

Sr No.	MSC Quantative Finance
1	Which fraction comes next in the sequence
	$\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, ?$
Alt1	9/32
Alt2	10/17
Alt3	11/34
Alt4	12/35

2	Choose the missing term out of the given options: Ac _ cab _ baca _ aba _ acac
Alt1	aacb
Alt2	acbc
Alt3	babb
Alt4	bcbb

3	Leaf is related to Sap in the same way as Bone is related.....?.....
Alt1	Fluid
Alt2	Blood
Alt3	Marrow
Alt4	Calcium

4	Select the lettered pair that has the same relationship as the original pair of words: Rotate: Gyrate
Alt1	Putrefy: Reject
Alt2	Anachronism: Cubism
Alt3	Accolade: Criticism
Alt4	Absolve: Exonerate

5	Choose the alternative, which is similar to the given words: Liver : Heart : Kidney
Alt1	Blood
Alt2	Nose
Alt3	Lung
Alt4	Urine

6	Spot the defective segment from the following:
Alt1	The more you read
Alt2	the more will you
Alt3	get to know
Alt4	about more things

7	Choose the meaning of the idiom/phrase from among the options given: A rainy day
Alt1	a holiday
Alt2	a difficult time
Alt3	a fine day
Alt4	a wet day

8	The villagers plan to ----- the elections in protest.
Alt1	avoid
Alt2	ignore
Alt3	neglect
Alt4	boycott

9	Choose the option closest in meaning to the given word: PUERILE
Alt1	vulgar
Alt2	perverse
Alt3	childish
Alt4	young

10	Choose the antonymous option you consider the best: OBTUSE
Alt1	fast
Alt2	sharp
Alt3	reliable
Alt4	lucid

11	In a Cricket tournament, each of the six teams will play every other team exactly once during the league phase. How many matches will be played during the league phase in total ?
Alt1	12
Alt2	36
Alt3	15
Alt4	24

12	A walks 10 metres in front and 10 metres to the right. The every time turning to his left, he waks 5, 15 and 15 metres respectively. How far is he now from the starting point ?
Alt1	15 metres
Alt2	5 metres
Alt3	10 metres
Alt4	30 metres

13	The sum of the income of A and B is more than that of C and D taken together. The sum of the income of A and C is the same as that of b and D taken together. Moreover, A earns half as much as the sum of the income of b and D. Whose income is he highest ?
Alt1	A
Alt2	B

Alt3	C
Alt4	D

14	Five boys A, B, C, D and E are seated on a bench. A is to the left of C. b is to the immediate right of D and there are two people between C and D. E is to the extreme right of the row. Who is exactly at the middle of this group ?
Alt1	A
Alt2	B
Alt3	C
Alt4	E

15	A man is facing south. He turns 1350 in the anticlockwise direction and then 1800 in the clockwise direction. Which direction is he facing now?
Alt1	North East
Alt2	North West
Alt3	South East
Alt4	South West

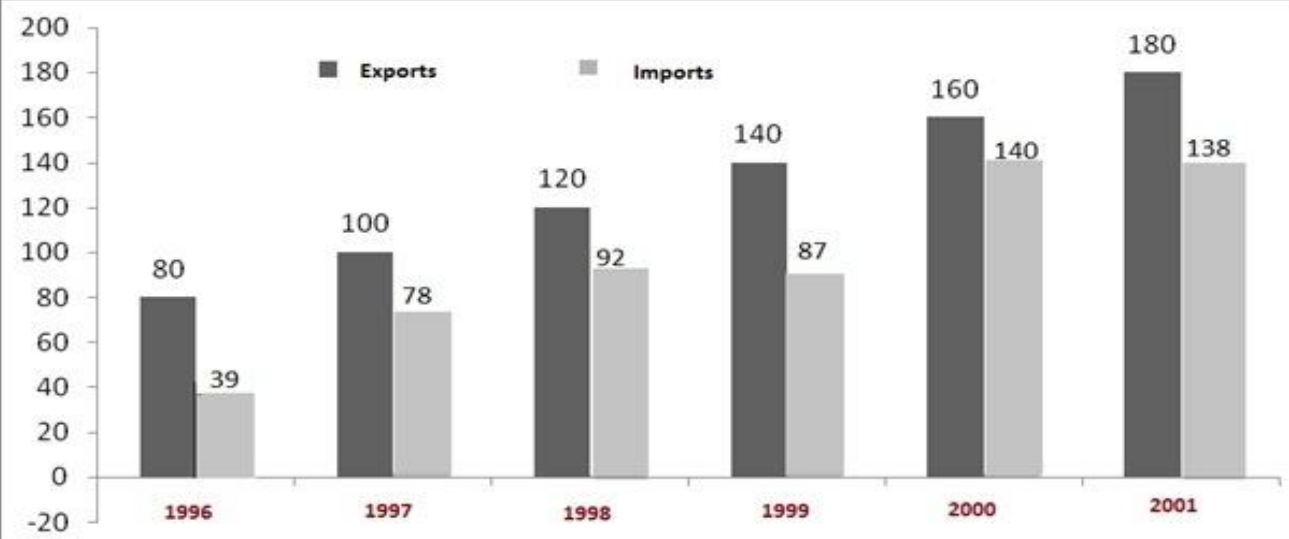
16	Find the number which when added to itself 17 times becomes 126.
Alt1	13
Alt2	7
Alt3	9
Alt4	18

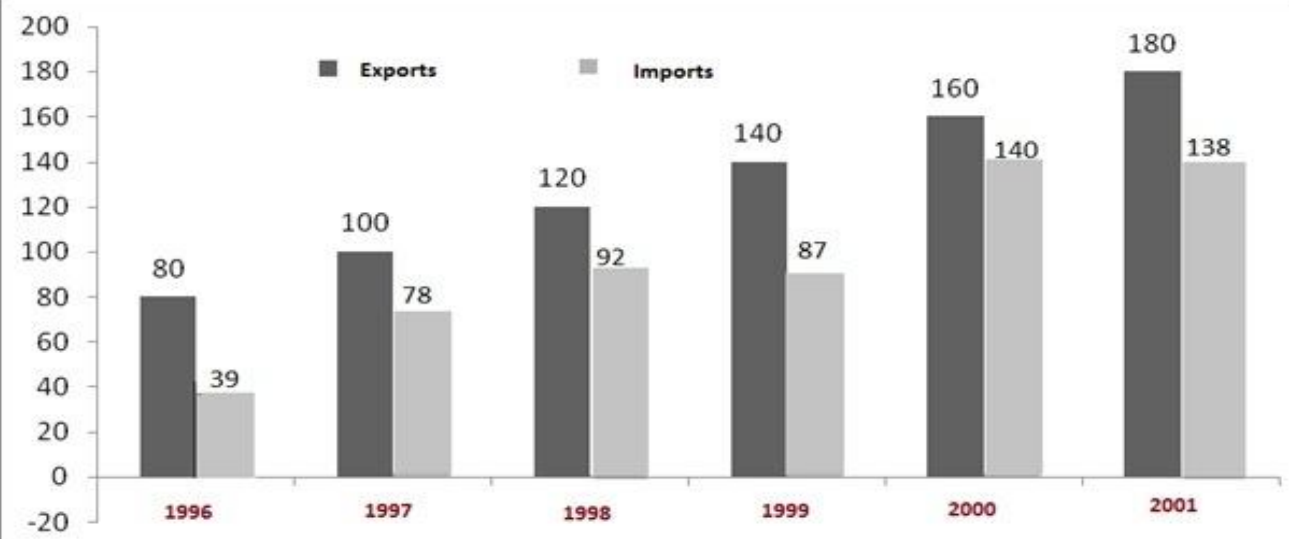
17	Ravi is exactly 9999 days old today. How old is he?
Alt1	27
Alt2	28
Alt3	26
Alt4	29

18	A Maths teacher usually has 21 students in his class. A,B & C are asleep. D&E are in the bathroom and the teacher has sent F&G to the principal's office. How many students are left in the classroom?
Alt1	18
Alt2	19
Alt3	15
Alt4	17

19	JIPMER is coded as 589142; AIPMT is coded as 78910; Then JEE is coded as
Alt1	910
Alt2	544
Alt3	789
Alt4	914

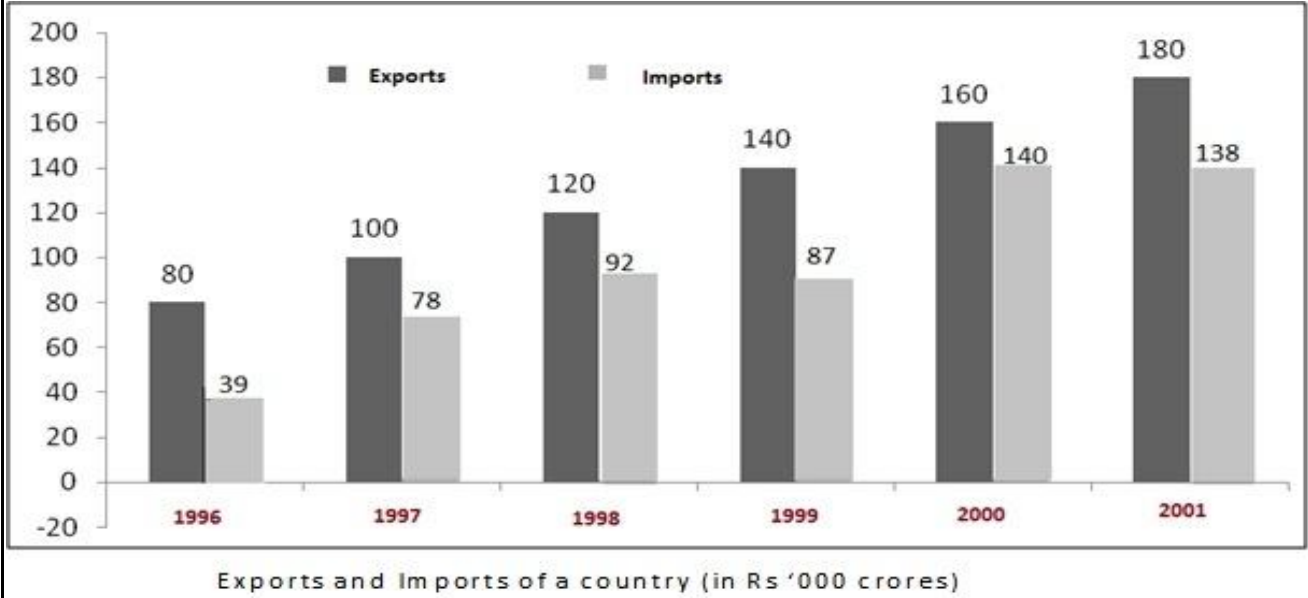
20	Mr. Arvind drove 90 km at 30 kmph and then an additional 90 km at 45 kmph. What is his average speed over his 180 km ?
Alt1	37.5 kmph
Alt2	35 kmph
Alt3	36 kmph
Alt4	38 kmph

21	In how many of the given years was the exports at least 10% more than the imports?
	 <p style="text-align: center;">Exports and Imports of a country (in Rs '000 crores)</p>
Alt1	0
Alt2	1
Alt3	6
Alt4	3

22	What was the average export (in Rs. '000 crores) for the given period?
	 <p style="text-align: center;">Exports and Imports of a country (in Rs '000 crores)</p>
Alt1	145

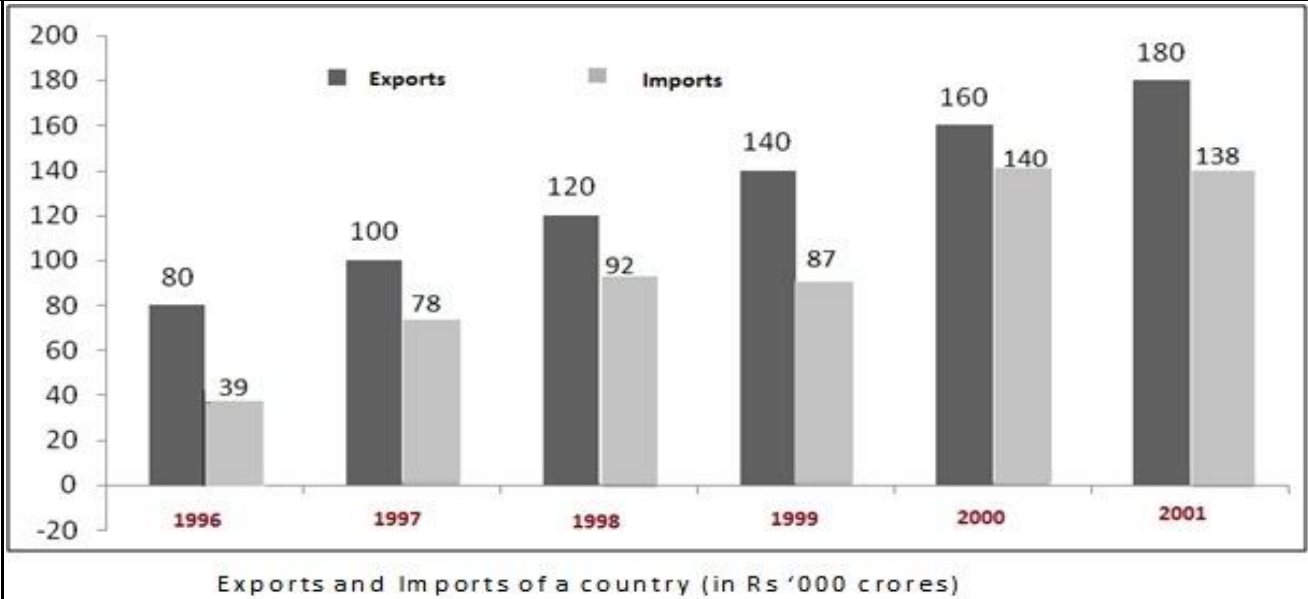
Alt2	130
Alt3	126
Alt4	119

23 From 1997 to 2001, in which year was the percentage growth in exports, when compared to the previous year, the highest?



Alt1	1997
Alt2	1996
Alt3	1999
Alt4	1998

24 What is the simple average annual growth rate in the imports from 1997 to 2001?



Alt1	25 %
Alt2	16 %
Alt3	19 %

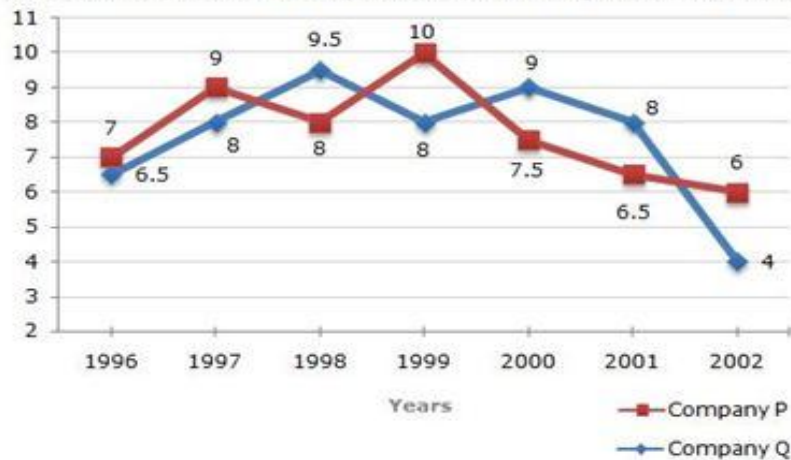
Alt4	0.34
------	------

25	A sum of Rs. 4.75 lakhs was invested in Company Q in 1999 for one year. How much more interest would have been earned if the sum was invested in Company P?
----	---

**A sum of Rs. 4.75 lakhs was invested in Company Q in 1999 for one year. How much more interest would have been earned if the sum was invested in Company P?**

Two different finance companies declare fixed annual rate of interest on the amounts invested with them by investors. The rate of interest offered by these companies may differ from year to year depending on the variation in the economy of the country and the banks rate of interest. The annual rate of interest offered by the two Companies P and Q over the years are shown by the line graph provided below.

**Annual Rate of Interest Offered by Two Finance Companies Over the Years.**



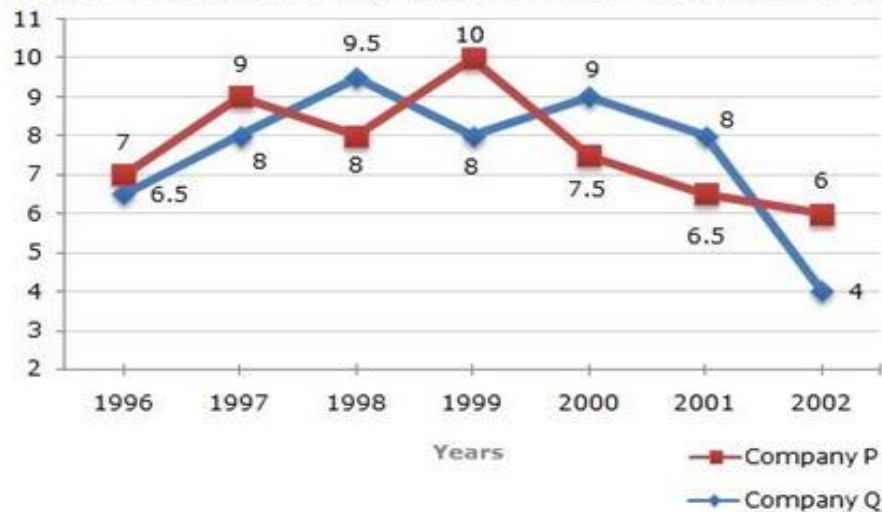
Alt1	Rs. 19,000
Alt2	Rs. 14,250
Alt3	Rs. 11,750
Alt4	Rs. 9500

26	In 2000, a part of Rs. 30 lakhs was invested in Company P and the rest was invested in Company Q for one year. The total interest received was Rs. 2.43 lakhs. What was the amount invested in Company P?
----	---

In 2000, a part of Rs. 30 lakhs was invested in Company P and the rest was invested in Company Q for one year. The total interest received was Rs. 2.43 lakhs. What was the amount invested in Company P?

Two different finance companies declare fixed annual rate of interest on the amounts invested with them by investors. The rate of interest offered by these companies may differ from year to year depending on the variation in the economy of the country and the banks rate of interest. The annual rate of interest offered by the two Companies P and Q over the years are shown by the line graph provided below.

**Annual Rate of Interest Offered by Two Finance Companies Over the Years.**



Alt1 Rs. 9 lakhs

Alt2 Rs. 11 lakhs

Alt3 Rs. 12 lakhs

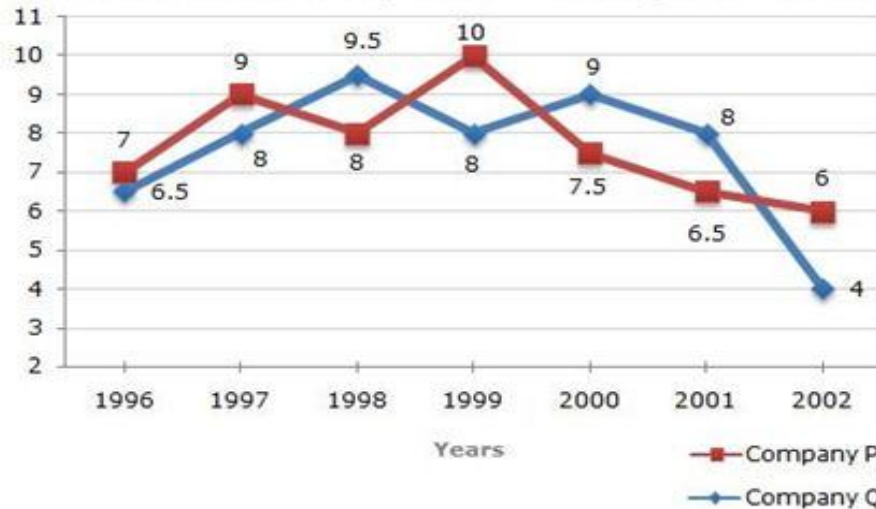
Alt4 Rs. 18 lakhs

27 An investor invested Rs. 5 lakhs in Company Q in 1996. After one year, the entire amount along with the interest was transferred as investment to Company P in 1997 for one year. What amount will be received from Company P, by the investor?

An investor invested Rs. 5 lakhs in Company Q in 1996. After one year, the entire amount along with the interest was transferred as investment to Company P in 1997 for one year. What amount will be received from Company P, by the investor?

Two different finance companies declare fixed annual rate of interest on the amounts invested with them by investors. The rate of interest offered by these companies may differ from year to year depending on the variation in the economy of the country and the banks rate of interest. The annual rate of interest offered by the two Companies P and Q over the years are shown by the line graph provided below.

**Annual Rate of Interest Offered by Two Finance Companies Over the Years.**



Alt1 Rs. 5,94,550

Alt2 Rs. 5,80,425

Alt3 Rs. 5,77,800

Alt4 Rs. 5,77,500

28 What is the average amount of interest per year which the company had to pay during this period ?

Study the following table chart and answer the questions based on it. Expenditures of a Company (in Lakh Rupees) per annum over the given Years.

Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

Alt1 Rs. 36.66 lakhs

Alt2 Rs. 36.36 lakhs

Alt3 Rs. 36.26 lakhs

Alt4 Rs. 36.06 lakhs



29	The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period ?																																				
<p>Study the following table chart and answer the questions based on it. Expenditures of a Company (in Lakh Rupees) per annum over the given Years.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Salary</th> <th>Fuel and Transport</th> <th>Bonus</th> <th>Interest on Loans</th> <th>Taxes</th> </tr> </thead> <tbody> <tr> <td>1998</td> <td>288</td> <td>98</td> <td>3.00</td> <td>23.4</td> <td>83</td> </tr> <tr> <td>1999</td> <td>342</td> <td>112</td> <td>2.52</td> <td>32.5</td> <td>108</td> </tr> <tr> <td>2000</td> <td>324</td> <td>101</td> <td>3.84</td> <td>41.6</td> <td>74</td> </tr> <tr> <td>2001</td> <td>336</td> <td>133</td> <td>3.68</td> <td>36.4</td> <td>88</td> </tr> <tr> <td>2002</td> <td>420</td> <td>142</td> <td>3.96</td> <td>49.4</td> <td>98</td> </tr> </tbody> </table>		Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes	1998	288	98	3.00	23.4	83	1999	342	112	2.52	32.5	108	2000	324	101	3.84	41.6	74	2001	336	133	3.68	36.4	88	2002	420	142	3.96	49.4	98
Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes																																
1998	288	98	3.00	23.4	83																																
1999	342	112	2.52	32.5	108																																
2000	324	101	3.84	41.6	74																																
2001	336	133	3.68	36.4	88																																
2002	420	142	3.96	49.4	98																																
Alt1	.5%																																				
Alt2	1%																																				
Alt3	1.5%																																				
Alt4	2%																																				

30	Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002 ?																																				
<p>Study the following table chart and answer the questions based on it. Expenditures of a Company (in Lakh Rupees) per annum over the given Years.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Salary</th> <th>Fuel and Transport</th> <th>Bonus</th> <th>Interest on Loans</th> <th>Taxes</th> </tr> </thead> <tbody> <tr> <td>1998</td> <td>288</td> <td>98</td> <td>3.00</td> <td>23.4</td> <td>83</td> </tr> <tr> <td>1999</td> <td>342</td> <td>112</td> <td>2.52</td> <td>32.5</td> <td>108</td> </tr> <tr> <td>2000</td> <td>324</td> <td>101</td> <td>3.84</td> <td>41.6</td> <td>74</td> </tr> <tr> <td>2001</td> <td>336</td> <td>133</td> <td>3.68</td> <td>36.4</td> <td>88</td> </tr> <tr> <td>2002</td> <td>420</td> <td>142</td> <td>3.96</td> <td>49.4</td> <td>98</td> </tr> </tbody> </table>		Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes	1998	288	98	3.00	23.4	83	1999	342	112	2.52	32.5	108	2000	324	101	3.84	41.6	74	2001	336	133	3.68	36.4	88	2002	420	142	3.96	49.4	98
Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes																																
1998	288	98	3.00	23.4	83																																
1999	342	112	2.52	32.5	108																																
2000	324	101	3.84	41.6	74																																
2001	336	133	3.68	36.4	88																																
2002	420	142	3.96	49.4	98																																
Alt1	61%																																				
Alt2	47%																																				
Alt3	59%																																				
Alt4	69%																																				

31	The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately?
----	---

Study the following table chart and answer the questions based on it. Expenditures of a Company (in Lakh Rupees) per annum over the given Years.

Year	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

Alt1 4:13

Alt2 7:13

Alt3 10:13

Alt4 11:13

32

16. The inverse of  $\begin{pmatrix} 3 & 1 \\ 5 & 2 \end{pmatrix}$  is

(a)  $\begin{pmatrix} 2 & -1 \\ -5 & 3 \end{pmatrix}$

(b)  $\begin{pmatrix} -2 & 5 \\ 1 & -3 \end{pmatrix}$

(c)  $\begin{pmatrix} 3 & -1 \\ -5 & -3 \end{pmatrix}$

(d)  $\begin{pmatrix} -3 & 5 \\ 1 & -2 \end{pmatrix}$

Alt1 A

Alt2 B

Alt3 C

Alt4 D

33

17. The differential equation of straight lines passing through the origin is

(a)  $x \frac{dy}{dx} = y$

(b)  $\frac{dy}{dx} = \frac{x}{y}$

(c)  $\frac{dy}{dx} = 0$

(d)  $x \frac{dy}{dx} = \frac{1}{y}$

Alt1 A

Alt2	B
Alt3	C
Alt4	D

34	Mean and Variance of binomial distribution are
Alt1	$nq, npq$
Alt2	$np, np$
Alt3	$np, npq$
Alt4	none of the above

35	For a standard normal distribution, the mean and variance are
Alt1	0,0
Alt2	1,1
Alt3	0,1
Alt4	1,0

36	A time series is a set of data recorded
Alt1	Periodically
Alt2	at equal time intervals
Alt3	at successive points of time
Alt4	all the above

37	A bag contains an equal number of one rupee, 50 paise and 25 paise coins. If the total amount in the bag is Rs. 35, how many coins of each type are there?
Alt1	15
Alt2	18
Alt3	20
Alt4	25

38	Ten years ago, P was half of Q in age. If the ratio of their present ages is 3:4, what will be the total of their present ages?
Alt1	45
Alt2	40
Alt3	35
Alt4	30

39	Present ages of Kiran and Syam are in the ratio of 5: 4 respectively. Three years hence, the ratio of their ages will become 11: 9 respectively. What is Syam's present age in years?
Alt1	28
Alt2	27
Alt3	26
Alt4	24

40	Hockey was introduced in the Asian Games in
Alt1	1958 in Tokyo
Alt2	1962 in Jakarta
Alt3	1966 in Bangkok

Alt4	1970 in Bangkok
------	-----------------

41	If $a = 0.99$ , which of the following is less than $a$ ?
Alt1	$a^2$
Alt2	$2/a$
Alt3	$\bar{O}a$
Alt4	$1/a$

42	The price of a pair of trousers was decreased by 22% to Rs.30. What was the original price of the trousers?
Alt1	35
Alt2	38.5
Alt3	30.5
Alt4	35.2

43	$\frac{d}{dx} (\ln e^{2x}) =$ <p style="text-align: center;"> a) <math>\frac{1}{2e^x}</math>      b) 2      c) 2x      d) <math>\frac{2}{2e^x}</math> </p>
Alt1	A
Alt2	B
Alt3	C
Alt4	D

44	Ceteris paribus, the price and yield on a bond are
Alt1	positively related
Alt2	negatively related.
Alt3	sometimes positively and sometimes negatively related.
Alt4	not related

45	A coupon bond is a bond that _____.
Alt1	pays interest on a regular basis
Alt2	does not pay interest on a regular basis but pays a lump sum at maturity
Alt3	can always be converted into a specific number of shares of common stock in the issuing company
Alt4	always sells at par value

46	A basic principle of finance is that the value of any investment is
Alt1	the present value of all future net cash flows generated by the investment
Alt2	the undiscounted sum of all future net cash flows generated by the investment
Alt3	unrelated to the future net cash flows generated by the investment
Alt4	unrelated to the degree of risk associated with the future net cash flows generated by the investment

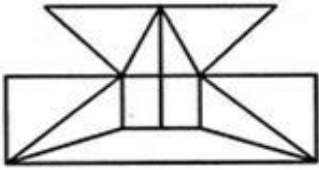
47	The expected value is the
Alt1	inverse of the standard deviation
Alt2	correlation between a security's risk and return.

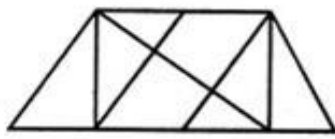
Alt3	weighted average of all possible outcomes.
Alt4	same as the discrete probability distribution

48	To determine whether portfolio performance is statistically significant requires
Alt1	a very long observation period due to the high variance of stock returns.
Alt2	a short observation period due to the high variance of stock returns.
Alt3	a very long observation period due to the low variance of stock returns.
Alt4	a short observation period due to the low variance of stock returns.

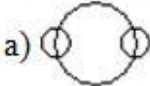

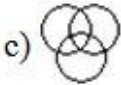
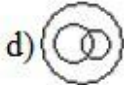
49	A fair gamble is when:
Alt1	Expected value from the gamble is greater the cost of the gamble
Alt2	Expected value from the gamble is exactly equal to the cost of the gamble
Alt3	Cost of the gamble is fairly low
Alt4	Expected value from the gamble is fairly good

50	A risk averse individual will:
Alt1	Always accept a fair gamble.
Alt2	Never accept a fair gamble.
Alt3	Will sometimes accept a fair gamble if the bet is small.
Alt4	Will only accept a fair gamble for large bet.

51	<p>Find the minimum number of straight lines required to make the given figure.</p> 
Alt1	16
Alt2	17
Alt3	18
Alt4	19

52	<p>Find the number of triangles in the given figure.</p> 
Alt1	8
Alt2	10
Alt3	12

Alt4	14
------	----

53	<p>Which of the following diagrams indicates the best relation between Profit, Dividend and Bonus ?</p> <p>a) </p> <p>b) </p> <p>c) </p> <p>d) </p>
----	---

Alt1	A
Alt2	B
Alt3	C
Alt4	D

54	Although some think the terms "bug" and "insect" are _____, the former term actually refers to _____ group of insects.
Alt1	parallel ; an identical
Alt2	precise ; an exact
Alt3	interchangeable ; a particular
Alt4	exclusive ; a separate

55	Like foolish people who continue to live near an active volcano, many of us are _____ about the _____ of atomic warfare and its attendant destruction.
Alt1	worried...possibility
Alt2	unconcerned...threat
Alt3	excited...power
Alt4	cheered...possession

56	In order that future generations may _____ the great diversity of animal life, it is the task of the International Wildlife Preservation Commission to prevent endangered species from becoming _____.
Alt1	recollect...tamed
Alt2	value...evolved
Alt3	enjoy...extinct
Alt4	anticipate...specialize

57	For all the _____ involved in the study of seals, we Arctic researchers have occasional moments of pure _____ over some new discovery.
Alt1	hardships...exhilaration
Alt2	confusions...bewilderment
Alt3	inconvenience...panic
Alt4	thrills...delight

58	If there is nothing to absorb the energy of sound waves, they travel on _____, but their intensity _____ as they travel further from their source.
Alt1	erratically – mitigates
Alt2	forever - increases
Alt3	steadily - stabilizes
Alt4	indefinitely – diminishes

59	If p pencils cost c paise, how many pencils can be bought for k rupees?
Alt1	$100ckp$
Alt2	$kp / 100c$
Alt3	$100ck / p$
Alt4	a. $100kp / c$

60	The total cost of 2 pencils, 5 erasers and 7 sharpeners is Rs.30, while 3 pencils and 5 sharpeners cost Rs.15 more than 6 erasers. By what amount (in Rs.) does the cost of 39 erasers and 1 sharpener exceed the cost of 6 pencils?
Alt1	20
Alt2	30
Alt3	It does not exceed
Alt4	Cannot be determined

61	What is the remainder when 7700 is divided by 100?
Alt1	1
Alt2	61
Alt3	41
Alt4	21

62	A sequence of 4 digits, when considered as a number in base 10 is four times the number it represents in base 6. What is the sum of the digits of the sequence?
Alt1	7
Alt2	6
Alt3	9
Alt4	8

63	A wooden box (open at the top) of thickness 0.5, length 21, width 11 and height 6 is painted on the inside. The expenses of the painting are Rs. 70. What is the rate of painting?
Alt1	Re 0.7
Alt2	Re 0.5
Alt3	Re 0.1
Alt4	Re 0.2

64	Instead of a meter scale, a cloth merchant uses a 120cm scale while buying but uses an 80cm scale while selling the same cloth. What's his overall profit percentage?
Alt1	0.5
Alt2	0.25
Alt3	0.4
Alt4	0.15

65	From a circular sheet of paper with a radius 20cm, four circles of radius 5cm each is cut out. What is the ratio of the uncut to the cut portion?
Alt1	1:3
Alt2	4:1
Alt3	3:1
Alt4	4:3

66	If $X = (163 + 173 + 183 + 193)$ , then divided by 70 leaves a remainder of
Alt1	0
Alt2	1
Alt3	69
Alt4	35

67	Two boats, traveling at 5 and 10 kms per hour, head directly towards each other. They begin at a distance of 20 kms from each other. How far apart are they (in kms) one minute before they collide?
Alt1	1/12
Alt2	1/6
Alt3	1/4
Alt4	1/3

68	If the sum of the first 11 terms of an arithmetic progression equals that of the first 19 terms, then what is the sum of the first 30 terms?
Alt1	0
Alt2	-1
Alt3	1
Alt4	Not Unique

69	If a man cycles at 10 km/hr, then he arrives at a certain place at 1 p.m. If he cycles at 15 km/hr, he will arrive at the same place at 11 a.m. At what speed must he cycle to get there at noon?
Alt1	11 km/hr
Alt2	12 km/hr
Alt3	13 km/hr
Alt4	14 km/hr

70	A milkman mixes 20 litres of water with 80 litres of milk. After selling one-fourth of this mixture, he adds water to replenish the quantity that he had sold. What is the current proportion of water to milk?
Alt1	0.085416667
Alt2	0.043055556
Alt3	0.04375
Alt4	0.127777778



71	In Nuts And Bolts factory, one machine produces only nuts at the rate of 100 nuts per minute and needs to be cleaned for 5 minutes after production of every 1000 nuts. Another machine produces only bolts at the rate of 75 bolts per minute and needs to be cleaned for 10 minutes after production of every 1500 bolts. If both the machines start production at the same time, what is the minimum duration required for producing 9000 pairs of nuts and bolts?
Alt1	130 minutes
Alt2	135 minutes
Alt3	170 minutes
Alt4	180 minutes

72	In a chess competition involving some boys and girls of a school, every student had to play exactly one game with every other student. It was found that in 45 games both the players were girls, and in 190 games both were boys. The number of games in which one player was a boy and the other was a girl is
Alt1	200
Alt2	216
Alt3	235
Alt4	256

73	5. Let S be the set of five-digit numbers formed by digits 1, 2, 3, 4 and 5, using each digit exactly once such that exactly two odd positions are occupied by odd digits. What is the sum of the digits in the rightmost position of the numbers in S?
Alt1	228
Alt2	216
Alt3	294
Alt4	192

74	The rightmost non-zero digits of the number $302720!$ is
Alt1	1
Alt2	3
Alt3	7
Alt4	9

75	Rectangular tiles each of size 70 cm by 30 cm must be laid horizontally on a rectangular floor of size 110 cm by 130 cm, such that the tiles do not overlap. A tile can be placed in any orientation so long as its edges are parallel to the edges of the floor. No tile should overshoot any edge of the floor. The maximum number of tiles that can be accommodated on the floor is
Alt1	4
Alt2	5
Alt3	6
Alt4	7

76	In the X-Y plane, the area of the region bounded by the graph $xy^2 + y^2 = 4$ is
Alt1	8
Alt2	12
Alt3	16
Alt4	20

77	A telecom service provider engages male and female operators for answering 1000 calls per day. A male operator can handle 40 calls per day whereas a female operator can handle 50 calls per day. The male and the female operators get a fixed wage of Rs. 250 and Rs. 300 per day respectively. In addition, a male operator gets Rs. 15 per call he answers and female operator gets Rs. 10 per call she answers. To minimize the total cost, how many male operators should the service provider employ assuming he has to employ more than 7 of the 12 female operators available for the job?
Alt1	15
Alt2	14
Alt3	12
Alt4	10

78	Three Englishmen and three Frenchmen work for the same company. Each of them knows a secret not known to others. They need to exchange these secrets over person-to-person phone calls so that eventually each person knows all six secrets. None of the Frenchmen knows English, and only one Englishman knows French. What is the minimum number of phone calls needed for the above purpose?
Alt1	5
Alt2	10
Alt3	9
Alt4	15

79	A rectangular floor is fully covered with square tiles of identical size. The tiles on the edges are white and the tiles in the interior are red. The number of white tiles is the same as the number of red tiles. A possible value of the number of tiles along one edge of the floor is
Alt1	10
Alt2	12
Alt3	14
Alt4	16

80	Which among $2\frac{1}{2}$ , $3\frac{1}{3}$ , $4\frac{1}{4}$ , $6\frac{1}{6}$ , is the largest?
Alt1	2.5
Alt2	3.333333333
Alt3	4.25
Alt4	6.166666667

81	The length, breadth and height of a room are in the ratio 3 : 2 : 1. If the breadth and height are halved while the length is doubled, then the total area of the four walls of the room will
Alt1	remain the same
Alt2	decrease by 13.64%
Alt3	decrease by 18.75%
Alt4	decrease by 30%

82	Ten years ago, the ages of the members of a joint family of eight people added up to 231 years. Three years later, one member died at the age of 60 years and a child was born during the same year. After another three years, one more member died, again at 60, and a child was born during the same year. The current average age of this eight-member joint family is nearest to
----	---

Alt1	23 years
Alt2	22 years
Alt3	21 years
Alt4	24 years

83	Suppose you have a currency, named Miso, in three denominations: 1 Miso, 10 Misos and 50 Misos. In how many ways can you pay a bill of 107 Misos?
Alt1	17
Alt2	16
Alt3	18
Alt4	15

84	The integers 1, 2, ..., 40 are written on a blackboard. The following operation is then repeated 39 times: In each repetition, any two numbers, say $a$ and $b$ , currently on the blackboard are erased and a new number $a + b - 1$ is written. What will be the number left on the board at the end?
Alt1	820
Alt2	821
Alt3	781
Alt4	819

85	What are the last two digits of 72008?
Alt1	21
Alt2	61
Alt3	1
Alt4	41

86	The number of common terms in the two sequences 17, 21, 25, ..., 417 and 16, 21, 26, ..., 466 is
Alt1	78
Alt2	19
Alt3	20
Alt4	77

87	In a triangle ABC, the lengths of the sides AB and AC equal 17.5 cm and 9 cm respectively. Let D be a point on the line segment BC such that AD is perpendicular to BC. If $AD = 3$ cm, then what is the radius (in cm) of the circle circumscribing the triangle ABC?
Alt1	17.05
Alt2	27.85
Alt3	22.45
Alt4	26.25

88	Consider obtuse-angled triangles with sides 8 cm, 15 cm and $x$ cm. If $x$ is an integer, then how many such triangles exist?
Alt1	5
Alt2	21
Alt3	10
Alt4	15

89	What is the number of distinct terms in the expansion of $(a + b + c)^{20}$ ?
Alt1	231
Alt2	253
Alt3	242
Alt4	210

90	Rahim plans to drive from city A to station C, at the speed of 70 km per hour, to catch a train arriving there from B. He must reach C at least 15 minutes before the arrival of the train. The train leaves B, located 500 km south of A, at 8:00 am and travels at a speed of 50 km per hour. It is known that C is located between west and northwest of B, with BC at $60^\circ$ to AB. Also, C is located between south and southwest of A with AC at $30^\circ$ to AB. The latest time by which Rahim must leave A and still catch the train is closest to
Alt1	0.260416667
Alt2	0.270833333
Alt3	0.28125
Alt4	0.291666667

91	A student took five papers in an examination, where the full marks were the same for each paper. His marks in these papers were in the proportion of 6 : 7 : 8 : 9 : 10. In all papers together, the candidate obtained 60% of the total marks. Then the number of papers in which he got more than 50% marks is
Alt1	2
Alt2	3
Alt3	4
Alt4	5

92	A red light flashes three times per minute and a green light flashes five times in 2 min at regular intervals. If both lights start flashing at the same time, how many times do they flash together in each hour?
Alt1	30
Alt2	24
Alt3	20
Alt4	60

93	Of 128 boxes of oranges, each box contains at least 120 and at most 144 oranges. The number of boxes containing the same number of oranges is at least
Alt1	5
Alt2	103
Alt3	6
Alt4	Cannot be determined

94	A certain city has a circular wall around it, and this wall has four gates pointing north, south, east and west. A house stands outside the city, 3 km north of the north gate, and it can just be seen from a point 9 km east of the south gate. What is the diameter of the wall that surrounds the city?
Alt1	6 km
Alt2	9 km
Alt3	12 km

Alt4	None of these
------	---------------

95	A can complete a piece of work in 4 days. B takes double the time taken by A, C takes double that of B, and D takes double that of C to complete the same task. They are paired in groups of two each. One pair takes two-thirds the time needed by the second pair to complete the work. Which is the first pair?
Alt1	A and B
Alt2	A and C
Alt3	B and C
Alt4	A and D

96	Two men X and Y started working for a certain company at similar jobs on January 1, 1950. X asked for an initial salary of Rs. 300 with an annual increment of Rs. 30. Y asked for an initial salary of Rs. 200 with a rise of Rs. 15 every 6 months. Assume that the arrangements remained unaltered till December 31, 1959. Salary is paid on the last day of the month. What is the total amount paid to them as salary during the period?
Alt1	Rs. 93,300
Alt2	Rs. 93,200
Alt3	Rs. 93,100
Alt4	None of these

97	A college has raised 75% of the amount it needs for a new building by receiving an average donation of Rs. 600 from the people already solicited. The people already solicited represent 60% of the people the college will ask for donations. If the college is to raise exactly the amount needed for the new building, what should be the average donation from the remaining people to be solicited?
Alt1	Rs. 300
Alt2	Rs. 250
Alt3	Rs. 400
Alt4	Rs. 500

98	A ladder leans against a vertical wall. The top of the ladder is 8 m above the ground. When the bottom of the ladder is moved 2 m farther away from the wall, the top of the ladder rests against the foot of the wall. What is the length of the ladder?
Alt1	10 m
Alt2	15 m
Alt3	20 m
Alt4	17 m

99	If 09/12/2001(DD/MM/YYYY) happens to be Sunday, then 09/12/1971 would have been a
Alt1	Wednesday
Alt2	Tuesday
Alt3	Saturday
Alt4	Thursday

100	All the page numbers from a book are added, beginning at page 1. However, one page number was added twice by mistake. The sum obtained was 1000. Which page number was added twice?
-----	---

Alt1	44
Alt2	45
Alt3	10
Alt4	12