 2008

(3) 2012 (4) 2009

(5) None of these

80. Find the ratio between the number of defective toys of type-A in 2006 and that of defective toys of type-E in 2007?

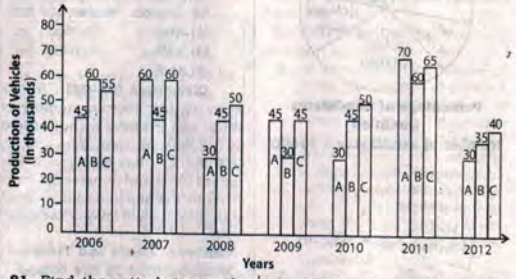
(1) 3 : 2 (2) 2 : 3

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

(5) 1 : 1

Directions (81–85) : In the following bar diagram, production of three kinds of vehicles by a company in different years has been given. Read the bar diagram carefully and answer the questions.

Production of Three Type of Vehicles A, B and C (In Thousands).



81. Find the ratio between the number of vehicles of type C produced in 2012 and that of vehicles A produced in 2006.

(1) 8 : 9

(2) 7 : 9

(3) 7 : 6

(4) 7 : 8

(5) None of these

82. The number of vehicles of type B produced is 2009 is what per cent of the total production of vehicles in 2009 ?

(1) 20% (2) 25%

(3) 18% (4) 21%

(5) None of these

83. What is the ratio between the total number of vehicles produced in 2012 and total production of A-type of vehicles in the years 2007 and 2008 ?

(1) 7 : 9 (2) 7 : 8

(3) 7 : 6 (4) 8 : 7

(5) None of these

84. In which year is the percentage increase in production of type-A vehicles from the previous year is maximum ?

(1) 2009 (2) 2007

(3) 2010 (4) 2011

(5) None of these

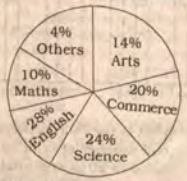
85. The number of type-C vehicles produced in 2010 is approximately what per cent of total number of vehicles produced in 2011 ?

(1) 30% (2) 20%
(3) 32% (4) 28%
(5) 26%

Directions (86-90) : In the following pie-charts, the percentage wise distribution of candidates who have applied for different subjects in a college and that of selected candidates has been given. Read the following pie-charts to answer the questions.

Percentage of Candidates Applied Number of candidates = 88000

Percentage of Candidates Qualified Number of candidates = 14400



86. What is the difference between the total number of candidates who got selected in Science and the number of candidates who applied for the same ?

(1) 15904 (2) 14904
(3) 15940 (4) 16940
(5) None of these

87. What is the sum of the total number of candidates who applied for Arts and the number of candidates who got selected in Maths and English both ?

(1) 19432 (2) 20432
(3) 20342 (4) 19432
(5) None of these

88. What is the ratio between the number of candidates who qualified in Arts and commerce together and the number of candidates who qualified in English and Science ?

(1) 17 : 25 (2) 17 : 29
(3) 17 : 26
(4) 29 : 17
(5) None of these

89. What per cent of candidates qualified in English of the total candidates applied for the same ?

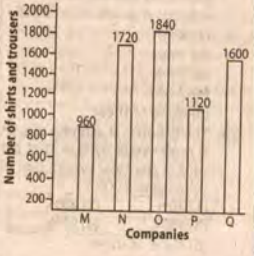
(1) 15 (2) 16
(3) 17 (4) 19
(5) 22

90. Find the average number of candidates who got selected for English, Science and Arts.

(1) 3618 (2) 3682
(3) 3628 (4) 3268
(5) 3168

Directions (91-95) : In the following bar diagram number of shirts and trousers manufactured by five different companies – M, N, O, P and Q – has been given. The ratio of shirts and trousers has been given in the adjoining table. Read both the data and answer the questions.

Number of Shirts and Trousers manufactured by five companies M, N, O, P and Q



Ratio of Shirts & Trousers

Companies	Shirts	Trousers
M	5	3
N	24	19
O	7	9
P	3	5
Q	8	17

91. What is the average of the number of shirts manufactured by the companies M, O and Q ?

(1) 639 (2) 539
(3) 693 (4) 369
(5) None of these

92. The number of shirts manufactured by company P is

(1) 320 (2) 420
(3) 480 (4) 460
(5) None of these

93. What is the total number of trousers manufactured by companies N and P ?

(1) 1360 (2) 1260
(3) 1460 (4) 1406
(5) None of these

94. The number of shirts manufactured by company Q is what per cent of its total production ?

(1) 25% (2) 28%
(3) 30% (4) 32%
(5) None of these

95. The ratio between the number of shirts manufactured by company M and that of trousers manufactured by company P is

(1) 9 : 7 (2) 8 : 7
(3) 7 : 8 (4) 5 : 7
(5) 6 : 7

Directions (96–100) : In the following table, the number of vehicles passing over a bridge during different time intervals on different days of a week is given. Read the table carefully to answer the following questions.

Number of Vehicles (In thousands)

Time Intervals / Days	8-11 am	11 am-1pm	1pm-4pm	4pm-7pm	7pm-10pm
Monday	12	10	8	11	6
Tuesday	15	12	10	12	5
Wednesday	10	8	6	8	6
Thursday	11	7	7	7	7
Friday	13	10	8	10	6
Saturday	8	6	7	8	5

96. What is the difference between the total number of vehicles, crossing during 7pm-10 pm and the number of vehicles crossing during 11am-1pm on Tuesday, Thursday and Saturday ?

(1) 8000 (2) 8500
(3) 7500 (4) 7800
(5) None of these

97. Find the difference between the number of vehicles crossing on Tuesday and Saturday during 1pm-4pm and the number of vehicles crossing on Thursday during 1pm-4pm.

(1) 7000 (2) 10000
(3) 24000 (4) 14000
(5) None of these

98. What is the percentage decrease in the number of vehicles crossing from time interval 8-11am to 7pm-10pm on Wednesday?

(1) 45% (2) 38%
(3) 40% (4) 50%
(5) 46%

99. Find the average number of vehicles crossing the bridge during 8-11 am.

(1) 11056 (2) 12500
(3) 11050 (4) 11500
(5) None of these

100. Find the total number of vehicles crossing the bridge during 11am-1 pm on Thursday and Friday.

(1) 11000 (2) 19500
(3) 17500 (4) 19000
(5) 17000