DATA INTERPRETATION REPLICA QUESTIONS THAT HAVE APPEARED IN CAT IN THE LAST 4 YEARS

TABLES

Directions for questions 1 to 3: Answer the following questions based on the information given below.

Telecom operators get revenue from transfer of data and voice. Average revenue received from transfer of each unit of data is known as ARDT. In the table below, the revenue received from data transfer as a percentage of total revenue received and the ARDT in US Dollars (USD) are given for various countries.

Country	ARDT (in USD)	Revenue from data transfer as a percentage of total revenue
Japan	13	70
India	1	9
Brazil	2	8
Thailand	1	11
Israel	4	13
Hungary	2	15
Ireland	14	23
Russia	1	18
China	2	25
Indonesia	2	42
Philippines	3	54
UK	13	30
Spain	7	14
Sweden	6	18
Poland	6	22
Germany	7	24
South Korea	10	24
Norway	11	20
USA	11	17
Singapore	9	21

1. It was found that the volume of data transfer in India is the same as that of Singapore. Then which of the following statements is true?
(1) Total revenue is the same in both countries.
(2) Total revenue in India is about 2 times that of Singapore.
(3) Total revenue in India is about 4 times that of Singapore.
(4) Total revenue in Singapore is about 2 times that of India.
(5) Total revenue in Singapore is about 4 times that of India.

2. It is expected that by 2010, revenue from data transfer as a percentage of total revenue will triple for India and double for Sweden. Assume that in 2010, the total revenue in India is twice that of Sweden and that the volume of data transfer is the same in both the countries. What is the percentage increase in ARDT in India if there is no change in ARDT in Sweden?
(1) 400% (2) 550%
(3) 800% (4) 750%
(5) Cannot be determined

3. If the total revenue received is the same for the pairs of countries listed in the choices below, choose the pair that has approximately the same volume of data transfer.
(1) Philippines and Brazil
(2) South Korea and Poland
(3) Germany and USA
(4) UK and Spain
(5) Isreal and Norway

Directions for questions 4 to 6: Answer the following questions based on the information given below.

For admissions to its postgraduate programme, six institutes conducted a common admission test. The test had four sections with the maximum marks in each section being 50. The following tables gives the aggregate as well as sectional cut-off marks fixed by the six institutes. A student will get interview calls only if he/she gets marks higher than or equal to the cut-off marks in each of the sections and his aggregate marks are at least equal to the aggregate cut-off marks as specified by the institute.

	Sectional cut-off marks				Aggregate cut-off marks
	Section A	Section B	Section C	Section D	
Institute 1	41	41	41		172
Institute 2		44	44		171
Institute 3			45		167
Institute 4	42			44	174
Institute 5	44		42		176
Institute 6		40		43	172

4. Arun got calls from all colleges. What could be the minimum aggregate marks obtained by him?
(1) 176 (2) 177 (3) 192
(4) 172 (5) 180

5. Bala got calls from two colleges. What could be the minimum marks obtained by him in a section?
(1) 0 (2) 17 (3) 21 (4) 31 (5) 37

6. Chandu did not get a call from even a single college. What could be the maximum aggregate marks obtained by him?
(1) 179 (2) 174 (3) 182
(4) 194 (5) 188

Directions for questions 7 to 9: Answer the following questions based on the information given below.

There are 100 employees in an organisation across five departments. The following table gives the department-wise distribution of average age, average basic pay and allowances. The gross pay of an employee is the sum of his/her basic pay and allowances.

Department	Number of Employees	Average age (years)	Average basic pay (Rs)	Allowances (% of Basic pay)
HR	5	46	10000	60
Marketing	3	36	12000	70
Finance	20	31	13000	50
Business Development	35	43	15000	65
Maintenance	10	36	11000	40

There are limited number of employees considered for transfer/promotion across departments. Whenever a person is transferred/promoted from a department of lower average age to a department of higher average age, he/she will get an additional allowance of 10% of basic pay over and above his/her current allowance. There will not be any change in pay structure if a person is transferred/promoted from a department with higher average age to a department with lower average age.

Questions below are independent of each other.

7. What is the approximate percentage change in the average gross pay of the HR department due to transfer of a 40 year old person with basic pay of ₹16000 from the marketing department?
(1) 9% (2) 11% (3) 13%
(4) 15% (5) 17%

8. There was a mutual transfer of an employee between Marketing and Finance departments and transfer of one employee from Marketing to HR. As a result, the average age of Finance department increased by one year and that of Marketing department remained the same. What is the new average age of the HR department?
(1) 31 (2) 36 (3) 41
(4) 46 (5) Cannot be determined

9. If two employees (each with a basic pay of ₹12000) are transferred from Maintenance department to HR department and one person (with a basic pay of ₹16000) was transferred from Marketing department to HR department, what will be the percentage change in average basic pay of HR department?
(1) 10.5% (2) 12.5% (3) 15%
(4) 30% (5) 40%

Directions for questions 10 to 13: Answer the following questions based on the information given below.

An athletics coach was trying to make an energy drink which is best suited for the athletes. For this purpose he took five of the best known energy drinks – A, B, C, D and E in the market with the idea of mixing them to get the result he desired. The table below gives the composition of these drinks. The cost of each of these energy drinks per litre is A – 150, B – 50, C – 200 D – 500 and E – 100.

Energy drink	Composition			
	Carbohydrate (%)	Protein (%)	Fat (%)	Minerals (%)
A	50	30	10	10
B	80	20	0	0
C	10	30	50	10
D	5	50	40	5
E	45	50	0	5

10. For the sprinters, he has to prepare a drink containing 10% minerals and at least 30% protein. In how many different ways can we prepare this drink by mixing at least two ingredients?
(1) One (2) Two (3) Three
(4) Four (5) Five

11. Which among the following is the combination having the lowest cost per unit for a drink having 10% fat and at least 30% proteins? The drink has to be formed by mixing two ingredients together.
(1) B and C (2) B and E
(3) B and D (4) C and E
(5) D and E

12. In what proportion should B, C and E be mixed to make a drink having at least 60% carbohydrate at the lowest cost per unit?
(1) 2 : 1 : 3 (2) 4 : 1 : 2
(3) 2 : 1 : 4 (4) 3 : 1 : 2
(5) 4 : 1 : 1

13. A drink containing 30% each of carbohydrate and protein, no more than 25% fat and at least 5% minerals is to be made. Which of the following two drinks must be mixed in equal quantities to obtain the required drink?
(1) A and B (2) D and E (3) B and E
(4) C and D (5) A and E

Directions for questions 14 to 17: Answer the following questions based on the information given below:

The following table shows the breakup of actual costs incurred by a company in the last five years (year 2004 to year 2008) to produce a particular product.

	2004	2005	2006	2007	2008
Volume of production and sale (units)	1500	1350	1650	1800	1800
Costs (Rs)					
Material	75000	67650	82800	89850	90000
Labour	30000	27000	33150	36225	36000
Consumables	3000	3300	2700	2400	2100
Rent of building	1500	1500	1650	1650	1800
Rates and taxes	600	600	600	600	600
Repair and maintenance expenses	1200	1230	1170	1185	1200
Operating cost of machines	45000	40500	50250	54030	54000
Selling and marketing expenses	8625	8700	8700	8625	8700

The production capacity of the company is 3000 units. The selling price for the year 2008 was ₹125 per unit. Some costs change almost in direct proportion to the change in the volume of production, while others do not follow any obvious pattern to change with respect to the volume of production and hence are considered fixed. Using the information provided for the year 2008 as the basis for projecting the figures for the year 2009, answer the following questions.

14. What is the approximate cost per unit in rupees, if the company produces and sells 2100 units in the year 2009?
(1) 104 (2) 107 (3) 110
(4) 115 (5) 116

15. What is the minimum number of units that the company needs to produce and sell to avoid any loss?
(1) 470 (2) 525 (3) 576
(4) 1120 (5) 1392

16. If the company reduces the price by 5%, it can produce and sell as many units as it desires. How many units should the company produce to maximize its profit?
(1) 2100 (2) 2400 (3) 2700
(4) 2850 (5) 3000

17. Given that the company cannot sell more than 2550 units, and it will have to reduce the price by ₹5 for all units, if it wants to sell more than 2100 units what is the maximum profit, in rupees, that the company can earn?
(1) 38100 (2) 36600 (3) 1800
(4) 1900 (5) 2000

Directions for questions 18 to 21: Answer the following questions based on the information given below.

The table below shows the comparative costs, in US Dollars, of certain items in USA and a select few Asian countries. The models considered are the most popular ones in the respective countries.

Product	Comparative Costs in USA and some Asian countries (in US Dollars)				
	USA	India	Thailand	Singapore	Malaysia
LCD TV	2300	1000	1100	1850	900
Home gym	1900	900	1000	1250	900
Refrigerator	2000	1100	1300	1300	1100
Air conditioner	2300	900	1200	1200	1000
Washing machine	1200	300	450	600	300
Music system	2000	850	1000	1300	800
Digital camera	1600	550	700	900	600

The equivalent of one US Dollar in the local currencies is given below.

	I US Dollar equalent	
India	40.93	Rupees
Malaysia	3.51	Ringits
Thailand	32.90	Bahts
Singapore	1.53	S Dollars

A consulting firm found that the quality of the products was not the same in all the countries above. A poor quality product would result in higher servicing costs over its life time. The cost of poor quality of the products is given in the table

Products	Comparative cost of poor quality in USA and Asian countries (in US Dollars)				
	USA	India	Thailand	Singapore	Malaysia
LCD TV	0	300	300	200	400
Home gym	0	500	400	500	500
Refrigerator	0	500	500	400	600
Air Conditioner	0	700	500	500	800
Washing machine	0	500	600	500	400
Music system	0	900	600	400	400
Digital camera	0	500	600	500	600

Note: For all questions assume that the models considered are the ones for which the prices are mentioned.

18. A US citizen requires a refrigerator, air conditioner and a music system. He can buy them through an internet portal from any of the given countries without having to pay for any transportation costs. Which country will result in the cheapest overall cost, taking cost of poor quality into account?
(1) India (2) Thailand
(3) Malaysia (4) Singapore
(5) USA

19. Taking the cost of poor quality into account, which country/countries will be the most expensive if one has to buy a music system?
(1) India (2) Thailand
(3) Malaysia (4) Singapore
(5) India and Singapore

20. Approximately what difference in Bahts will it make to a Thai citizen who is touring India if she were to get a washing machine from India instead of her native country, taking into account the cost of poor quality? One has to pay a duty of 1500 Bahts for transporting the washing machine from India to Thailand.
(1) 2350 (2) 4050 (3) 5150
(4) 6725 (5) 7500

21. The rupee values increases to ₹35 for a US Dollar, and all other things including quality, remain the same. What is the approximate difference in cost, in US Dollars, between Singapore and India for a digital camera, taking this change into account?
(1) 70 (2) 250 (3) 450
(4) 800 (5) No difference

Directions for questions 22 to 26: Answer the following questions based on the information given below.

An all India tour operator connects ten cities A to J. The table below gives the distance between a pair of cities and the corresponding price charged by the operator. Travel is permitted only from the city of departure to the city of arrival. The customers do not travel by a route when they have to stop at more than two intermediate cities.

Sl. No	City of Departure	City of Arrival	Distance between the two cities. (in kms)	Fare (Rs).
1	A	B	280	335
2	A	C	395	675
3	A	D	425	625
4	A	E	625	800
5	A	F	672	850
6	A	G	675	1225
7	A	H	975	925
8	B	C	825	1000
9	B	H	875	950
10	B	I	1050	1225
11	B	J	1150	1135
12	C	D	230	225
13	C	F	205	215
14	C	G	455	550
15	D	E	270	295
16	D	F	312	350
17	D	G	320	375
18	D	H	475	625
19	D	J	825	1225
20	E	F	625	850
21	E	G	485	575
22	E	H	425	435
23	F	G	450	525
24	F	I	437	475
25	F	J	485	575
26	G	I	255	275
27	G	J	415	445
28	H	I	395	485
29	H	J	200	210
30	I	J	230	270

22. What is the lowest price, in rupees, a passenger has to pay for traveling by the shortest route from A to J?
(1) 1135 (2) 1425 (3) 1445
(4) 1465 (5) 1670

23. The operator plans to introduce a direct service between cities A and J. The market research results indicate that all its existing passengers traveling between A and J will use the direct service if it is priced 5% below the minimum price that they pay at present. What should the operator charge, approximately, in rupees, for the direct service?
(1) 995 (2) 1078 (3) 1349
(4) 1372 (5) 1392

24. If cities C, D and H are not accessible due to security reasons, what would be the minimum price, in rupees, to be paid by a passenger traveling from A to J?
(1) 1140 (2) 1310 (3) 1425
(4) 1475 (5) 1545

25. If the prices include a margin of 10% over the total cost that the operator incurs, what is the minimum cost per kilometer that the operator incurs for the service from A to J?
(1) 0.77 (2) 0.88 (3) 0.99
(4) 1.06 (5) 1.08

26. If the prices include a margin of 15% over the total cost that the company incurs, which among the following is the distance to be covered in traveling from A to J that minimizes the total cost per kilometer for the operator?
(1) 1085 (2) 1090 (3) 1160
(4) 1175 (5) 1195

Directions for questions 27 to 30: Answer the following questions based on the information given below:

The proportion of male employees and the proportion of post graduates in a company are given below. The company has a total of 800 employees, 80% of whom are in the production department and the rest equally divided between the marketing and the accounts department.

Department	Male	Post graduates
Marketing	0.60	
Accounts	0.55	0.50
Production		0.55
Total	0.475	0.53

27. What is the percentage of male employees in the production department?
(1) 40 (2) 45 (3) 50
(4) 55 (5) 60

28. In the marketing department, twenty five per cent of the post graduates are male. What is the difference between the number of female post graduates and male employees who are not post graduates?
(1) less than 8 (2) 10 (3) 12
(4) 14 (5) 16

29. What percentage of employees in the marketing department are post graduates?
(1) 40 (2) 45 (3) 50
(4) 55 (5) 60

30. In the production department, 50% of the males are post graduates. Which of the following statements is correct?
(1) Except post graduate males, all other groups have the same number of employees.
(2) Except males who are not post graduates, all other groups have the same number of employees.
(3) Except post graduates females, all other groups have the same number of employees.
(4) Except females who are not post graduates, all the other groups have the same number of employees.
(5) All of the above groups have the same number of employees.

Directions for questions 31 to 33: Buziki motors, a two wheeler manufacturer, introduced a variant in the 125cc category in the beginning of 2009. The number of bookings received in a city for a period 12 months is as given below.

	Q1			Q2			Q3			Q4		
Month	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Number of bookings	346	412	380	450	308	359	462	333	345	250	506	370
Number of deliveries		200	362	356	445	395	297	496	300	249	420	403

The company promises the delivery of the vehicles within a span of two months i.e., a booking made in January will be delivered in February or March.

The entire period of 12 months is divided into 4 quarters. The price of the motorcycle was increased every quarter. The customer had to pay the total amount at the time of the booking.

Quarter	Price (in Rs) per motor cycle
Q1	42000
Q2	42500
Q3	43100
Q4	44000

31. In which quarter was the average number of bookings per month, the highest?
(A) Q1 (B) Q2 (C) Q3 (D) Q4

32. The number of deliveries made in December from the bookings made in November is how many times the number of deliveries made in August from the bookings made in June?
(A) 1.39 (B) 1.58 (C) 2.38 (D) 2.58

33. What is the highest revenue (in ₹crore) obtained by the company from the sales of the new 125cc variant in any of the four quarters?
(A) 4.91 (B) 4.95 (C) 4.99 (D) 5.05

Directions for questions 34 to 36: The following table gives the relation between the scaled scores of three teams and the number of wins in the matches played.

Number of wins	Scaled score		
	Team A	Team B	Team C
10 – 12	18	19	20
13 – 15	22	22	24
16 – 18	28	36	36
19 – 21	30	27	39
22 – 24	41	51	46
25 – 27	68	64	63
28 – 30	62	51	52
31 – 33	94	99	95

34. If the scaled score for two of the teams is the same and greater than that of the third team, then which of the following could be the range for the 'number of wins'?
(A) 13 – 15 (B) 16 – 18
(C) > 16 (D) Either (A) or (C)

35. For which of the following range for the 'number of wins' is the difference between the scaled scores of team A and team B as a percentage of that of team C, the 3rd least?
(A) 19 – 21 (B) 10 – 12
(C) 31 – 33 (D) None of these

36. If average scaled score of the three teams is 2.5 times the average of the corresponding 'number of wins', Then which of the following could be the range for the 'number of wins'.
(A) 25 – 27 (B) 31 – 33
(C) 22 – 24 (D) All the three

Directions for questions 37 to 39: A stock brokerage firm accepts the investments and places the amounts invested in seven different companies under three schemes. Scheme X is applicable for an investment of 5 to 10 lakh rupees, scheme Y is applicable for an investment of 11 to 20 lakh rupees and scheme Z is applicable for an investment of 21 to 40 lakh rupees.

Percentage of investments in the seven companies under the different schemes are as follows:

Companies	Scheme X	Scheme Y	Scheme Z
GB Holdings	5%	20%	15%
Solar Computers	12%	2.5%	10%
NLP Industries	16%	12.5%	7.5%
Techies' Technologies	10%	30%	$16\frac{2}{3}\%$
Wiz craft solutions	25%	10%	15%
OBCC bank	15%	10%	22.5%
Live life mutual funds	17%	15%	$13\frac{1}{3}\%$

The brokerage firm promises a rate of return of 2% on scheme X, 2.5% on Scheme Y and 3% on Scheme Z.

Assume that the rate of return on each of the companies in a scheme is same as the overall rate of return of the scheme.

37. If Mahesh invested ₹12 lakh in the stock brokerage farm, but he immediately withdrew an amount of ₹3 lakh, then what is the percentage change in the investment in NLP Industries because of the withdrawal?
(A) 2% (B) 2.5% (C) 3% (D) 4%

38. Mr. Anil and Ms. Shivani invests an amount of ₹7 lakh and ₹13 lakh respectively. What is the difference (in ₹) in their returns on investment made in Wizcraft solutions?
(A) 250 (B) 300
(C) 400 (D) More than 500

39. If three persons A, B and C make investments in the ratio of 10 : 20 : 21, such that their investments fall under the schemes X,Y and Z respectively, then what is the increase in their combined return on investment (in ₹) if the firm increases the rate of return on the schemes X, Y and Z by 10%, 20%, and 10% respectively?
(A) 16100 (B) 16300
(C) 17300 (D) None of these

Directions for questions 40 and 41: The following table gives the numbers of music payers, of two companies - NOSY and BOSS, sold in Delhi across three years.

Type of music system	2001		2002		2003	
	NOSY	BOSS	NOSY	BOSS	NOSY	BOSS
Mono speaker	1000	1600	3000	2700	2600	4000
Dual speaker – 1000w	1800	2000	3100	2500	4400	3400
Dual speaker – 2000w	2300	1200	2900	3200	3600	4200
Four speaker – 5000w	1400	2200	3000	4200	4600	3800
Home theatre	1600	2400	3200	2400	4000	5000
Total	8100	9400	15200	15000	19200	20400

40. From 2001 to 2003, for how many types of music systems is there an increase in the percentage contribution for each of the two companies?
(A) 0 (B) 1
(C) 2 (D) More than 2

41. From 2001 to 2003, which type of music system has shown the maximum change in percentage points in its contribution to the total sales of the company NOSY?
(A) Mono speaker
(B) Dual speaker – 1000w
(C) Dual speaker – 2000w
(D) Four speaker – 5000w

Directions for question 42: The following table gives the break up of the number of cars sold by two showrooms in the first 10 days of their opening.

Day	Showroom A	Showroom B
1	16	18
2	20	19
3	35	26
4	30	42
5	33	39
6	24	29
7	51	48
8	63	52
9	60	71
10	79	81

42. Which of the following statement (s) is/are 'true'?

I. The total number of cars sold by showroom A at the end of 7 days lies between 90% and 110% of that sold by showroom B.

II. In the given period, the total number of cars sold by showroom A on odd numbered days is less than 90% of that sold by showroom B on even numbered days.

(A) Only I (B) Only II.
(C) Both I and II (D) Neither I nor II.

Directions for questions 43 and 44: The following data gives the details of the establishment fee and average number of customers estimated (per year) in franchises of a restaurant chain, Foodies, in class A and class B centers of different cities in India.

City	Est. fee in class A centers (in ₹ lakh)	Est. fee in class B centers (in ₹ lakh)	Estimated customers per year in class A centers	Estimated customers per year in class B centers
Hyderabad	126	75	51,860	42,500
Bengaluru	144	90	60.200	50.246
Pune	132	104	70,000	52,400
Chennai	125	95	48,800	40,000
Kolkata	115	65	45,500	37,000

43. If each customer spends an average amount of ₹240 in restaurants in class A centers and ₹180 in class B centers, then in which of the given cities will the franchise earn revenues more than the establishment fees (for each type of centre), in one year?

(A) Hyderabad (B) Pune
(C) Chennai (D) Bengaluru

44. If a person owns two franchises of Foodies in Pune, one in a class A center and the other in a class B center, and it is estimated that the average amount each person spends in class A and class B centers are ₹300 and ₹130 respectively, then find the minimum number of customers, who are required to come to the two restaurants together in the first year, such that the revenues are not less than the establishment fees for each?

(A) 12.4 lakh (B) 1.24 lakh
(C) 2.4 lakh (D) 9.6 lakh

Directions for questions 45 and 46: The number of dropouts from primary schools, as a percentage of the total enrollments in a year in five districts across six years are given below. The values represented by '–' are unknown.

Districts	2001	2002	2003	2004	2005	2006
P	52.3	51.0	45.6	43.9	42.0	40.8
Q	52.4	53.2	54.1	57.3	61.3	61.1
R	45.9	46.2	–	44.5	43.0	–
S	36.5	–	37.4	–	38.2	39.6
T	41.2	43.4	42.6	44.5	44.1	45.0

45. Which of the following is definitely false?

(A) For more than one of the five districts the percentages are continuously increasing or decreasing.

(B) In the given period, the number of dropouts is the highest in 2006 for at least two districts

(C) The total number of dropouts as a percentage of total number of enrolments, in the given period, is not the highest for Q if it is given that the districts R and S have registered highest percentages in 2002 and 2006 respectively.

(D) In the given period, the maximum number of dropouts in all the five districts combined was registered in 2006, if it is given that R has registered its maximum percentage in 2006 and in any given year each of the five districts have equal number of enrolments in primary schools.

46. If the percentage of dropouts in a year has decreased with respect to that in the previous year, than it is considered as an 'achievement' for a district. What is the minimum number of such 'achievements', in the given period, for all the five districts combined?

(A) 5
(B) 10
(C) 11
(D) More than 12

Directions for questions 47 and 48: The following table gives the temperatures in six cities at three different times of the day.

City	5.00 a.m.	12 noon	6.00 p.m.
P	24	42	29
Q	25	46	28
R	25	44	32
S	32	49	31
T	30	46	30
U	22	44	26

47. If the increase in temperature from 5 a.m. to 12 noon is linear, then what is the temperature in city Q at 10 a.m.?
(A) 30°C (B) 32°C (C) 36°C (D) 40°C

48. If the decrease in temperature from 12 noon to 6.00 p.m. is linear, then in which city was the temperature the highest at 3.30 p.m.?
(A) Q (B) R (C) S (D) U

Directions for questions 49 to 52: The following table gives the details about the traffic flow on a particular day through the roads connecting six different cities. For example, 846 vehicles travel from P to Q and 964 travel from Q to P. So, total traffic on the road connecting the cities A and B is 846 + 964 = 1810. Assume that these are the only cities interconnected and traffic flow is among these cities only.

	P	Q	R	S	T	U
P	–	846	808	400	472	820
Q	964	–	564	540	840	844
R	536	664	–	248	888	200
S	848	242	624	–	478	428
T	484	364	784	672	–	648
U	672	496	528	992	372	–

49. The maximum traffic flow occurs on the road connecting which two cities?
(A) P – Q (B) P – R
(C) T – R (D) None of these

50. The total number of vehicles passing through the road connecting any two of the given cities is the second least for
(A) S – U (B) R – S
(C) P – T (D) None of these

51. Traffic flowing from which of the given cities is the maximum?
(A) P (B) Q (C) T (D) U

52. What is the least difference between the traffic flowing from a particular city and traffic flowing to the same city?
(A) 120 (B) 158 (C) 98 (D) 232

Directions for questions 53 and 54: The following table gives the different payments options for a ₹1 lakh loan provided by a rural bank to persons with different income levels, depending on the time in which they would repay the loan.

Income level (in '000 Rs)	Payment options (interest amount in ₹)		
	1 year	2 years	3 years
20 – 40	2,000	3,000	4,000
41 – 60	2200	3,600	4,100
61 – 80	2,600	3,800	4,400
81 – 100	2,900	4,000	4,800

A person with an income between ₹41,000 to ₹60,000 has to repay the loan of ₹1 lakh with an interest amount of ₹2,200 if the loan is repaid in 1 year, ₹3,600 if the loan repaid in 2 years and so on. The interest amount to be paid gets multiplied by the factor of loan amount (for example a loan of ₹3.4 lakh lent to a person with an income between ₹20,000 to ₹40,000, in one year, accumulates to an amount (in ₹) of $3,40,000 + 3.4 \times 2,000 = 3,46,800$.)

53. Mr. A, whose annual income is ₹45,000 takes a loan of ₹2.2 lakh and promises to repay it in 2 years. Mr. B, whose annual income is ₹76,000 takes a loan of ₹3.6 lakh and promises to repay it in 2 years. What is the difference in the interest amounts (in ₹) they have to pay?
(A) 5,440 (B) 5,760 (C) 6,120 (D) 6.260

54. A person with an annual income of ₹96,000 takes two loans-one of ₹5.6 lakhs for 3 years and another of ₹6.4 lakh for 2 years. What is the average of the interest amount paid by him?
(A) ₹24,840 (B) ₹26,000
(C) ₹26,240 (D) ₹28,140

Directions for questions 55 and 56: The following table gives the distribution of number of male employees and female employees owning a four wheeler or a two wheeler or both in three companies X, Y and Z.

Company		Four Wheeler	Two wheeler	Neither
X	Male employees	45%	65%	5%
	Female employees	30%	70%	10%
Y	Male employees	50%	60%	20%
	Female employees	25%	80%	15%
Z	Male employees	36%	54%	20%
	Female employees	24%	67%	9%

The number of male employees in company X is 70% of the total number of employees in the company and the number of female employees in company Y and Z is 40% each of the total number of employees of their respective companies.

55. In which company is the percentage of employees who own both two wheeler and four wheeler, the highest?
(A) X (B) Y
(C) Z (D) Cannot be determined

56. What percentage of the male employees in companies Y and Z together own either a four wheeler or a two wheeler but not both, if it is given that the total number of employees in both the companies is the same?
(A) 40% (B) 50%
(C) 80% (D) None of these

Directions for questions 57 and 58: The following table gives the details about the percentage distribution of the total bikes sold by ACE Motors Ltd. The percentage distribution was the same in 2007 and 2008. The total number of bikes sold in 2007 is 1,50,000 which is the same as that in 2008.

Model	Percentage of total bikes sold
RL-100	13%
BCZ	25%
Thunder	20%
WB-150	30%
Muzzle	12%

The table below shows the revenue of the company from each of the five models in both the years.

Model	Revenue (in ₹ crore) In 2007	Revenue (in ₹ crore) In 2008
RL-100	78	87.75
BCZ	93.75	105
Thunder	93	105
WB-150	90	103.5
Muzzle	93.6	99

57. For which model is the percentage increase in the average selling price per bike, the highest?
(A) RL-100 (B) Thunder
(C) WB-150 (D) Muzzle.

58. What is the average of the selling prices (in ₹) of the five models in 2007?
(A) 37,600 (B) 33,600
(C) 32,400 (D) None of these.

Directions for questions 59 and 60: The following table gives the performance of four companies, all listed on National Stock Exchange (NSE), from 2001 to 2010.

	Company I		Company II		Company III		Company IV	
Year	Share price (in ₹)	Dividend (in ₹)	Share price (in ₹)	Dividend (in ₹)	Share price (in ₹)	Dividend (in ₹)	Share price (in ₹)	Dividend (in ₹)
2001	128	120	283	112	148	128	400	128
2002	132	116	289	115	152	132	420	124
2003	126	123	295	128	163	145	432	136
2004	148	152	296	138	168	148	440	144
2005	158	148	312	142	172	140	453	148
2006	123	121	328	154	184	152	448	132
2007	172	113	324	132	196	128	432	120
2008	164	109	345	106	212	136	464	112
2009	128	105	360	121	252	138	484	128
2010	132	102	364	143	286	140	496	132

For any company,

$$G_x = D_x + \left(\frac{P_x + P_{x+1} - 2P_{x-1}}{2}\right)$$

Where G_x is gain an company;s share in yea x.
D_x is the divided declared by the company in year x.
P_x and P_{x+1} are share prices of the company in year x and x + c respectively.

59. What was the gain from the shares of company IV in 2006?
(1) 116 (2) 132 (3) 148 (4) 138

60. What was the highest percentage increase in the gain from the shares of company III in a year with respect to the previous year?
(1) 13.48% (2) 29.38%
(3) 16.32% (4) 38.45%

61. The following table gives the per capita income of countries in the year 2004. From the table determine the number of countries having their per capita income more than 40% of the median per capita income of these countries?
(1) 9 (2) 10 (3) 11 (4) 8

Per capita income (gross) in US $	
Switzerland	24,369
New Zealand	15,350
Lithuania	4,965
Romania	2,916
Spain	11,692
Sweden	13,746
United States	23,484
France	13,477
Mexico	3,523
Hong Kong	10,372
United Kingdom	19,207
Brazil	5,663
Germany	24,337

Directions for question 62: Bolvo bus service has the following revenue data (in ₹ crore) regarding its operations in 2007.

	A/c sleeper	A/c semi sleeper	Non A/c semi-sleeper	Non A/C general	Total
Inter-state services					
Intra-state services		240			2880
Total	1200				

A/c sleeper and A/C semi-sleeper accounted for 37.5% of the total revenue whereas non A/c semi-sleeper accounted for 25% of the total revenue. 50% of Intra-state services revenue was generated from non A/c general services.
60% of the total revenue generated was from Intra-state services. The revenue generated from A/c sleeper in inter-state services to that in intra-state services was in the ratio of 1 : 2

62. What was the total revenue (in ₹ crore) generated from non A/c general in Intra-state services?
(1) 600 (2) 1440 (3) 950 (4) 600

Directions for question 63:

63. The following table gives list of the major coal producing countries in the world along with the total production of coal in the year 2007(in million tonnes)

Country	Coal production
China	2536.7
Russia	314.2
Poland	145.8
Ukraine	76.3
India	478.2
Turkey	76.6
United States	1039.2
Australia	393.9
Germany	201.9
Indonesia	174.9

What percent of the coal production of the top four (i.e, the four highest) countries is the coal production of the bottom four (i.e. the four lowest) countries?
(1) 10.66% (2) 8.98%
(3) 11.32% (4) 12.45%

Directions for questions 64 and 65: The following table gives the gender, height, weight and age of fifteen students of a college who have cleared the preliminary round of the selection process for being selected in the Air Force. The names of the students being denoted by A, B, C, D, ... and O.

	Names	Gender	Height (in cm)	Weight (in kg)	Age (in years)
1	A	M	164	64	22
2	B	M	169	62	21
3	C	F	152	49	17
4	D	M	148	68	18
5	E	F	154	78	21
6	F	M	172	68	23
7	G	M	168	67	27
8	H	M	165	70	22
9	I	F	145	58	20
10	J	M	152	78	18
11	K	M	156	64	18
12	L	F	146	51	19
13	M	F	138	56	23
14	N	M	171	67	24
15	O	F	162	60	25

Air Force follows a selection criterion where the height and weight of a person must lie in one of the following ranges:

Male

HEIGHT (in cm)	WEIGHT (in kg)
155 – 160	58 – 62
160 – 165	60–64
165 – 170	63–68
170 – 175	66–74

Candidates whose height is less than 155 cm or more than 175 cm, are not eligible for selection.

Female

HEIGHT (in cm)	WEIGHT (in kg)
145 – 150	48 – 52
150 –155	52 –56
155– 160	55 –59
160 – 165	58 – 62

Candidates with weight less than 145 cm or more than 165 cm are not eligible for selection.

64. Find the ratio of the number of male and female students who were eligible for selection.
(1) 2 : 1 (2) 5 : 2 (3) 3 : 2 (4) 4 : 1

65. If x represents the number of male students whose age lies in the range of 18 to 22 years (both inclusive) and y represents the number of females students whose weight lies in the range of 49 to 58 kg (both inclusive) then
(1) $x > 2y$ (2) $x < y$
(3) $x = y$ (4) $2x = 3y$

Directions for questions 66 and 67: The following table gives the cost and revenue of a company for a period of five years from 2005 to 2009. The total cost is the sum of the costs under three heads H_1, H_2 and H_3. Operating Expense of the company for each year is equal to 20% (H_1) + 25% (H_2) + 30% (H_3) the profitability of the company in each year is defined as $\frac{\text{Operating Expense}}{\text{Revenue}}$. Study the given table carefully and answer the questions that follow:
All values are given in '000s of ₹.

Year	H_1	H_2	H_3	Revenue
2009	20.8	30.6	40.8	104.2
2008	21.2	24.3	38.2	96.6
2007	29.6	38.4	21.6	112.4
2006	30.8	23.4	42.4	128.2
2005	24.8	42.8	36.4	130.6

66. In which of the following years was the profitability of the company the least?
(1) 2005 (2) 2006
(3) 2007 (4) 2008

67. What was the maximum percentage decrease in the total cost of the company in a given year with respect to the previous year?
(1) 7.04% (2) 7.24%
(3) 7.11% (4) 8.92%

Directions for questions 68 and 69: The following table gives the distribution of the number of students based on the marks obtained in a certain examination for five sections A, B, C, D and E. Students were categorised as per their marks being 'less than 45', from 45 to 85 and greater than 85.

M is the marks obtained.

Sections	M < 45	45 < M ≤ 85	M > 85
A	28	72	24
B	15	68	36
C	18	52	28
D	29	58	47
E	30	60	35

68. What percentage of the total number of students got scores less than 45?
(1) 15.6% (2) 18.8% (3) 21.2% (4) 20%

69. If the qualifying mark in the paper is 48, then the maximum number of students from a section who passed in that examination was
(1) 96 (2) 104 (3) 105 (4) 95

Directions for questions 70 to 72: The following table gives the exports and imports (values given in millions of ₹) of the 4 companies in the years 2002 – 03, 2003 – 04, 2004 – 05

Company	Year	Exports	Imports	Total trade
Rahul & co	2002 - 03	7.13	5.14	12.27
	2003 - 04	12.15	11.67	23.82
	2004 - 05	15.3	17.41	32.71
Chandu & co	2002 - 03	12.4	11.61	24.01
	2003 - 04	14.1	16.31	30.31
	2004 - 05	16.2	17.1	33.3
Shiva & co	2002 - 03	5.4	8.72	14.12
	2003 - 04	9.3	9.39	18.69
	2004 - 05	12.1	13.17	25.27
Kanta & co	2002 - 03	6.54	7.46	14.00
	2003 - 04	10.41	11.51	21.92
	2004 - 05	13.73	14.33	28.06

70. Which of the following company registered the highest percentage growth in exports from 2003 – 04 to 2004 – 05?
(1) Rahul & co. (2) Chandu & co.
(3) Shiva & co. (4) Kanta & co.

71. Which company registered the least growth rate in imports from 2002 – 03 to 2003 – 04?
(1) Rahul & co. (2) Chandu & co.
(3) Shiva & co. (4) Kanta & co.

72. Which company had the highest trade-deficit (= imports – exports) in 2004-05?
(1) Rahul & co. (2) Chandu & co.
(3) Shiva & co. (4) Kanta & co.

Directions for questions 73 and 74: Five companies held examinations for all the employees who are in their probation period.

The following table gives the details of all the employees who have taken the exam

Company	No. of employees who crossed the cut off	% of employees who got more than 90% of marks	No. of employees who wrote the exam
A	180	10	300
B	225	8	450
C	150	12	250
D	400	16	600
E	300	20	575

73. If the employees who do not clear the cut offs are rejected, then which company rejected the maximum number of employees?
(1) B (2) C (3) D (4) E

74. What is percentage of employees who got more than 90% of marks out of the total number of employees who cleared the cut off for all companies combined (approximately)?
(1) 20% (2) 22%
(3) 24% (4) 28%

Directions for questions 75 and 76: The following table gives the sales of 5 companies in 2008 and 2009

2008	Company	Price/unit (in ₹)	No. of units products (in 1000)	Closing stock
	P	8	12	500
	Q	6	14	750
	R	5	9	675
	S	10	11	890
	T	11	13	1200
2009	P	7	11	485
	Q	4	15	690
	R	8	10	775
	S	6	9	1245
	T	9	12	865

75. Which company had the least sales in the year 2009?
(1) P (2) S (3) Q (4) T

76. In which year did R have lower sales?
(1) 2008
(2) 2009
(3) Both 2008 and 2009
(4) None of these

Directions for questions 77 and78: The following table gives the number of members in seven families and the details regarding their income and expenses.

	No. of members	**Average income of the family in (₹)**	**Expenses of the family in (₹)**	**Overhead expenses in (₹)**
Kapoor family	6	24500	9000	3000
Khanna family	5	21000	11000	2500
Kirsten family	7	24000	14000	3750
Kumble family	4	35000	12500	4250
Khan family	6	27500	13000	6000
Kittu family	3	40000	14200	3250
Kala family	7	28000	17000	4375

77. What is the total savings made by all the families (in ₹)?
(1) 913175 (2) 923175
(3) 923075 (4) 921075

78. If the average income of the Khan family increased by 2% where as the expenses of the family decreased by 3%, then the savings of the Khan family would increase by
(1) ₹3370 (2) ₹3570
(3) ₹3870 (4) ₹3670

Directions for question 79: The following table gives the diet statistics of 10 Drinks named P to Y. The values are in percentages.

Drinks	Proteins	Vitamins	Carbohydrat	Fats	Sugar content
P	16%	24%	12%	27%	21%
Q	21%	18%	18%	14%	29%
R	17%	25%	20%	24%	14%
S	23%	26%	20%	16%	15%
T	18%	29%	19%	18%	16%
U	25%	21%	16%	15%	23%
V	24%	22%	14%	19%	21%
W	16%	29%	15%	17%	23%
X	27%	24%	14%	18%	17%
Y	19%	25%	18%	14%	24%

A healthy drink is considered to have at-least 20% of proteins, at-least 23% of vitamins and at-most 20% of other ingredients. Otherwise, it is considered as an unhealthy drink.

79. What is the ratio of healthy drinks to unhealthy drinks in the given group?
(1) 2 : 3 (2) 3 : 7 (3) 1 : 4 (4) 1 : 9

Directions for questions 80 and 81: The following table shows the number of students in government schools in six different states of India during 2007, 2008 and 2009.

Students in Government schools (in '000)

State	2007	2008	2009
Andhra Pradesh	15.4	17.2	16.1
M.P	21.2	19.6	20.9
U.P	20.1	21.4	22.1
Karnataka	18.7	17.3	19.6
Kerala	16.3	18.5	17.9
Tamil Nadu	14	19.2	20.3

80. In 2008, which state experienced the maximum increase in the number of students studying in government schools with respect to that in the previous year?
(1) Andhra Pradesh (2) U.P
(3) Kerala (4) Tamil Nadu

81. Which state has shown a consistent increase in the number of students studying in government schools from 2007 to 2009?
(1) M.P (2) U.P
(3) Kerala (4) Karnataka

Directions for questions 82 and 83: The following table gives the number of students in different sections A, B, C, D, E and F of a school in 2007

Section	Students	New students
A	18	12
B	12	4
C	20	8
D	17	10
E	14	11
F	19	9

82. With respect to the number of students in each section, how many sections have the number of students more than the median of the number of students in a section for the given sections?
(1) 2 (2) 3 (3) 4 (4) 1

83. The student who fails in any class is retained in the same class and section. Which of the following sections have the highest number of failed students?
(1) A (2) B (3) C (4) D

Directions for questions 84 and 85: The following table gives the details of the area utilized and the production of wheat by 3 countries P, Q and R from 2003 to 2008.

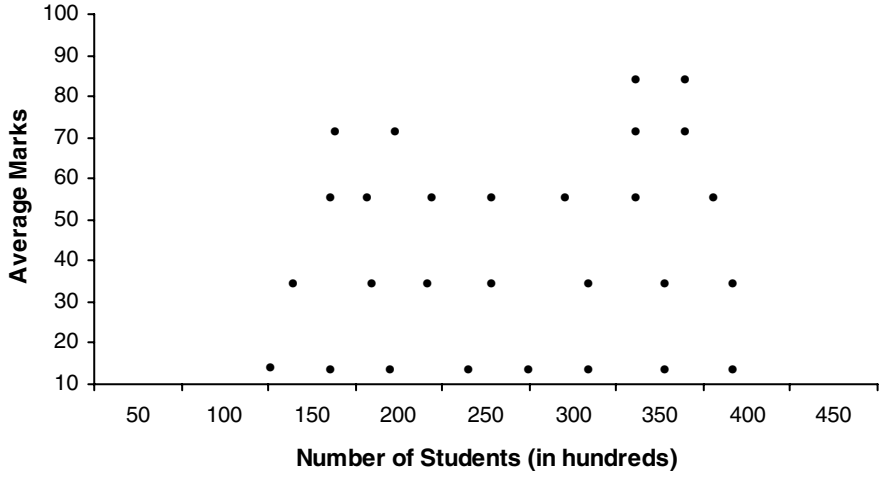
	P		Q		R	
	Area	Production	Area	Production	Area	Production
2003	2.1	5280	1.7	2850	3.5	5450
2004	2.6	1380	2.2	4850	2.7	4250
2005	1.8	2790	1.5	3950	2.6	4900
2006	1.9	5550	2.4	4800	2.3	4650
2007	2.3	5950	2.5	6800	2.1	3350
2008	3.4	5180	1.9	7800	3.2	4880

$$\text{Yield return} = \frac{\text{Production}}{\text{Unit area}}$$

84. Which of the following is the highest yield return obtained by country R?
(1) 2021 (2) 1885 (3) 2011 (4) 1914

85. In which year is the percentage increase in the yield return the highest for country Q?
(1) 2005 (2) 2006 (3) 2007 (4) 2008

Directions for questions 86 and 87: The following graph shows the average marks obtained by the students and the number of students.



The table given below shows the average marks obtained and the number of students in each class.

Class	Average marks	Number of students (in hundreds)
I	45	450
II	60	325
III	31	120
IV	17	180
V	57	220
VI	37	110
VII	83	180
VIII	71	240
IX	62	305
X	79	400

86. The statement "the higher the average marks, the higher the number of students" is true in which of the following classes?
(1) II, VIII, X (2) III, V, VII
(3) II, IX, X (4) I, IV, VI

87. The statement "the lower the number of the students higher is the average marks" is true for which of the following classes?
(1) VII, VIII, V (2) I, X, VI
(3) I, II, V (4) V, VII, IX

Directions for question 88: The following table gives the details of the number of students in 6 states

	No.of students (in lakhs)	Change in this year (in '000)
AP	13	+21
UP	17	+46
MP	16	–210
Bihar	18	+114
Assam	19	–612
Orissa	12	–112

88. In which state are the number of students the third highest this year?
(1) Assam
(2) MP
(3) Orissa
(4) AP

Directions for question 89: Select the correct alternative from the given choices.

89. Lakshmi, an employee, wants to invest in 3 types of business X, Y and Z. The following table gives the investment and revenue obtained by Lakshmi from her investments

Name of the business	X	Y	Z
Investments (in lakhs)	16.2	14.5	12.9
Revenue (in lakhs)	21.2	18.4	16.5

Which of the following would be the most profitable investment for Lakshmi if she spends 20% of the revenue earned from each business to maintain her house?
(1) X
(2) Y
(3) Z
(4) Both (1) and (3)

Directions for questions 90 and 91: The table given below gives the details of income and expenditure for some states in different regions in 2006 and 2007

Region	**Income (in ₹ crore)**		**Expenditure (in ₹ crore)**		**Per capita income (in ₹ crore)**		**Per capita expenditure (in ₹ crore)**	
	2006	2007	2006	2007	2006	2007	2006	2007
North J & K	16.2	17.3	18.1	17.6	250	265	215	221
Punjab	15.1	16.5	15.5	16.9	261	272	218	224
South AP	18.3	17.5	18.9	17.9	271	281	224	236
Karnataka	14.6	16.3	15.1	17.3	283	294	241	249
East West Bengal	17.5	18.4	17.8	18.9	241	261	213	232
Assam	12.1	13.5	12.7	13.8	264	270	222	234
West Gujarat	19.4	20.2	19.8	20.9	256	271	233	241
Maharashtra	19.6	19.9	19.9	20.4	245	259	219	232

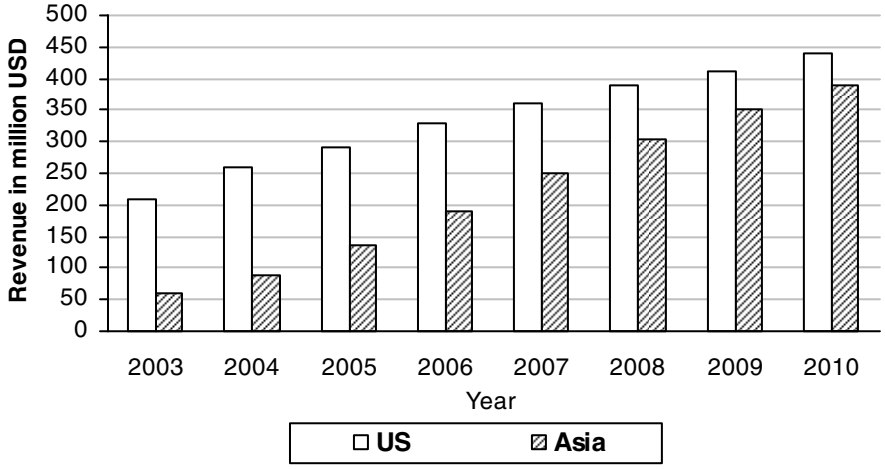
90. Which of the following regions had the ratio of income to expenditure in 2007 the highest?
(1) North (2) South (3) East (4) West

91. What is ratio of the number of states in which per capita income increased by more than 5% to the number of states in which per capita income did not increase by more than 5%?
(1) 1 : 7 (2) 1 : 1 (3) 3 : 5 (4) 1 : 3

BAR GRAPH

Directions for questions 1 to 4: Answer the following questions based on the information given below.

The bar chart below shows the revenue, in million US Dollars(USD), of a cosmetics company. The data covers the period 2003 to 2007 for the United States(US) and Asia. The bar chart also shows the estimated revenues of the company for the period 2008 to 2010.



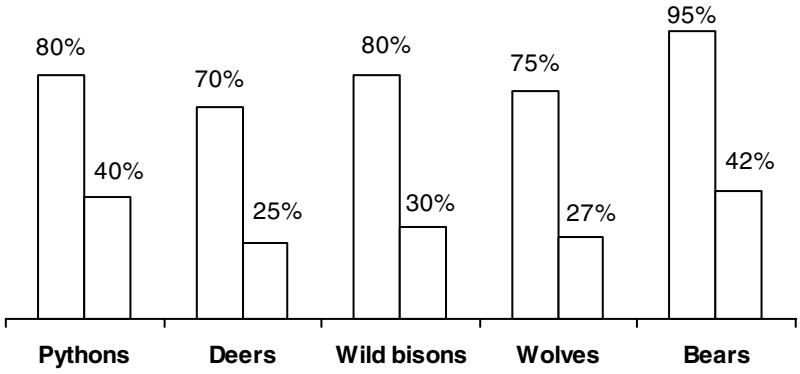
1. The difference between the estimated revenue in Asia in 2008 and what it would have been if it were computed using the percentage growth rate of 2007(over 2006) is closest to
(1) 25 (2) 40 (3) 10 (4) 5 (5) 0

2. In 2003, sixty percent of the people who used the company's products in Asia were men. Given that women who used the company's products increase at the rate of 10 percent per annum and men at the rate of 5 percent per annum, what is the approximate percentage growth of customers between 2003 and 2010 in Asia? The prices of the company's products are volatile and may change each year.
(1) 62 (2) 15 (3) 78 (4) 84 (5) 50

3. Consider the annual percent change in the gap between revenues in the US and Asia. What is the year in which the absolute value of this change is the highest?
(1) 30-04 (2) 05-06 (3) 06-07
(4) 08-09 (5) 09-10

4. While the revenues from Asia has been growing steadly towards that of the US, the growth rate in Asia seems to be declining. Which of the following is closest to the percent change in growth of 2007 (over 2006) relative to the growth rate of 2005 (over 2004)?
(1) 17 (2) 10 (3) 35 (4) 60 (5) 100

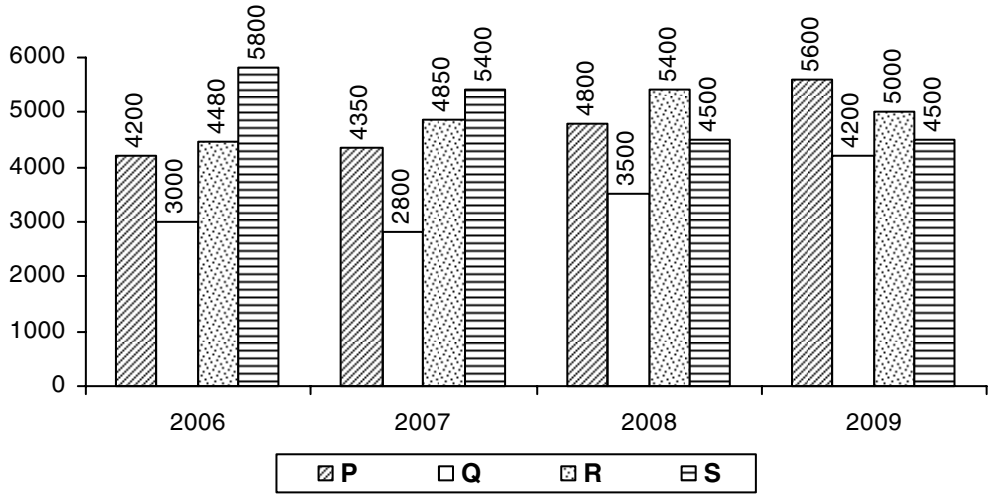
Directions for questions 5 and 6: The first part of the bar graph gives the number of animals of a given species in the Amazon forest as a percentage of the total number of animals of that species in South America and the second part of the bar graph gives the number of animals of that species in South America as a percentage of the total number of animals of that species in the world. The total number of deers and wild bisons in the world are 24,000 and 18,000 respectively. The total number of animals of the five given species in South America is 25,800.



5. If the number of Pythons and Bears in South America are 4800 and 4200 respectively, then what is the number of Wolves in the Amazon forest?
(A) 3,990 (B) 4,050
(C) 4,200 (D) 4,320

6. Using the information in the previous question, arrange the animals in the decreasing order of their number in the Amazon Forest?
(A) Deers, Wild bisons, Deers, Wolves, Bears, Pythons.
(B) Wild bison, Deers, Wolves, Bears, Pythons.
(C) Deers, Wolves, Wild bisons, Bears, Pythons.
(D) Deers, Wolves, Wild bisons, Pythons, Bears.

Directions for questions 7 to 9: The following graphs shows the sales (by volume) of four PC manufacturing companies P, Q, R and S, in Hyderabad across four years.



7. The sales volume of which company increased by the highest percentage from 2006 to 2008?
(A) P (B) Q (C) R (D) S

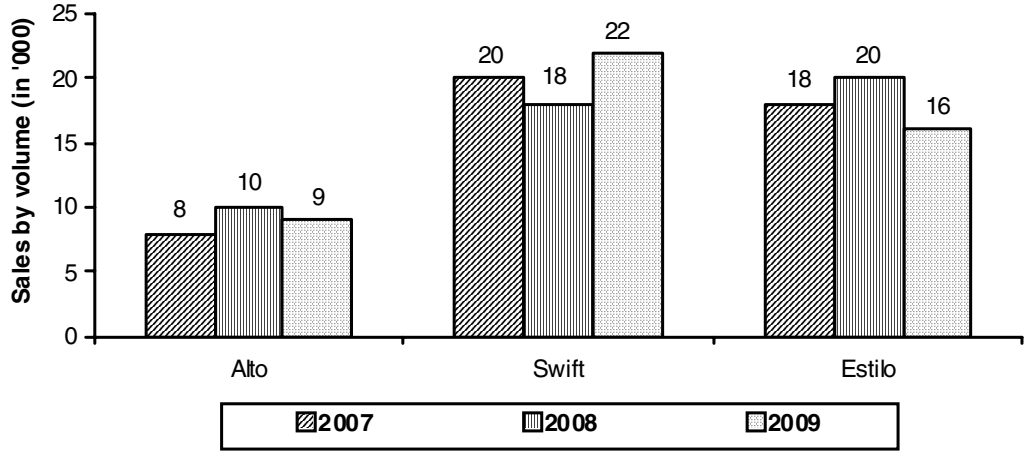
8. If in 2010, company S goes bankrupt and the sales volume of the other companies increases by 10% each, when compared to that in 2009, then what is increase, in percentage points, in the market share of company Q if these are the only companies in the market and the cost of PC is same for all the companies?
(A) 6.61 (B) 6.73 (C) 6.95 (D) 7.31

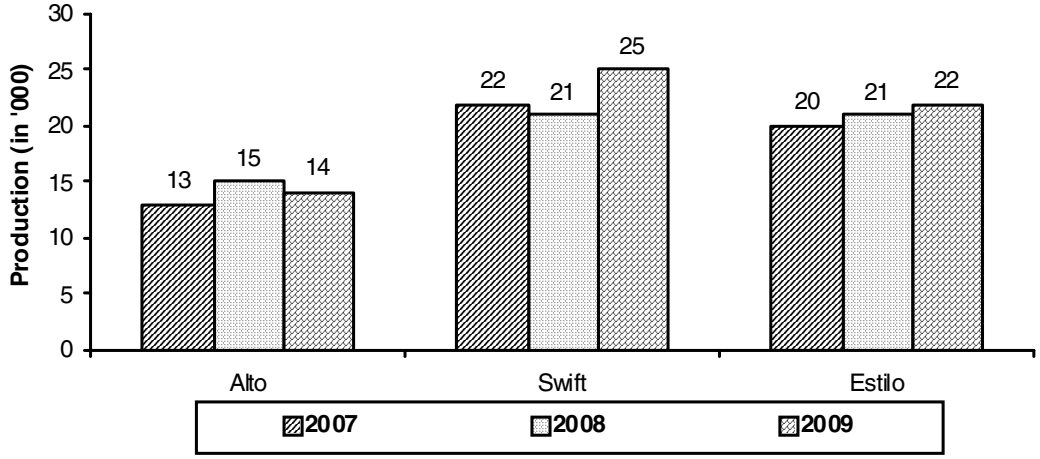
9. The market share of which of the following is the highest if these are the only companies in the market and price per PC of the companies P, Q, R and S in each of the given years was in the ratio 1 : 2 : 1 : 2?
(A) S in 2006 (B) R in 2008
(C) S in 2007 (D) S in 2009

Directions for question 10: The following table gives the distribution of the number of handsets sold by a mobile-phone manufacturing company from 2004 to 2006. P, Q, R and S denote the different models of mobile-phones sold every year. Further it is given that the selling prices of the four models of mobile phones in the year 2004, SP_P, SP_Q, SP_R, SP_S were in the ratio 3 : 4 : 5 : 6 and the ratio of the selling price of each model in the year 2004, 2005 and 2006 was 2 : 3 : 4.

10. The sales revenue of R in 2006 was more than the sales revenue of Q in 2004 by what %?
(1) 50% (2) 56.25% (3) $66\frac{2}{3}$% (4) 75%

Directions for questions 11 to 13: The following bar graphs gives the sales by volume of 3 cars sold in the market during 2007 to 2009 and also the number of units of these cars produced in these years.





11. In which year is the ratio of the total production to the total sales of all 3 cars the highest?
(1) 2007 (2) 2008
(3) 2009 (4) Both (1) and (2)

12 In which year is the ratio of the production of Alto to the sales, the highest?
(1) 2007 (2) 2008
(3) 2009 (4) Both (1) and (2)

13. Production – sales = Exports
In which year is the ratio of the exports to sales of Swift the highest?
(1) 2007 (2) 2008
(3) 2009 (4) Both (1) & (2)

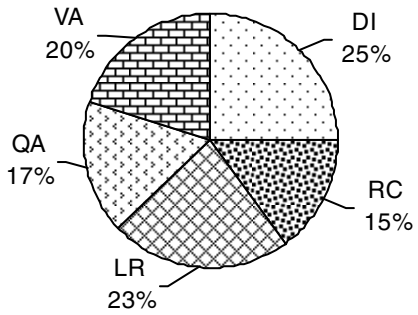
PIE CHART

Directions for questions 1 to 6: The total scaled scores obtained by a student in five AIMCATs is as shown in the table below. An AIMCAT has five sections – Quantitative Ability (QA), Logical Reasoning (LR), Verbal Ability (VA), Reading Comprehension (RC) and Data Interpretation (DI).

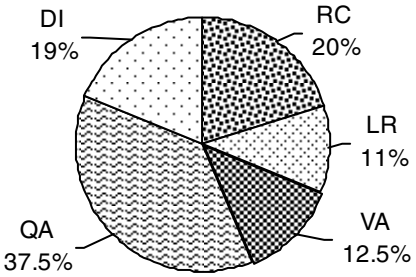
Exam	Total scaled scores
AIMCAT 1	300
AIMCAT 2	280
AIMCAT 3	360
AIMCAT 4	320
AIMCAT 5	350

The following pie charts give the distribution of the scaled scores in each AIMCAT.

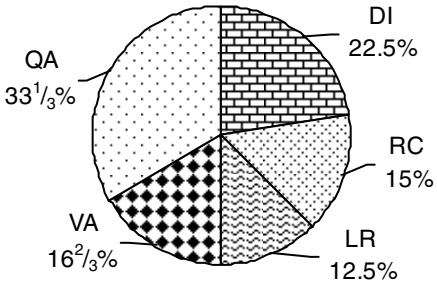
AIMCAT 1



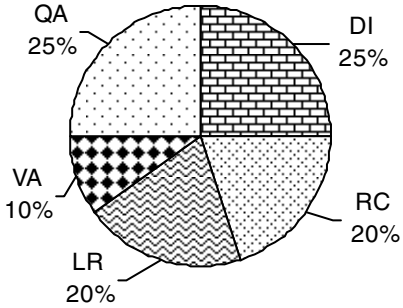
AIMCAT 2



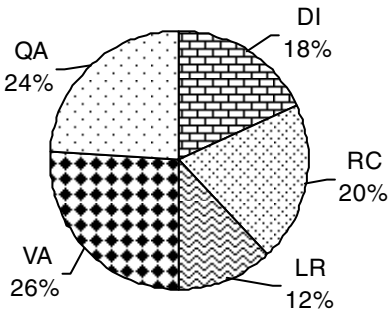
AIMCAT 3



AIMCAT 4



AIMCAT 5



NOTE: The scores given are actually the 'scaled scores'. The 'actual scores' are obtained by dividing the scaled scores by the 'scoring factors.' The maximum scaled scores in the five sections are also given below

Section	QA	LR	VA	RC	DI
Scoring factor	1.5	1.25	2.5	1.25	1.2
Maximum scaled score	150	100	125	75	120

1. The 'scaled score' obtained by the student in the VA section in AIMCAT 3 is what percent of the maximum possible' actual score' in that section?
(A) 48% (B) 60%
(C) 80% (D) None of these

2. What is the least difference between the 'scaled score' in the RC section and the maximum possible 'actual score' in that section in any of the given AIMCATs?
(A) 4 (B) 6 (C) 11 (D) 19

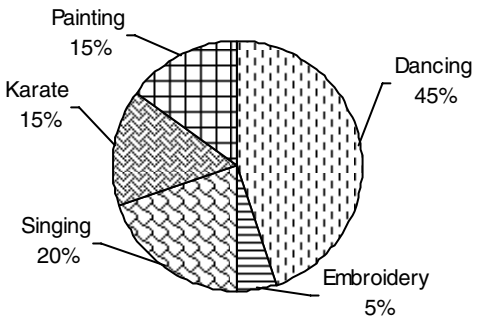
3. In an AIMCAT, if in at least three of the five sections a candidate has a 'scaled score' in a section greater than 80% of the maximum possible 'actual score' in that section, the performance of the candidate is considered to be 'significant'. In how many of the five AIMCATs, the student shows a 'significant' performance?
(A) 1 (B) 2 (C) 3 (D) 5

4. From AIMCAT 1 to AIMCAT 5, in which section did the student have the highest percentage increase in the scaled score?
(A) LR (B) QA (C) RC (D) DI

5. From AIMCAT 1 to AIMCAT 5, in which section, did the student have the least percentage change in the actual score?
(A) LR (B) VA (C) RC (D) DI

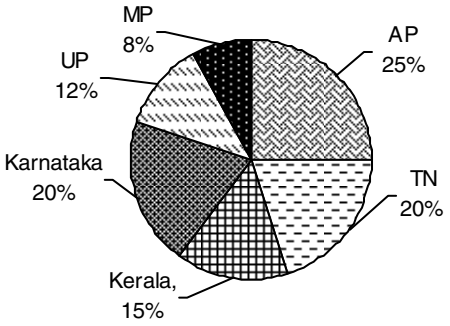
6. In which AIMCAT was the marks obtained by the student in the RC section the highest?
(A) AIMCAT 4 (B) AIMCAT 5
(C) AIMCAT 3 (D) AIMCAT 1

Direction for question 7: 1000 students in a school have to choose one extra-curricular activity (in which they are interested) among 5 activities – Dancing, Singing, Printing, Embroidery classes and Karate. Only boys chose Karate, and only girls chose Embroidery classes. The ratio of the number of boys to girls in painting is 1 : 1. 80% of the students who choose Dancing are boys and 80% of the students who choose singing are girls. The following pie chart gives the distribution of the students in the five activities.

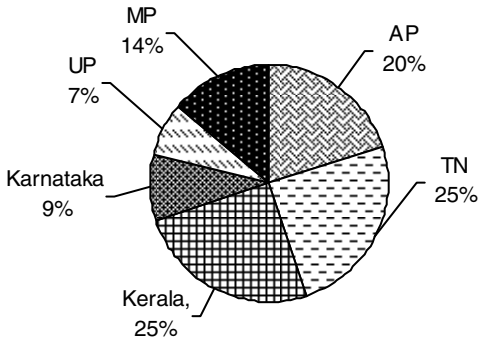


7. If the students who selected Painting and Singing are made to sit in the same class then what would be the ratio of boys to girls in that class?
(1) 23 : 45 (2) 1 : 2
(3) 23 : 47 (4) 23 : 49

Direction for question 8: The following pie charts give the number of employees in central government jobs and state government jobs in 6 states of India



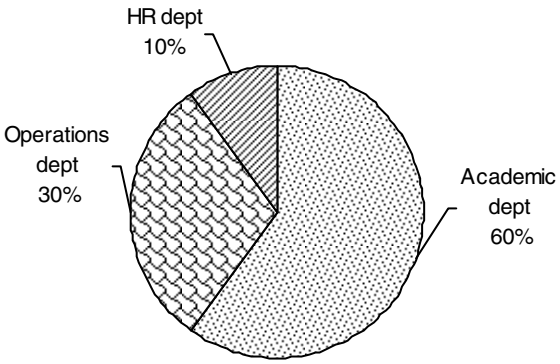
Central Govt. Jobs



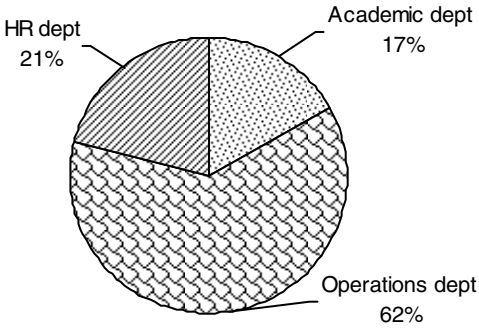
State Govt. Jobs

8. The number of employees in central government jobs and in state government jobs are in the ratio 6 : 1. Find the ratio of the number of employees in central govt. jobs in AP to that in state jobs in Kerala?
(1) 6 : 1 (2) 4 : 1 (3) 5 : 2 (4) 3 : 1

Directions for questions 9 and 10: The following pie charts give the details of all the employees of 2 companies P & Q:



Total number of employees in P = 17500



Total number of employees in Q = 18000

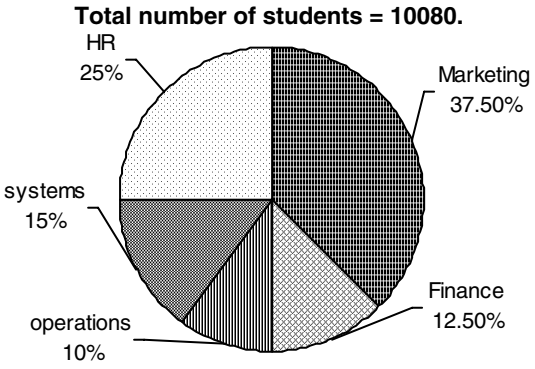
9. What percent of the employees in both the companies belong to the HR department?
(1) 17.5% (2) 15.5% (3) 16.1% (4) 17%

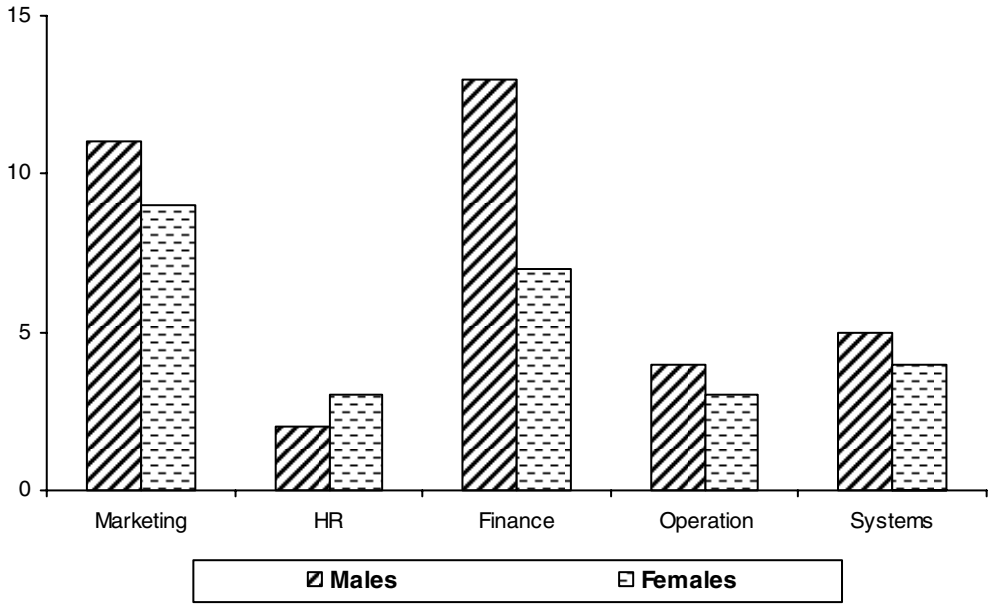
10. What is the approximate ratio of the number of employees in the Academic department to the Management department (HR dept + operation dept) in both the companies combined?
(1) 0.71 (2) 0.62 (3) 0.9 (4) 0.84

Pie Charts + Bar Charts

Directions for questions 1 and 2: In a management institute, students opt for various disciplines. The distribution of students across disciplines is shown in the pie chart and the ratio of the number of males and females in each discipline is shown in the bar chart. The institute has sixteen centres in the country and the students whose data is represented in the following charts are from those centres in the year 2009-2010.

Study the given charts carefully to answer the following questions.



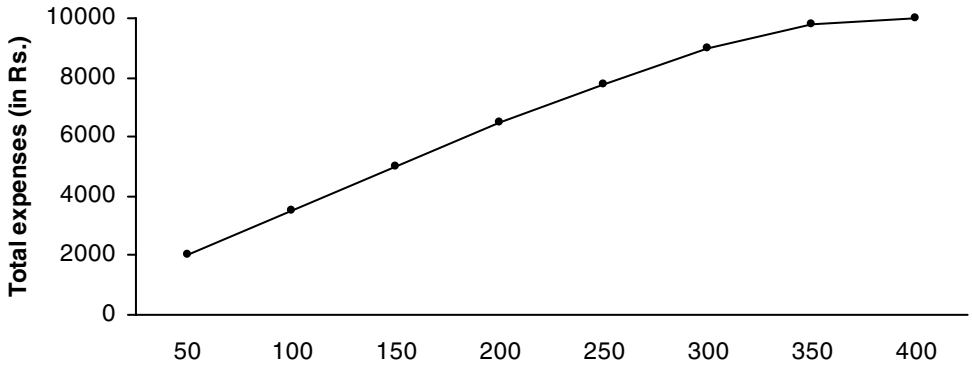


1. In the year 2009 – 2010, the total number of female students in the institute was less than the total number of male students by what percentage?
(1) 11% (2) 9.2% (3) 10.6% (4) 12.4%

2. For which discipline was the difference between the number of male and female students the highest?
(1) H R (2) Finance
(3) Marketing (4) Systems

LINE GRAPH

Directions for questions 1 and 2: The following graph gives the relation between the total expenses and the number of units produced in a factory.



Assume that all units produced are sold and that on a normal day 200 units are produced. The selling price of each unit is ₹35.

1. On a particular day if 300 units are sold, find the percentage change in profit when compared to a normal day
(A) 100 (B) 150 (C) 200 (D) 250

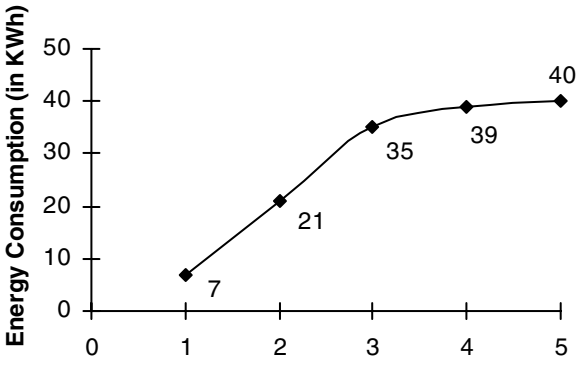
2. What is the average additional cost (in ₹) per unit produced in comparison to a normal day, when 350 units are produced?
(A) 18 (B) 23 (C) 25 (D) 28

Directions for questions 3 and 4: A family uses the following electrical appliances– TV, Refrigerator, Geyser, Washing machine and Grinder.

The monthly electricity bill generated has two components- a fixed cost of ₹60 and a variable cost of ₹0.35 per kWh.

The family uses Refrigerator throughout the day, Geyser for 2 hours, Washing machine for 0.5 hours, Grinder 0.25 hours and watches TV for 15 hours everyday.

The line graph given below shows the energy consumption of the above mentioned appliances in a week for the family.



1 → Geyser
2 → Geyser + Refrigerator
3 → Geyser + Refrigerator + TV
4 → Geyser + Refrigerator + TV + Washing machine
5 → Geyser + Refrigerator + TV + Washing machine + Grinder

3. Which of the following is true?
(1) The energy consumed by TV for 3 days is more than that of Refrigerator for 3 days.
(2) The energy consumed by Geyser for 4 days is less than that of Grinder for 7 days.
(3) The energy consumed by Washing machine in a week is less than that of Geyser for 2 weeks.
(4) The energy consumed by TV for 2 days is less than that of Washing machine for a week.

4. If the fixed cost increases by 25%, then what would be the percentage increase in the total cost of energy consumption by the family in a month of 30 days.
(1) 10% (2) 12.5%
(3) 15% (4) 19%

DATA SUFFICIENCY

Directions for questions 1 to 4: Each question is followed by two statements, A and B. Answer each question using the following instructions:

Mark (1) If the question can be answered by using the statement A alone but not using the statement B alone
Mark (2) If the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) If the question can be answered by using either of the statements alone.
Mark (4) If the question can be answered by using both the statements together but not by either of the statements alone.

Mark (5) If the question cannot be answered on the basis of the two statements.

1. In a particular company, sixty employees were managers. Ten among them were also among the people who had newly joined. How many employees in the company were newly joined?
(A) Sixty percent of the newly joined employees were not managers.
(B) All the newly joined employees were not necessarily managers.

2. Five people Amar, Babu, Craig, David and Edward were the only ones who participated in a chess tournament. They were ranked on the basis of the points they scored. David got a higher rank as compared to Edward while Babu got a higher rank as compared to Craig. Craig's rank was lower than the median. Who among the five got the highest rank?
(A) Amar got the last rank.
(B) Babu was not among the top two rankers.

3. Thirty percent of the students of a school are boys. Ten percent of the girls in the school are athletes. What is the percentage of boys in the school who are athletes?
(A) Twenty five percent of the students are athletes.
(B) Number of boys in the school who are athletes is 20% more than the number of girls who are athletes.

4. In a basketball match, team A was trailing by 25 points at the end of the first half. Did it win the match?
(A) In the second half team A scored 35 points.
(B) The opponent scored 35 points in the match.

PPL

Directions for question 1:

(1) If the question can be answered from one of the statements alone but not from the other.
(2) If either statement alone is sufficient to answer the question.
(3) If both the statements together are sufficient but either statement alone is not sufficient.
(4) If the question cannot be answered even by combining both the statements

1. Pramod bought a new car after selling his old car. If the cost of the old car was 40% that of the new car, find the price of the new car.
I. He borrowed an amount which was equal to 60% of the cost of the old car from his friend and raised the remaining amount by withdrawing from his personal savings account.
II. His total personal savings were ₹3,00,000

Numbers

Directions for questions 1 and 2:

Mark option
(1), if the question can be answered by any one of the statements alone but not by the other.
(2), if the question can be answered by either statement alone.
(3), if the question can be answered by combining both the statements but not by each statement alone.
(4), if the question cannot be answered even after combining both the statements.

1. Which of x, y, z is the maximum?
A. xy = 18 and yz = 21
B. xz = 42, where x, y and z are natural numbers.

2. If ONE = O + N + E, i.e. considering 'O'=6, N= 7 and E = 8 we will get ONE = O + N + E = 6 + 7 + 8 = 21.
Find the value of SEEN, if SEVEN = 19 and all alphabets have distinct values which are natural numbers.
A. FIVE = 14
B. NINE = 7

Directions for question 3: This question is based on the following information.

Raju's dad goes to various temples on certain days in a year of 365 days which are numbered 1, 2, ….365.
He goes to the Shiva temple on days which are multiples of 3.
He goes to the Venkateshwara temple on days which are multiples of 4.
He goes to the Saibaba temple on the days which are multiples of 7.

3. On how many days did Raju's dad go to only one temple?
(1) 204 (2) 214 (3) 220 (4) 240

4. If A, B, C, D, E, F and G are distinct single digit natural numbers from 1 to 7such that A + B + C = C + D+ E = E + F + G = 11, then how many ordered pairs (C, E) exist which satisfy the given relation?
(1) 0 (2) 2 (3) 4 (4) 8

CASELET

Directions for questions 1 to 3: Answer the following questions based on the statements given below.

(i) There are three buildings on each side of the road.
(ii) These six buildings are labelled as A, B, C, D, E and F.
(iii) The buildings are of different colours, namely, Violet, Indigo, Blue, Green, Yellow, and Orange.
(iv) The buildings are of different heights.

(v) E, the tallest building, is exactly opposite to the Violet coloured building.
(vi) The shortest building is exactly opposite to the Blue coloured building.
(vii) F, the Green coloured building is located between A and D.
(viii) C, the Yellow coloured building is exactly opposite to A.
(ix) B, the Blue coloured building is exactly opposite to F.
(x) A, the Orange coloured building, is taller than C, but shorter than B and D.

1. What is the colour of the building diagonally opposite to the Yellow coloured building?
(1) Orange (2) Indigo (3) Blue
(4) Violet (5) None of these

2. Which is the second tallest building?
(1) A (2) B (3) C
(4) D (5) Cannot be determined

3. What is the colour of the tallest building?
(1) Violet (2) Indigo (3) Blue
(4) Yellow (5) None of these

Directions for questions 4 to 7: Answer the following questions based on the information given below.

Six teams (P, Q, R, S, T and U) are taking part in a cricket tournament. Matches are scheduled in two stages. Each team plays three matches in stage-I and two matches in stage-II. No team plays against the same team more than once in the event. No ties are permitted is any of the matches. The observations after the completion of stage-I and stage-II are as given below.

Stage I:
- One team won all the three matches.
- Two teams lost all the matches.
- S lost to P but won against R and U.
- T lost to Q but won against R and U.
- Q lost at least one match.
- U did not play against the top team of stage-I.

Stage II:
- The leader of stage-I lost the next two matches.
- Of the two teams at the bottom after stage-I, one team won both matches, while the other lost both the matches.
- One more team lost both matches in stage-III.

4. The two teams that defeated the leader of stage-I are:
(1) U and S (2) T and U (3) Q and S
(4) T and S (5) U and Q

5. The only team(s) that won both matches in stage-II is (are):
(1) Q (2) T and U
(3) P, T and U (4) Q, T and U
(5) Q and U

6. The teams that won exactly two matches in the event are:
(1) P, S and U (2) S and T
(3) T and U (4) S, T and U
(5) S and U

7. The team(s) with the most wins in the event is (are):
(1) p (2) P and R (3) U
(4) T (5) Q and T

Directions for questions 8 to 12: Answer the following questions based on the information given below.

Anand, Bala and Chandu are three professional traders who traded in gold in the commodities market. Anand followed the strategy of buying at the opening of the day at 10 a.m. and selling the whole lot at the close of the day at 3 p.m. Bala followed the strategy of buying at hourly intervals: 10 a.m., 11 a.m, 12 noon, 1 p.m. and 2 p.m. and selling the whole lot at the close of the day. Further, he buys an equal quantity (by weight) in each purchase. Chandu followed a similar pattern as Bala but his strategy is some what different. Chandu total investment amount is divided equally among his purchases. The profit or loss made by each investor is the difference between the sale value at the close of the day less the investment. The return for each investor is defined as the ratio of the profit or loss to the investment amount expressed as a percentage.

8. On a day of fluctuating prices, the price of gold ends with a gain, i.e., it is higher at the close of the day compared to the opening value. Which trader got the maximum return on that day?
(1) Bala (2) Chandu
(3) Anand (4) Bala or Chandu
(5) Cannot be determined

9. Which one of the following statements is always true?
(1) Anand will not be the one with minimum return.
(2) Return for Chandu will be higher than that for Bala.
(3) Return for Bala will be higher than that of Chandu.
(4) Return for Chandu cannot be higher than that of Anand.
(5) None of the above

10. On a "boom" day the price of gold keeps rising throughout the day and peaks at the close of the day. Which trader got the minimum return on that day?
(1) Bala (2) Chandu
(3) Anand (4) Anand or Chandu
(5) Cannot be determined

One day, two more traders, David and Emma joined Anand, Bala and Chandu for trading in gold. David followed a strategy of buying equal quantity of gold at 10 a.m., 11 a.m. and 12 noon and selling the same quantity at 1 p.m., 2 p.m. and 3 p.m. Emma on the other hand followed the strategy of buying using all her money at 10 a.m. and selling all of them at 12 noon and again buying using all her money at 1 p.m. and again selling them at the close of the day at 3 p.m. At the close of the day the following was observed.

(i) Anand lost money in the transaction.

(ii) Both David and Emma made profits.
(iii) There was an increase in the price of gold during the closing hour compared to the price at 2 p.m.
(iv) The price of gold at 12 noon was lower than the closing price.

11. The price of gold was its highest at
(1) 10 a.m. (2) 11 a.m. (3) 12 noon
(4) 1 p.m. (5) Cannot be determined

12. Which of the following is necessarily false?
(1) The price of gold was not at its lowest at 2 p.m.
(2) The price of gold was at its lowest at 11 a.m.
(3) The price of gold at 1 p.m. was higher than the price at 2 p.m.
(4) The price of gold at 1 p.m. was higher than the price at 12 noon.
(5) None of the above

Directions for questions 13 to 15: Select the correct alternative from the given choices.

13. Four persons A, B, C, and D on a tour to a hill station booked four consecutive rooms among 101, 102, 103 and 104 (all the rooms being on the same side in that order) in a hotel for their stay there. A had a dispute with B and did not want to stay in a room adjacent to him. C being a childhood friend of D booked a room adjacent to D who in turn booked the room adjacent to B. If B booked an odd numbered room, then which room did C book?
(A) 101 (B) 102 (C) 103 (D) 104

14. Four girls Dolly, Molly, Polly and Kelly appeared for their semester paper on Mass Communication in which two of them failed. When asked as to who passed in the exam, they gave the following replies.
Dolly: I did not fail in the examination
Molly: I passed in the examination and so did Kelly.
Polly: Only one among Dolly and Kelly failed in the examination
Kelly: Only one among Polly and Dolly passed in the examination.
If it is given that exactly three of them were telling the truth, then find the person who was lying.
(A) Dolly (B) Molly (C) Polly (D) Kelly

15. In IIBM, a reputed B school with a total strength of 270 students, every student opted for at least one specialization among the three – Finance, HR and Marketing. The number of students who opted for all three was 37.5% of those who opted for exactly one. The number of students who did not opt for Finance was 50% of these who opted for Finance which in turn was 25% more than those who did not opt for HR. The number of students who opted for only marketing and HR was equal to those who opted for only Finance and Marketing and also $33^{1}/_{3}$% of those who opted for all three categories. If the number of students who opted for only Finance and HR was 50% of those who opted for only Finance, then how many students opted for exactly two of the three specializations?
(A) 36 (B) 72 (C) 45 (D) 54

Directions for questions 16 and 17: Akira and Aroki read four books each from among A, B, C, D, E, F, G and H such that each of the eight books was read by exactly one person. Further the following information was known.
The person who read D, also read F. Books A and B were not read by the same person. The person who read book F, did not read book C.

16. If Akira read books E and G, then Aroki did not read book
(A) D (B) F (C) H (D) C

17. If books C and E were not read by the same person, then which of the following two books was definitely read by the same person
(A) A and C (B) B and C
(C) G and H (D) Cannot be determined

Directions for questions 18 to 25: Select the correct alternative from the given choices.

18. Nine workers – W_1, W_2, W_3, W_4, W_5, W_6, W_7, W_8, and W_9 are to be allotted work in four shifts – Morning, Afternoon, Evening and Night with not more than three workers in the same shift. The workers are allotted the shifts as per the following conditions.
Each worker can be allotted work in only a single shift.
W_1 and W_2 do not work in the same shift.
W_3 is to be allotted a shift, earlier than W_6 but later than W_2.
W_2 is to be allotted the morning shift and W_4 is to be allotted a shift which is two shifts after W_1.
W_5 and W_7 are both allotted the same shift and it is one shift earlier than the shift allotted to W_6.
W_9 is allotted the same shift as W_3.
W_8 cannot be allotted work in which of the following shift?
(A) Morning (B) Afternoon
(C) Evening (D) Night

19. Four players – A, B, C and D are the members of a cricket team. They are to lead their team in the upcoming tournament where they will be playing five matches: Match1, Match 2, Match 3, Match 4 and Match 5 to be held one after the other with each match having two leaders, one as captain and the other as vice captain. No person can Captain the side in two consecutive matches and neither can the same person be the vice captain on consecutive matches. These players are to lead their team subject to the following conditions.
(1) B was the captain of the side for Matches 1 and 3.
(2) C can be the vice captain only if A is the captain.
(3) D refused to lead the team as captain if A or B led the team as captain in the preceding match.
(4) Each of the four players was the captain and the vice captain in at least one of the five matches.

Which of the following statements is true?
(A) C was the vice captain in Match 5.
(B) B was the Vice captain in Match 4.
(C) C was the vice captain in Match 2.
(D) A was the captain in Match 5

20. Each of the three persons – A, B and C have to buy three household appliances – AC, Refrigerator and Water Purifier on three days – Monday, Tuesday and Wednesday. No two persons buys the same type of appliance on any single day. B buys the Refrigerator on Tuesday, while he has to buy the Water Purifier before buying the AC.
Which of the following is true regarding A?
(A) A buys the Water Purifier before the Refrigerator.
(B) A buys the AC before buying the Water Purifier.
(C) A buys the AC before buying the Refrigerator.
(D) A buys the Refrigerator before buying the AC.

21. The following table gives the average runs scored by four players in all the matches in a year.

Player	Average Runs
Sachin	48
Dravid	50
Mongia	40
Hussey	42
Sachin & Mongia	44
Dravid & Hussey	46

Sachin played more number of matches than Dravid. If n is the average runs scored by all four players, then what must be true about x?
(A) $44 < x < 45$ (B) $45 < x < 46$
(C) $x = 45$ (D) None of the above

22. In an international maths olympaid, there were seven questions. The marks scored by two candidates in seven questions (though not necessarily in the same order) from Q1 to Q7 are as follows

Ramesh: 26, 30, 34, 42, 46, 50, 54
Sanjay: 13, 34, 42, 46, 50, 54, 62
One of the questions was declared invalid (after the exam and the marking was over). The average marks of both the candidates in the remaining six questions were calculated. Both candidates scored same marks in the "invalid question", and so as a result of its exclusion, the average score of one candidate increased while that of the other candidate decreased. What was the marks scored by each candidate in the "invalid question"?
(A) 42 (B) 46 (C) 34 (D) 50

23. (1) If A wins, then B wins.
(2) If B wins, then C does not win.
(3) Only if D wins, then at most one of A or C wins.
If there are only four players A, B, C and D, then which of the following must be true?
(A) D wins (B) D does not win
(C) B wins (D) A does not win

24. A race is held on three days and there are three drivers – Schumi, Sebastian and Mclaren. On each day they are ranked from one to three in the order in which they finish the race. On any day, Schumi is always ranked ahead of Mclaren. No driver secures the same rank on more than two days. Which of the following must be false?
(A) Sebastian wins the race on exactly two days.
(B) If Sebastian wins the race on Day 1, then he is ranked below Mclaren on the remaining two days.
(C) Sehbastian comes last on exactly two days.
(D) Sebastian beats Mclaren on all the three days.

25. A company has two branches, one at Kukatpally and the other at Narayanguda. Six persons – Tom, Raj, Ryan, Mokambo, Sashi and Govind have to work in these branches. However, no person works in both the branches. Each branch has three employees. Further, it is known that
(1) Tom & Raj do not work in the same branch.
(2) Sashi and Govind works in the same branch.

Which of the following must be true?
(A) If Ryan works in the Narayanguda Branch, then Mokambo does not work in the Kukatpally branch
(B) Both Tom and Mokambo work in the same branch.
(C) Both Govind & Raj work in the same branch.
(D) More than one of the above.

Directions for questions 26 to 28: The analysis of the way the three star players of Mumbai Indians made runs is given below. The runs made by Pollard, Dumminy and Bhajji consist of three types of shots "straight drive", "pull shot" and "others".

(i) The total runs made by Pollard is 40 more than that made by Bhajji.
(ii) Pollard scored 20% of his runs through the 'pull shot'.
(iii) The runs made by Dumminy is the average of the runs made by Pollard & Bhajji.
(iv) Bhajji scored 25% of his runs, i.e., 20 runs, through he 'pull shot'.
(v) The runs scored by Dumminy through 'others' is 15% of the sum of the total runs scored by Pollard and Bhajji.
(vi) The runs scored by Dumminy through "straight drive" is 60% of the total runs made by him.
(vii) Each player scored at least one run through each type of shot.

26. Find the maximum possible difference between the runs scored by Pollard through 'Straight drive' and that by Dumminy through 'Pull shot'.
(A) 110 (B) 86
(C) 50 (D) None of these

27. The runs scored by Bhajji through 'straight drive' is x% of the total runs scored by all the three players put together. Find the maximum possible value of x.
(A) 20 (B) 30 (C) 19 (D) $19^2/_3$

28. Find the runs scored by Bhajji through 'others'.
(A) 50
(B) 60
(C) 40
(D) Cannot be determined

Directions for questions 29 to 41: Select the correct alternative from the given choices.

29. (1) All shoes are pens.
(2) Not all pens are pencils.
(3) All pens are chocolates.
(4) Not all chocolates are pens.

Which of the following must be true?
(A) Some chocolates are not shoes.
(B) Some shoes are chocolates.
(C) Some pencils are not chocolates.
(D) More than one of the above.

30. Ramesh was gifted a wonderful watch by his father. When the watch was showing 4 p.m. Ramesh started for his friend Umesh's house to show off his watch. He was driving at a constant speed. His friends watch was showing 6:10 p.m. at the moment Ramesh arrived at Umesh's house. Ramesh immediately drove back at $\frac{5}{4}$ th of the earlier speed. As soon as he reched home, he saw that the time shown by his watch was 7:45 p.m. By how many minutes is Ramesh's watch faster/slower as compared to Umesh's watch?
(A) No difference (B) 10 mins slower
(C) 10 mins faster (D) 5 mins slower

31. In a selection processes, each candidate has to appear for two types of tests – T_1 and T_2. 200 candidates failed in T_2 while 300 failed in T_1. Ratio of the number of candidates who failed in both T_1 and T_2 to those who passed in both T_1 and T_2 is same as the ratio of the number of candidates who passed in T_2 to those who passed in T_1. This ratio is an integral value. Find the number of candidates who passed in both the tests.
(A) 100 (B) 50
(C) 20 (D) Cannot be determined

32. Four persons – W, X, Y, Z secured distinct ranks from 1 to 6 in four events – Swimming, Running, Cycling and Walking.

	Swimming	Running	Cycling	Walking	Total
W		5		6	15
X	1				6
Y	5	2	4		14
Z			1		18

Which of the following was ranked 3?
(A) X in Cycling
(B) W in Swimming
(C) Z in Running
(D) More than one of the above.

33. Each of the five students Adam, Ben, Cathy, Dimitry and Emmanuel wrote four exams, one each in Mathematics, Physics, Chemistry and Biology and were ranked from 1 to 5 (1 being the highest and 5 being the lowest) in each of the exams. The sum of the ranks obtained by them in the four exams were 11, 15, 12, 8 and 14 respectively in the same order where no two students got the same rank in any exam. Further it was known that
(1) Dimitry got the 4th rank in Physics and his ranks in Chemistry and Biology were the same.
(2) The rank of Emmanuel in Chemistry was the same as that of Dimitry in Mathematics.
(3) The ranks secured by Ben in Mathematics and Chemistry was the same.
(4) Ben had the least rank in Physics and Cathy got the 3rd rank in Mathematics.
(5) Emmanuel got distinct ranks in all four subjects and did not get the best rank in any subject.

Which of the following is definitely true.
(A) Adam's rank in Maths was 2.
(B) Adam's rank in Physics was 2.
(C) Adam's rank in Chemistry was 4.
(D) Cathy's rank in Chemistry was 3.

34. There are 120 families living in a housing society where each family owns at least one among a Refrigerator, an Air Conditioner and LCD TV.
- 24 families have only a Refrigerator.
- 20 families have only an Air Conditioner.
- 26 families have only a LCD TV.
- At least 40 families own both Refrigerator as well as Air conditioners.

At most how many families own a refrigerator and an LCD TV but not an air conditioner?
(A) 10 (B) 12 (C) 15 (D) 30

35. Five lecturers L_1, L_2, L_3, L_4 and L_5 are to deliver lectures in a college on four consecutive days from Monday to Thursday with two lectures to be delivered on each day. No lecturer is to deliver more than two lectures in the given period. Further it is known that,
L_1 delivers lectures on Monday and Thursday only.
L_3 delivers a lecture on a day only if L_2 delivered a lecture the preceeding day.
L_1 and L_4 do not deliver lectures on the same day. Each lecturer delivered at least one lecture in the given period.
L_3 and L_4 do not deliver lectures on consecutive days.

On which day did L_3 deliver the lecture?
(A) Monday (B) Tuesday
(C) Wednesday (D) Thursday.

36. A committee consisting of five members is to be formed from five boys among B_1, B_2, B_3, B_4 and B_5 and three girls among G_1, G_2 and G_3. There must be three boys and two girls in the committee. Further it is known that,
(1) If B_1 is selected, then B_2 cannot be selected.
(2) If B_3 is selected, then B_4 cannot be selected.
(3) Both G_1 and G_2 cannot be selected at the same time.
(4) If B_4 is selected then B_5 must also be selected.
(5) If B_2 is selected, then G_2 must also be selected.

The total number of ways in which the committee can be formed is
(A) 5 (B) 4 (C) 3 (D) 6

37. Three products P_1, P_2 and P_3 needs to be machined in two machines M_1 and M_2. A product cannot be machined in two machines at the same time and the entire machining of a product in a machine must be completed in one go. A product can be machined in the machines in any order (i.e., M_1 before M_2 or M_2 before M_1). The duration (in hours) for which the products needs to be machined in each machine is given in the table below.

	M_1	M_2
P_1	3	2
P_2	4	3
P_3	2	5

If the total time taken to finish machining all the three products is the minimum, then which of the following is definitely false.
(A) Product P_3 is machined in M_1 before Product P_2
(B) Product P_2 is machined in M_2 before Product P_1.
(C) Product P_2 is machined in M_1 before Product P_1.
(D) None of these.

38. In a group of 30 members belonging to a Sports Club, each member played at least one of the three games from football, cricket and hockey. 18 members played at least two games. If the number of members playing exactly one game was three times that of those playing all the three games, then how many played exactly two games?
(A) 12 (B) 14 (C) 16 (D) 10

39. Ten athletes M_1 to M_{10} competing in an athletics meet represented five countries among UK, Germany, France, Switzerland and Turkey with each country being represented by two athletes. Further it was known that M_1 and M_3 represented the same country.
Both M_2 and M_4 were either from France or from Germany.
M_5 and M_9 were from different countries.
M_6 belonged to UK and so did M_8
M_7 was from Turkey and M_9 did not belong to France or Switzerland.
Which country did M_{10} belong to, if M_5 did not belong to France or Switzerland?
(A) France (B) Turkey
(C) Germany (D) Switzerland

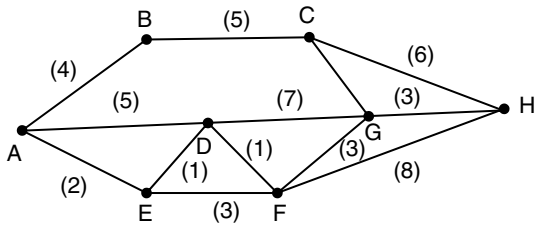
40. Each of the four friends Sneha, Shikha, Sushma and Sushmita bought a birthday present for their common friend Rahul. The gifts bought by them were a shirt costing ₹1200, a tie costing ₹800, trousers costing ₹2000 and a pair of shoes costing ₹2800 (not in the same order). The sum of the costs of the gifts bought by Sneha and Sushma was equal to that of the gift bought by Shikha. Further the difference between the cost of Sushma's gift and Sushmita's gift was equal to the cost of Sneha's gift. What was the gift bought by Shikha?
(A) Shirt (B) Trousers (C) Tie (D) Shoes

41. Two teams, each with three members, are to be selected from among the seven students – P, Q, R, S, T, U and V for the Inter School Meet consisting of a Debate and an Elocution contest. In addition it is also known that
(1) P was the only student who represented his school in both the contests.
(2) If Q was selected for Debate, then R must be selected for the Elocution contest.
(3) Both S and T cannot be selected for the same event.
(4) V represented his School in Debate where as U was selected for one of the two categories.
(5) If R was selected for the Elocution contest, then U cannot be selected for Debate.
Which of the following statement is definitely false?
(A) Both U and Q cannot be selected for the same event.
(B) If both V and U are selected for the same event, then Q must be selected.
(C) If S is selected for Debate then either R or T or Q must be selected for Elocution.
(D) None of these.

NETWORKS

Directions for question 1 and 2: The following network gives the bus routes of APSRTC in Hyderabad for its new A/C buses introduced in the previous month. Any passenger boarding a bus is charged ₹5 as local service charge and ₹8 as fixed charge in addition to a charge of ₹4 per km. Further it is also known that

(1) a bus does not visit the same city more than once.
(2) between any two cities only one mode of transport is available, i.e. the bus.
(3) in the network shown, the values in brackets denote the distance in kilometers.



1. Find the minimum cost incurred by a person to travel from A to H.
(1) ₹53 (2) ₹75 (3) ₹61 (4) ₹73

2. If the road connecting A to E is under repair, then what is the minimum cost incurred by a person to travel from A to H?
(1) ₹57 (2) ₹59 (3) ₹61 (4) ₹73

QBR (Miscellaneous)

Directions for question 1: Select the correct alternative from the given choices.

1. A group of 450 persons was tested for HIV infection, but there was an error in the testing process due to which four types of results were observed. The results identified the following four categories of persons.

C_1: Persons infected with HIV but reported negative in the test.

C_2: Persons not infected with HIV but reported positive in the test

C_3: Persons not infected with HIV and reported negative in the test

C_4: Persons infected with HIV and reported positive in the test

If it is known that the results of 275 people were correctly reported and that the number of infected people is 50% that of non-infected people, find the difference in the number of people under categories C_2 and C_4.

(1) 11 (2) 25 (3) 91 (4) 100

DI (Miscellaneous)

Directions for question 1: A company manufacturing cricket balls incurs a manufacturing cost of ₹50 per ball. The sale of the number of balls decreases linearly such that the number of balls sold decreases by 20 for every ₹2 rise in the selling price. It is known that when the selling price of each ball is ₹59, the number of balls sold is 700.

1. Which of the following will give maximum profit?

	Selling price	Number of balls sold
(1)	₹89	400
(2)	₹93	360
(3)	₹85	440
(4)	₹99	300

Directions for questions 2 and 3: There are two different investment schemes I and II yielding different percentage returns based on the market conditions. Market conditions are catagorised into three types, namely bearish, steady and bullish. The probabilities of the market conditions and the respective yield percentages for the two schemes are given below

Scheme I

Market conditions	Probabilities	Yield percentage
Bearish	0.25	–30
Steady	0.55	80
Bullish	0.20	100

Scheme II

Market conditions	Probabilities	Yield percentage
Bearish		–10
Steady	0.4	60
Bullish		100

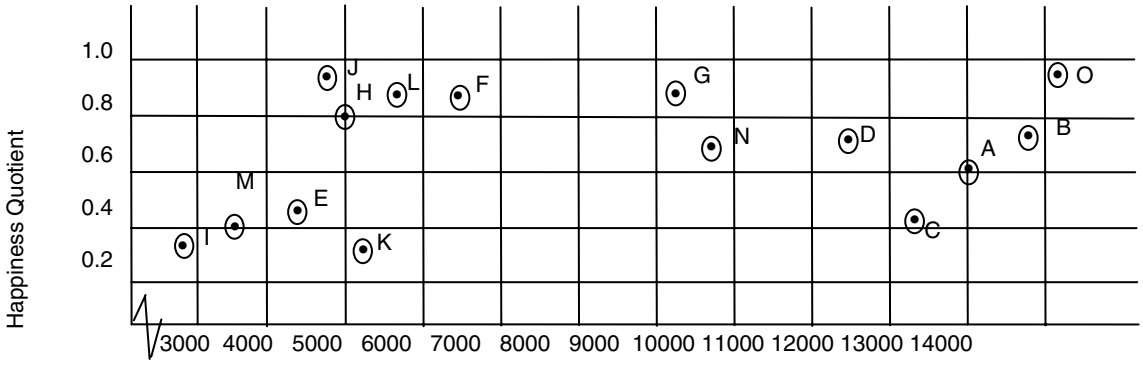
2. If the total yield from both the schemes is the same, what is the probability of the market condition being bearish for scheme II?

(1) 15% (2) 20% (3) 25% (4) 35%

3. If the probabilities for the market conditions being bearish, steady and bullish for scheme I are 0.2, 0.45 and 0.35 respectively instead of what is given in the table, then for the same yield percentage (as given in the table), what would be the percentage increase in the total yield from scheme I?

(1) 8.9% (2) 9.1% (3) 10.2% (4) 15%

Directions for questions 4 and 5: The following figure gives the per capital income and the Happiness Quotient of fifteen countries in the world vs the Per capita income. (Only for families with 3 or more members)



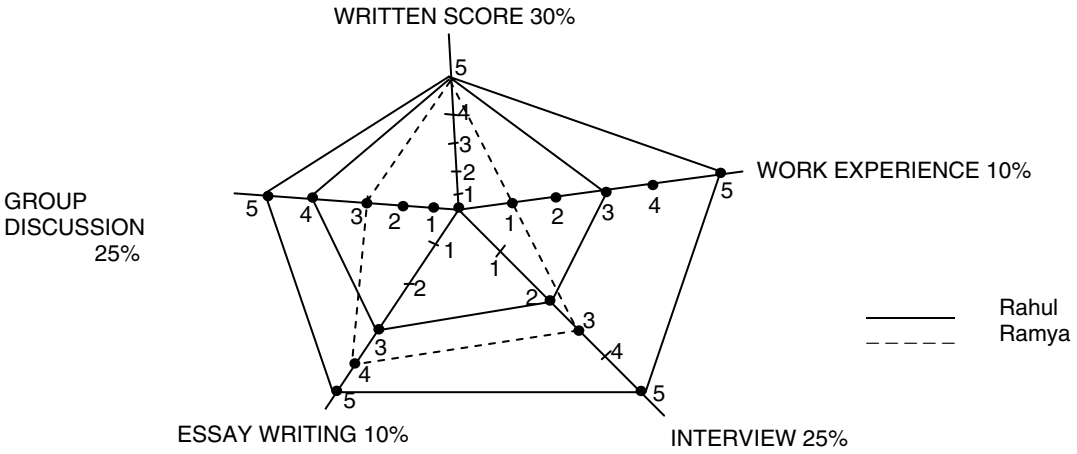
The following table gives the names of the countries represented in the above figure.

A-Taiwan	E-China	I-Philippines	M-Thailand
B-Australia	F-Czech Republic	J-Poland	N-Singapore
C-Japan	G-Israel	K-Slovakia	O-Austria
D-South Korea	H-Brazil	L-Latvia	

4. Which of the following gives the list of the countries which indicate "Low per capita Income with low happiness Quotient"
(1) China, Thailand, Slovakia
(2) China, Slovakia, Brazil
(3) China, Poland, Brazil
(4) China, Slovakia, Poland

5. Which of the following lists indicate "high happiness quotient with high per capita income".
(1) Australia Latvia, Austria
(2) Australia, South Korea, Austria
(3) Australia, Austria, Israel
(4) Australia, Latvia, Czech Republic.

Direction for question 6: The selection of a candidate into a B - school consisted of evaluating various factors - Written score, Group Discussion, Essay writing, Interview and Work experience. The B - school assigns some weightage to each of these factors. The cumulative score of a student is the sum of the product of the scores of the student attained in these factors and the weightage assigned to the respective factor. The following diagram gives the scores of two students Rahul and Ramya and also the weightage assigned to each factor.



6. What is the difference in the cumilative values of the scores obtained by Rahul and Ramya?
(1) 0.1 (2) 0.2 (3) 0.25 (4) 0.15

Directions for questions 7 and 8: In a game of cards played by two gamblers Raju and Ramu, the payout when a card out of King, Ace and Joker turns up, is given below along with the probability of occurrence.

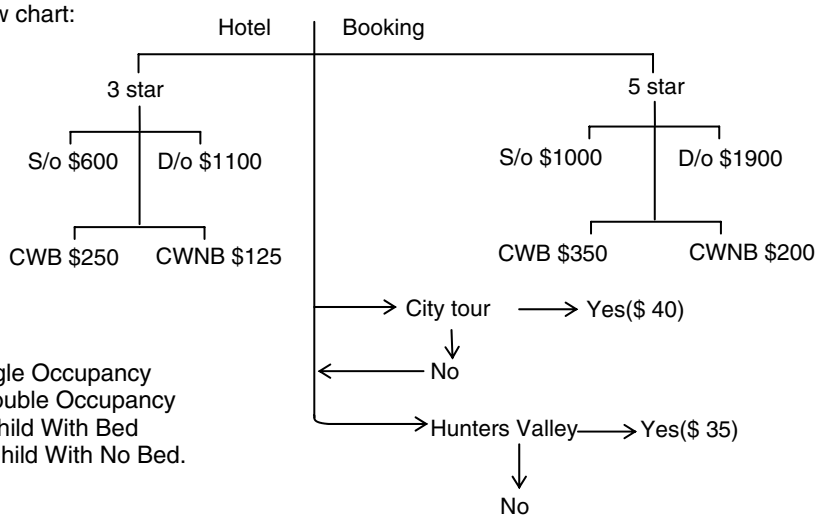
Card	Gambler	Pay out (in ₹)	Probability of occurrence
King	Raju	80	0.5
Ace	Raju	40	0.3
Joker	Raju	–20	0.2
King	Ramu	80	0.5
Ace	Ramu	60	0.3
Joker	Ramu	–20	0.2

Expected pay-out for any gambler is the weighted average of probability of occurrence and payout.

7. What is the expected pay-out for Raju?
(1)40 (2) 48 (3) 60 (4) 70

8. If the probability of getting a King and a Ace for Ramu is interchanged then what will be the percentage decrease in pay-out after the interchange as compared to the original pay-out?
(1)7.4% (2) 7.2% (3) 6.25% (4) 12.5%

Direction for question 9: An agency "Book a Hotel" offers its customers an incertive to book a hotel room in advance. It also offers its customers a half-a-day tour and also a tour of the Hunters Valley. The data is given in the following flow chart:



Note: S/O – Single Occupancy
D/O – Double Occupancy
CWB – Child With Bed
CWNB – Child With No Bed.

9. If Ramu, an employee of EMIT, books a hotel room in a 3 star hotel, goes on a city tour and visits the Hunters Valley, then what is the amount spent by Ramu?
(1) $685 (2) $665
(3) $675 (4) $655

10. 3 groups for 3 different modules have to be made from 4 junior software engineers (JSE) P, Q, R, S and 4 senior software engineers (SSE) X, Y, Z, W.
(1) P and S are in the group.
(2) X and Y cannot be in the same group as Q.
(3) R is a member of a group which has 3 people.
(4) R, Z, W are males.
(5) There has to be a male in every module.
(6) There has to be a JSE and a SSE in every module.
The person who is in the group having 3 members is
(1) X (2) Q (3) Z (4) W

Directions for questions 11 and 12: The following table shows some integers in a 5×5 grid.

	a	b	c	d	e
a		4		13	
b			8		12
c		14		10	
d			17	12	7
e		8			

The numbers in the blocks are placed according to the following conditions.
1. The number in column 'b' and row 'd' is 1/3 the sum of the numbers in column 'b'.
2. The numbers in column 'a' are squares of prime numbers in ascending order starting with the first odd prime number.

11. Which of the following is the value of the number in column 'b' and row 'b'?
(1) 23 (2) 19 (3) 17 (4) 16

12. What is the total sum of the numbers in column 'a'?
(1) 208 (2) 312 (3) 216 (4) 373

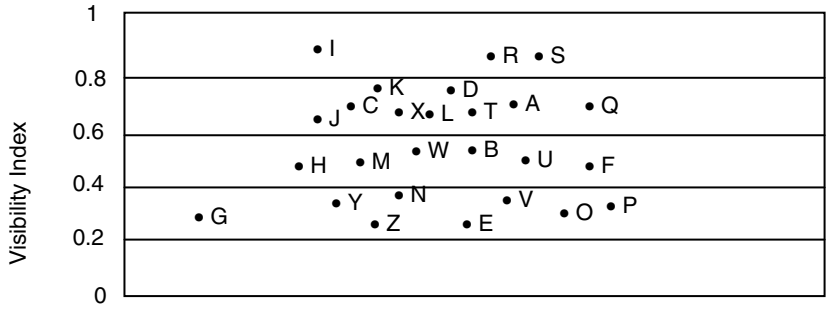
Directions for questions 13 and 14: Ram, a saree seller bought 400 sarees of 3 different types (Kanchipattu, Benarasi and Mangalagiri) in the ratio 5:3:2. He sells the sarees based on market demand. On the 1st day he sells 20% of the total volume. On the 2nd day he sells 50% of the total volume. On the 3rd day, he sells 30% of the total volume. The cost of each Kanchipattu, Benarasi and Mangalagiri saree is ₹350, ₹400 and ₹375 respectively. On each day he sells the sarees of each variety in the same ratio as he bought.

13. If on the 3rd day he sells Benarasi saree for a price which is more than 20% than their cost price whereas the other two sarees are sold at their cost price, then find the total amount received by Ram by selling the sarees on the 3rd day?
(1) ₹45280 (2) ₹47280
(3) ₹51280 (4) ₹49280

14. It is known that 25% of the sarees were slightly damaged. If Ram managed to sell the sarees which were slightly damaged at 20% loss, then what is the amount made by Ram by selling the damaged sarees. [consider the ratio of the damaged sarees in the three categories is the same as the ratio in which he bought]
(1) ₹37500 (2) ₹35000
(3) ₹29600 (4) ₹28000

15. The population of China in 2009 is 1.6 billion and it is expected to grow at 12% every year till 2020. If in 2020 the population of China is 15% of the total population of the world, then find the total population of the world in 2020 approximately?
(1) 30 billion (2) 37 billion
(3) 45 billion (4) 51 billion

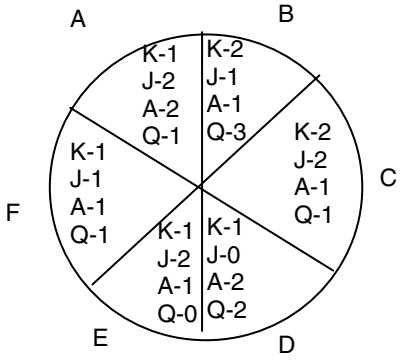
Direction for question 16 and 17: The following graph gives the visibility index of a certain number of people:



16. For what percentage of the total number of persons is the visibility index more than U?
(1) 50% (2) 54% (3) 60% (4) 64%

17. For which pair of persons the visibility index are equal?
(1) F, M (2) C, L (3) R, S (4) A, T

18. Six friends A-F play a game of cards. The winner of the game is found by adding the points allotted to the cards. The person having the highest number points is declared the winner of the game. The six friends are sitting around a circular table as given below



Card	Points
K - King	30
J - Jack	20
A - Ace	10
Q - Queen	5

Who among the following is the winner?
(1) A (2) B (3) C (4) E

Quant SI – CI

Directions for question 1 and 2: A company offers four schemes for investors to invest. The schemes are as follows.

Scheme 1: Gives a return of 8% p. a. interest being compounded annually
Scheme 2: Gives a return of 15% p. a. simple interest
Scheme 3: Gives a return of 10% p. a. interest being compounded semi-annually
Scheme 4: Gives a return of 20% p. a. compounded annually but 10% of the amount at the end of each year is paid as administrative charges and only the remaining 90% is reinvested.

1. If a person decides to invest an amount of ₹20000 equally in scheme 2 and scheme 3, then after how many years will his interest from scheme 3 be more than that from scheme 2?
(1) 7 (2) 9 (3) 10 (4) 11

2. If a person invests his entire money equally in all four schemes, then which scheme will fetch him the maximum interest after 8 years?
(1) scheme 1 (2) scheme 2
(3) scheme 3 (4) scheme 4

LA (Venn Diagram)

1. In a class all the students applied in at least one of the three examinations among CAT, FMS and XAT. 24 students applied for FMS, 32 students applied XAT and 36 students applied for CAT. 12 students applied for both FMS and XAT, 15 students applied for both XAT and CAT whereas 9 students applied for both FMS and CAT. If the number of students who applied for all the three was 25% of those who applied for at least two of the three examinations, then how many students were there in the class?
(1) 54 (2) 60 (3) 62 (4) 69

Directions for questions 2 and 3: Out of 800 persons living in a locality, 50% own a car, 60% can speak in Hindi, and 500 can speak in English. 15% of the total number of persons living in the locality own a car and can speak both in Hindi and English. Of the people who own a car, 240 cannot speak in English. Out of the people who can speak in Hindi, 180 own a car. There is no one in the locality, who does not own a car, cannot speak in Hindi and cannot speak in English.

2. What percent of the people who can speak in English, can also speak in Hindi?
(1) 48% (2) 54% (3) 72% (4) 75%

3. What proportion of the people in that locality do not own a car or cannot speak in English?
(1) 0.44 (2) 0.64 (3) 0.72 (4) 0.8

4. In a survey conducted among 120 families living in a locality regarding the daily newspaper they read among The Telegraph, The times of India and The Hindu, the following data was recorded. The number of families reading The Hindu, The Times of India and The Telegraph were 64, 48 and 45 respectively.21 families did not read any of the three newspapers whereas 9 families read all three newspapers.
How many families read exactly one newspaper?
(1) 40 (2) 45
(3) 50 (4) Cannot be determined

Directions for questions 5 and 6: 300 employees work in a company. 20% of the employees are HOD's. 70% of the employees have weekly off on Sunday. 180 employees own a car. Half of the HOD's own a car. All the HOD's have their weekly off on Sunday. 30 employees have a car but do not have their weekly off on a Sunday.

5. What percentage of the company HOD's own a car and have their weekly off on Sunday?
(1) 5% (2) 10% (3) 15% (4) 20%

6. How many employees are not HOD's and do not own a car?
(1) 60 (2) 70 (3) 80 (4) 90

7. 300 students passed engineering and chose only one of the two PG courses – MBA and MS. 70 students chose MS. In MBA, students chose at least one of the three specialisations among Finance, Marketing and HR. 20 chose general specialisation which includes all three specialisations. 100 students chose Marketing. 150 chose Finance. It is also known that the number of students who chose only Marketing and Finance is twice the number of students who chose only HR and Marketing which in turn is equal to the number of students who choose all three specialisations. How many students chose only HR specialization?
(1) 60 (2) 50 (3) 20 (4) 30

8. A few children visit a toy shop and buy some toys. 16 children buy toys of T & J, 26 children buy toys of C & H and 34 children buy toys of B & B. It is known that each child buys exactly two toys. How many children visited the toy shop?
(1) 28 (2) 32 (3) 34 (4) 38

Directions for questions 9 and 10: A survey was conducted to find out which of the four movies P, Q, R and S is liked by most people. The number of people who like P, Q, R and S are 24, 36, 29 and 25 respectively. It is further known that
– every person surveyed likes at least one movie
– the number of people who like P and Q are 12.
– the number of people who like R and P, Q and R are 18 and 16 respectively.
– the number of people who like only P, R and S are 8 and those who like P, Q and R are 6
– people who like S also like R.

9. How many people like only Q?
(1) 10 (2) 11 (3) 12 (4) 14

10. How many people like all 4 movies?
(1) 7 (2) 6 (3) 5 (4) 4

LA (Miscellaneous)

1. Six pizza stores are ranked as per the price offered by them on a particular variety of pizza and the time taken by them to deliver the order. The store offering the least price is ranked 1 and when ranked as per the delivery time, the store which delivered the earliest was ranked 1. If more than one store offered the same price or delivered in the same time, then they are given the median of all the rankings. The price ranking is given a weightage of 0.7 whereas the delivery time ranking is given a weightage of 0.3. Study the following table carefully and answer the given question:

Pizza store	Price (in ₹)	Delivery time (in minutes)
A	120	30
B	155	25
C	85	20
D	95	45
E	125	30
F	120	40

Which of the following pizza stores got the third lowest net score?
(1) A (2) D (3) E (4) F

Directions for questions 2 to 4: In the Recruitment process, a company asked the people who applied to write four objective papers each consisting of four questions. In the first paper, for every correct answer 15 marks were awarded whereas for every wrong answer 5 marks were deducted. In the second paper, for every correct answer 20 marks were awarded and for every wrong answer 15 marks were deducted, but if a person got all 4 questions correct, an additional 30 marks were awarded. In the third paper, for every correct answer 25 marks were awarded and for every wrong answer 15 marks were deducted. In the fourth paper, 20 marks were awarded for every correct answer and 5 marks deducted for every wrong answer but if a student got three or more questions wrong, 50 marks were deducted from his total.

2. What is the least score obtained by a person in these four papers, if he gets 4 wrong answers across all four papers?
(1) 200 (2) 150 (3) 180 (4) 165

3. What is the difference between the highest marks obtained by two persons one of whom wrote paper 1 and paper 3 and the other wrote paper 2 and paper 4, each getting 2 wrong answers overall?
(1) 20 (2) 30 (3) 40 (4) 60

4. What is the least total score obtained by a person who got 2 questions wrong and attempted 3 papers?
(1) 145 (2) 150 (3) 160 (4) 165

Directions for questions 5 and 6: In a 9 seater van having 3 rows of 3 seats each, the seats in the first row are numbered 1, 2 and 3, those in the 2nd row are numbered 4, 5 and 6 and those in these last row are numbered 7, 8 and 9. The seats are arranged in a grid form with 3 rows and 3 columns. These seats are occupied by 9 persons from P, Q, R, S, T, U, V, W and X not necessarily in this order. The seats are occupied subject to the following conditions..
1. Q the driver occupies seat 3 and both R and V are in his column.
2. P is the son of W and occupies the seat in the same row as V and S.
3. T occupies seat 5 and is in the same row as W and is not seated immediately in front of S.
4. X and T are not seated in the same column.

5. If persons sitting in the seats swap their positions in the following order (1,4) (2,6) (4,6) (5, 7), (4, 5), (7,2), then which of the following persons will be seated beside U?
(1) X (2) R (3) S (4) T

6. If swapping of seats is done in the order (1,2) (2,8) (9,2) (4,9), (7,5) (5,8) (8,4), then which of the following is true?
(1) S is in the fifth seat.
(2) W is in the ninth seat.
(3) T is in the second seat.
(4) P is in the second seat.

Directions for questions 7 to 9: A survey was conducted in four colonies A, B, C and D whose populations are in the ratio 3 :5 : 3 : 4, to find (i) the proportion of residents who prefer watching movie to eating out & (ii) the proportion of people who prefer surfing the internet to chatting with friends. The following was the data collected.

	Proportion of residents who preferred watching movies	Proportion of residents who preferred surfing
Colony A	0.6	0.64
Colony B	0.45	0.55
Colony C	0.65	0.68
Colony D	0.48	0.75

7. If 61% of the residents in colony C preferred both watching movies and surfing the net, then what percentage of the residents in colony C did not prefer any of the two?
(1) 30% (2) 28% (3) 25% (4) 35%

8. In which colony do the maximum number of residents prefer chatting with friends?
(1) A (2) B (3) C (4) D

9. In how many colonies is the number of residents who prefer surfing the net more than the average number of residents in the four colonies who prefer the same?
(1) 0 (2) 1 (3) 2 (4) 3

10. There are eight oil tanks A, B, C, D, E, F, G & H in a refinery by which oil is being transferred. Due to the lack of sufficient connecting routes, oil cannot be transferred from any tank to any other tank but can only be transferred subject to the following conditions.
(a) Oil can be transferred from A to E or F
(b) From E oil can be transferred to A, C or D
(c) From D oil can be transferred to A, B or C
(d) From F oil can be transferred to D or G
(e) From H oil can be transferred to A or E
(f) from G oil can be transferred to E, C or H
(g) from C oil can be transferred to A or G
(h) from B oil can be transferred only to E.

In how many ways can oil be transferred from tanks B to tank H if the same tank cannot be revisited in the route, i.e. oil can pass through a particular tank only once?
(1) 5 (2) 6 (3) 7 (4) 8

11. Arun, Varun and Kiranmala, subscribed to three business magazines, among India-Day-to Day, India-Everyday and India-These-Days subject to the following conditions:
1. If Arun subscribes to India-Day-to-Day, then Varun subscribes to India-Every-day.
2. If Arun subscribes to India-Every-day, then Kiranmala subscribes to India-These-Days.
3. If Varun subscribes to India-These-Days, then Arun subscribes to India-Every-Day.
4. If Kiranmala subscribes to India-Day-to-Day, then Varun subscribes to India-These-Days.
5. If Kiranmala subscribes to India-Every-Day, then Arun subscribes to India-These-Days
6. If Varun subscribes to India-Day-to-Day, then Kiranmala subscribes to India-Every-Day.

From the above constraints, which of the following can be definitely concluded, if it is given that each person subscribed for exactly one business magazine.
(1) Arun subscribed to India-Day-to-Day
(2) Kiranmala subscribed to India-Every-day
(3) Varun did not subscribe to India-These-Days.
(4) More than one of the above.

12. If it is given that Kiranmala did not subscribe to India-These-Days, then which of the following magazines did Varun subscribe to?
(1) India-Day-to-Day
(2) India-These-Days
(3) India-Every-day
(4) Cannot be determined

13. There are 6 baskets 1, 2, 3, 4, 5 and 6. Two baskets have gold, two have silver and the other two have nothing in them. They are placed one beside the other in a row. Rajini, a contestant, has to select one of the baskets and can get whatever is present in the basket. No two baskets having the same thing inside are kept side by side. What is the probability that Rajini goes home by taking something?
(1) $\frac{1}{6}$ (2) $\frac{2}{3}$ (3) $\frac{1}{3}$ (4) $\frac{1}{2}$

14. In a forest there are P tigers and a goat. Grass is eaten by both the goat and the tigers but the tigers would rather prefer eating a goat. If a tiger eats the goat then the tiger transforms into a goat and hence runs the risk of being eaten by another tiger. The tigers are intelligent and would not risk being eaten.

Which of the following is true?
(1) If P is odd, no tiger eats the goat.
(2) If P is odd tiger close to the goat eats the goat.
(3) For any value of P, the goat is not eaten.
(4) For any value of P, the goat gets eaten.

Directions for questions 15 and 16: During his holidays Ram wanted to learn Tabla and Piano. Ram went to learn Tabla for 12 days and to learn Piano for 8 days.

15. If on 4 days he went to learn both the instruments, then on how many days in all did Ram go to learn playing musical instruments?
(1) 8 (2) 10 (3) 14 (4) 16

16. It is known that on 6 days he went to learn only Tabla and not Piano, then on how many days in all did Ram go to learn playing musical instruments?
(1) 8 (2) 10 (3) 14 (4) 16

Directions for question 17: The following gives the process of arranging words by a word arrangement machine. Read the pattern below and answer the questions.

Input	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Step 1	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Step 2	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
Step 3	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday

17. Which step will be the same as the input?
(1) Step 24 (2) Step 26 (3) Step 29 (4) Step 28

LA (Circular Arrangements)

1. Eight persons A, B, C,D,E,F,G and H are seated around a circular table, such that each person has another person seated exactly opposite him. B is seated opposite to E who is seated to the immediate right of G.D is seated between E and C. If F is not seated adjacent to A, then who is seated opposite to H?
(1) D (2) C
(3) G (4) either C or D

2. Ten persons P, Q, R, S, T, U, V, W, X, and Y are seated around a circular table with equal distance between any two adjacent persons such that any person can only see the person seated opposite him and the two persons seated on either side of that person (i.e on either side of the person seated opposite).
Further the following information is known. P does not want to see Q, R, S, or T but wants to see X and Y.
U does not want to see R, S, T or V, but wants to see P, W and Q.
T wants to see X and Y.
Which of the following gives the correct seating arrangement?
(1) P T R U V X Y S Q W
(2) P W Q V Y X U R S T
(3) P S T R U Y X VQ W
(4) P Q W V Y X R U S T

3. A company "XYZ Ltd" asks some of its Branch coordinators to attend a Round Table Conference.

The coordinators sit around a circular table.

– The Mumbai coordinator sits to the left of the Bengaluru coordinator, who is opposite the Hyderabad co-ordinator

– The Delhi co-ordinator is not opposite the Chennai coordinator but is to the left of the Hyderabad coordinator

Who is opposite to the Delhi coordinator?
(1) Mumbai co-ordinator
(2) Chennai co-ordinator
(3) Bengaluru co-ordinator
(4) Hyderabad co-ordinator

4. Six employees P, Q, R, S, T and U of EMIT Pvt Ltd. go to a party. They sit around a circular table. P and S do not sit together and R and T always sit together. In how many ways can they be seated?
(1) 12 (2) 24 (3) 6 (4) 18

LA (Distribution)

Directions for questions 1 to 3: Twelve persons who are members of a rock band live in a building having twelve floors from the 1st floor to the 12th floor with the ground floor and the basement being used for parking. All the persons live in distinct floors. Among them there are 4 singers, 3 guitarists, 2 drummers, 2 instrumentalists and 1 keyboard player. There are seven male members in the group A, B, C, D, E, F and G and 5 female members P, Q, R, S and T. These members live in the building subject to the following conditions:

1. No two female members lived on adjacent floors and no singer lived on floors at the extreme ends, i.e. the topmost floor or the bottom most floor.
2. D and R were both guitarists and lived on adjacent floors but neither of them lived on the topmost or the bottommost floor.
3. P and C were both singers and had exactly one guitarist living on an adjacent floor.
4. A was neither a drummer nor a guitarist whereas F was not a drummer.

5. T lived on a floor adjacent to at least one drummer where as Q, the keyboard player lived on the 7th floor.
6. All the singers were 3 floors apart from each other where as all the guitarists were at least 2 floors apart from each other.
7. There were 3 floors between Q and B, who was an instrumentalist, and there was only one female guitarist.
8. Both the drummers were males and neither lived in the topmost floor or the bottommost floor.

1. How many male singers were there?
(1) 1 (2) 2 (3) 3 (4) 4

2. How many floors were above the floor on which G lived?
(1) 4 (2) 6
(3) 8 (4) Cannot be determined

3. Who lived on the second floor?
(1) A (2) S
(3) F (4) Cannot be determined

Directions for questions 4 and 5: Six couples got married on different dates in the years between 1993 and 1999. Only two couples got married in the same year and only two couples got married in the same month. The couple who got married on April 23rd, got married before the couple who got married on October 15th, but after the couple who got married on November 5th. There is only one couple who got married in 1993 and they got married in the same month as the couple who got married in 1998, there being only one couple who married in 1998. The couple who got married on October 15th was not the last couple to got married and the couple who got married on January 3rd was not the 3rd couple to have got married. Two couples got married on the same day in consecutive months but not in the same year.

4. Both the couples who got married in the same month were married in the month of
(1) October. (2) April.
(3) November. (4) January.

5. What was the least difference between the marriage dates of any two couples (in days)?
(1) 49 (2) 78
(3) 160 (4) None of these

6. From a group of nine friends consisting of three boys Jalan, Jagan, and Jeevan and six girls Kekul, Kokila, Kavya, Kavita, Kaya and Kadambari, three groups each consisting of three members are formed from the above persons subject to the following conditions:
1. Kavya and Jeevan should be there in the same group.
2. Kavya and Kekul should not be there in the same group.
3. Kokila wants Jalan in her group.
4. Kaya and Kavitha must be in the same group.
5. Jalan prefers not to be in the same group as Kekul.
6. In a group, the number of boys must not be more than the number of girls.

Jagan is in the same group as
(1) Kaya and Kavita.
(2) Kaya and Kadambari.
(3) Kavita and Kadambari.
(4) None of these

Directions for questions 7 and 8: There are 5 cricketers, L, M, N, O and P from different countries (India, Australia, S.A, SL, England) and playing for 5 different teams in IPL (KKR, RCB, DC, DD, MI). These cricketers are made to stand in a row for post match presentation.
– L, who is from SL, does not play for MI and is standing at the extreme right end of the row.
– The cricketer who is to the immediate left of N plays for KKR and neither of them are from Australia.
– The cricketer who is from India plays for RCB, and is adjacent to only one player P who plays for DC.
– O is to the immediate left of L, and is from SA.

7. What is the correct combination of country and the team for which M plays?
(1) India, RCB (2) England, KKR
(3) England, MI (4) SA, KKR

8. The player from Australia plays for which team in the IPL?
(1) DD (2) MI (3) KKR (4) DC

9. Four faculty members A, B, C, and D visited a college on 4 consecutive days starting from Monday and taught 4 different subjects – Maths, Physics, Chemistry and Biology. Further it is known that A and C went to the college on consecutive days and taught Biology and Chemistry respectively. B went to the college on the last day and did not teach Physics. If Physics was taught immediately after Chemistry then when was Biology taught?
(1) Monday (2) Tuesday
(4) Wednesday (3) Thursday

Directions for questions 10 and 11: In a hockey tournament, 15 teams from 'A' to 'O' participated. The teams are arranged in ascending order of the points they scored in the tournament.

The following information is know.

(a) Team L scored the least number of points, i.e 96
(b) Team I scored the maximum number of points, i.e 364
(c) Team D, team G and team C were placed 4th, 7th and 10th respectively with 116, 182, and 218 points.
(d) Team N and team B got 108, 165 points less than Team F.
(e) The points scored by Team 'O' = 251
(f) Team A got 361 points.
(g) Team H got 4 points more than team M and team E got 18 points less than Team N.

(h) The sum of the total points for the following positions are as follows.
1 + 2 + 3 = 302; 4 + 5 + 6 = 412; 7 + 8 + 9 = 590; 10 + 11 + 12 = 753; 13 + 14 + 15 = 1046
(i) The ascending order of the teams is O, J, F, OJF.

10. What is the difference in the points obtained by teams J and K?
(1) 136 (2) 144 (3) 151 (4) 161

11. What is the position of team E?
(1) 7^{th} (2) 8^{th} (3) 9^{th} (4) 10^{th}

Directions for questions 12 and 13: Seven friends P, Q, R, S, T, U and V went to a restaurant. Each friend is wearing a different coloured shirt among Violet, White, Orange, Blue, Green, Yellow and Red. They order seven different cool-drinks among Pepsi, Thums up, Sprite, Mazaa, Coke, Mountain dew and Fanta.

– P, who wears an orange shirt drinks Sprite.
– The friend who wears a green shirt drinks Pepsi.
– R wears a red shirt.
– U wears a blue shirt.
– T drinks Thums up and Q drinks Coke.
– The friend who wears a green shirt, the friend who drinks Fanta and V ordered the same dish.
– The friend who wears the violet shirt drinks Mazaa.

12. Who among the following drinks Pepsi?
(1) Q (2) S (3) T (4) V

13. Which of the following is a correct combination of person, colour of shirt worn and the cool-drink he ordered?
(1) V, violet, Maaza
(2) U, blue, Fanta
(3) R, red, Mountain Dew
(4) Q, yellow, Coke

Directions for question 14 and 15: P, Q, R, S, T, U, V, W and X are students learning a foreign language. and were divided into 3 groups of 3 each for the purpose of presenting a seminar.
Group I P, Q, R
Group II S, T, U
Group III V, W, X

But at the time of the seminar, some of the students were missing. So the teacher had to change the order of making presentations.
– X presented before T.
– R presented before V but after U.
– Q presented after W, P and S
– W presented the seminar before U and X but after P and S.

14. Which among the following is the group of students who presented their seminar in the 1^{st} group?
(1) W, P, S (2) W, U, X
(3) P, S, U (4) P, Q, R

15. Who among the following cannot be the first person to make his presentation in the 2^{nd} group?
(1) X (2) U (3) Q (4) V

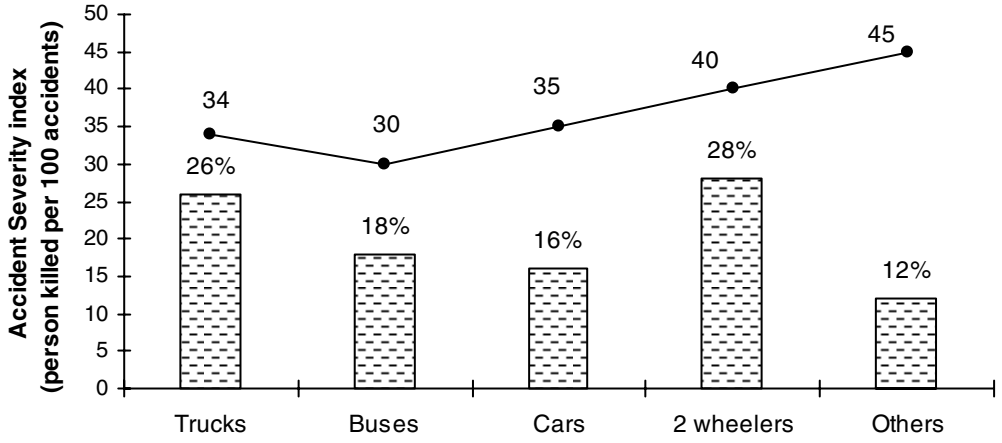
16. Seven students P, Q, R, S, T, U and V go to tuition in different subjects-Mathematics, Physics and Chemistry. Out of 7 students, 3 were girls. It is further known that
– R goes for Physics tuition
– P and U go to the same tuition
– Every tuition is attended by at least 2 people
– Q who goes to Maths tuition does not go to the same tuition as S.
– T and V go to same tuition.
Who among the following definitely goes to the tuition in which 3 students attend?
(1) S (2) T (3) V (4) Q

Quant ERPV

1. Two auditoriums are designed to be constructed such that their floors are square shaped with the ratio of the sides of the squares being 1 : 2. A group of N workers start working in A_1. After $1^{th}/6$ of a day, $\frac{3^{th}}{4}$ of the workers working in A_1 move over to A_2 and start working. At the end of the day the work in A_1 just gets completed and the work in A_2 gets completed when N workers work for $\frac{7}{8}$ th of the next day as well. Find the value of N.
(1) 24 (2) 36
(3) 48 (4) Cannot be determined

Line + Bar graph

Directions for questions 1 to 4: The following bar graph gives the accident severity index and the type of vehicles responsible for accidents in the year 2005. A total of 75000 accidents occured during 2005.



1. How many persons were killed in 2 wheeler accidents?
(1) 6780 (2) 7200 (3) 8400 (4) 9600

2. The ratio of people killed to people who got injured in the accidents is the highest for
(1) 2 wheeler accidents
(2) Other types of accidents
(3) Car accidents
(4) Truck accidents

3. How many persons were injured by car accidents?
(1) 6400 (2) 7800 (3) 4200 (4) 7200

4. By how much is the number of persons killed in truck accidents more than the persons injured in accidents caused by other types of vehicles?
(1) 1440 (2) 1720 (3) 1480 (4) 1680

DI (Distribution)

Directions for questions 1 and 2: Atul has 6 policy accounts which are going to mature in between the years 1997 to 2002 (both the years included). Two policies have their maturity in the same month whereas two policies have their maturity in the same year. One of the policies matures on Feb 29th. It matures before the policy which matures on January 10th but after the policy which matures on August 8th. The first policy matures on August 24th 1997. The policy which matures on September 17th matures immediately before the policy which matures on May 21st which inturn is the last policy to mature.

1. Which of the following policies is the 3rd to mature?
(1) Feb 29th, 2000 (2) Jan 10th, 2001
(3) August 8th, 1999 (4) August 8th 1998

2. In which of the following years did Atul receive money from 2 policies?
(1) 2000 (2) 2001
(3) 1999 (4) 2002

LA(Linear Arrangement)

Directions for questions 1 to 3: Ten friends who stay in 3 different countries among USA, UK and Australia meet at a reunion party in their school in India. They stand in a row according to their roll numbers in the school. There are 5 male friends among P, Q, R, S and T and 5 female friends among F, G, H, I and J. 5 friends stay in USA, 3 stay in the Australia and 2 stay in the UK.

- No two friends from USA stand next to each other.
- P is from Australia and stands in between I and J.
- The friends from UK are at least 4 places away from each other.
- S is from UK and is 3rd in the row from the left end.
- The extreme ends are occupied by the friends who stay in USA. They positions are of different genders.
- F, Q, G stand in the 7th, 6th and 5th from the right end of the row respectively. Two of these stay in the USA.
- R is adjacent to I.

1. How many female friends stay in the USA?
(1) One (2) Two
(3) Three (4) Four

2. How many friends stand in between friends from UK?
(1) Three (2) Four
(3) Five (4) Six

3. Who among the following is the male friend from the USA?
(1) Q (2) T
(3) R (4) Both A and B

Directions for question 4 and 5: Seven friends Pradip, Qureshi, Raju, Shyam, Tarun, Uttam and Vamsi stand in a row. It is further known that

(i) Shyam is at the extreme left end of the row.
(ii) Qureshi is two places to the right of Tarun.
(iii) There are exactly 2 persons in between Uttam and Vamsi.
(iv) Raju has the same number of people to his left as to his right.

4. Who is standing 3 places away to the left of Qureshi?
(1) Tarun (2) Shyam
(3) Pradip (4) Raju

5. Who is standing to the immediate right of Shyam?
(1) Qureshi (2) Uttam
(3) Pradip (4) Vamsi

LA (Sequencing)

Directions for questions 1 to 3: Five students A, B, C, D and E are arranged according to their marks under the following conditions

– C got more marks than A but less than E.
– D got less marks than 3 other students.
– Two students got the same marks.
– The first and the last ranked students did not get the same marks as any other student.

1. Which student got the highest marks?
(1) A (2) B (3) C (4) E

2. Which two students got the same marks?
(1) B and D (2) B and C
(3) A and D (4) C and D

3. Which of the following is the descending order of the students according to their marks?
(1) ECBDA (2) EACDB
(3) EBADC (4) ECADB

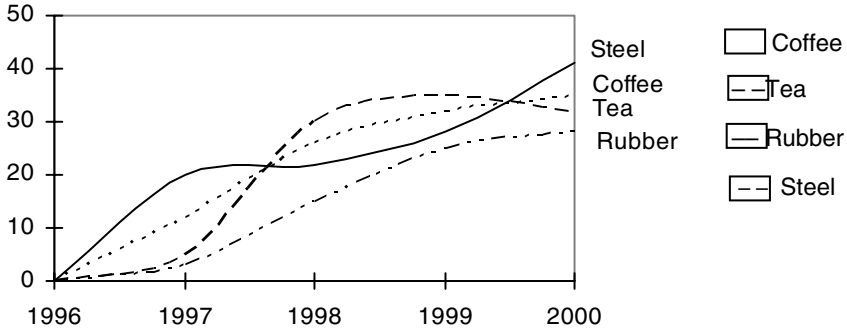
Directions for questions 4 and 5: Five movies P, Q, R, S, T were set to release on every Friday of a month. P was neither the first nor the last movie to be released. Q was released immediately before R and there were at least 2 movies to be released before R. There was one movie released in between S and T (Assume that no movie was scheduled to release during this period apart from these 5)

4. Which of the following movies was released last?
(1) S (2) T (3) R (4) Q

5. How many movies were released before P?
(1) 1 (2) 2 (3) 3 (4) 4

Line Graph + Table

Directions for question 1: The following line graph gives the details of the production of different plants per unit area:



Profit/ton = Revenue/ton – Cost/ton

The following table gives the cost and revenue obtained by these plants per ton in 2000.

	Coffee	Tea	Rubber	Steel
Cost/ton	₹12340	₹13460	₹8900	₹15800
Revenue/ton	₹`15610	₹14280	₹12300	₹19960

1. Which of the following plants has the maximum profit in 2000?
(1) Coffee (2) Tea (3) Rubber (4) Steel