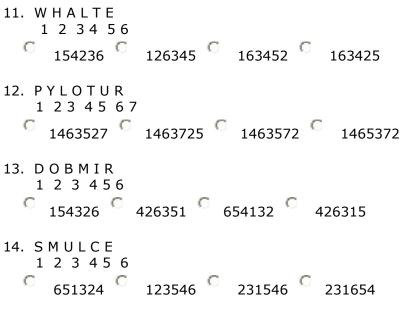
No of questions: 185

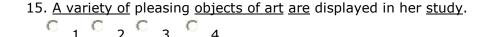
Directions for questions 1 to 4: Each question below consists of a pair of capitalized words, followed by 4 pairs of words. Select the pair, which best expresses the relationship similar to that expressed in the capitalized pair.

medicine : germs calcium : bones bacteria : illness Fire : explosio	'n
2. STANZA : CHAPTER poetry : prose art : fiction clause : sentence novelty : narration	
3. SCULPTOR : CLAY doctor : patient mechanic : car chemist : discovery artist : paint	
4. TACIT : SILENT object : oblate isometric : monometric vacillate : waver vulpine : supine	
5. CATERPILLAR : BUTTERFLY star : moon river : sea tadpole : frog bee : flower	
6. ELONGATE : ABBREVIATE Change : return pull : strike duplicate : alter stretch : shrink	
7. NECKLACE : BEAD bouquet : flower door : handle room : window cutlery : forks	
8. ALLEVIATE : AGGRAVATE joke : worry pain : disease plastic : rigid medicine : doctor	
9. PLAY: PLAYWRIGHT bus: conductor baby: mother symphony: composer student: teacher	
10.PLIABLE : BEND irreducible : reduce	

Directions for questions 11 to 14: Given below are a set of letters with numbers followed by four choices of letters to make a word. Choose the correct order of letters as indicated by numbers to make a word.



Directions for questions 15 to 20: In the each of the following sentences, four words or phrases have been underlined. You should choose the one word or phrase which would not be appropriate in standard written English. If the sentence has no error, mark(5)



16. The <u>sum and the substance</u> of the <u>matter were</u> that your summary is <u>unfounded</u>.

17. She is one of those few people who know everything in this matter.

 0_{1} 0_{2} 0_{3} 0_{4}

18. This is one of those films which has caused the recent controversy.

0 1 0 2 0 3 0 4

19. $\underline{\text{Having failed}}$ once, it is unfortunate $\underline{\text{to note}}$ that no $\underline{\text{further}}$ attempt $\underline{\text{was}}$ made.

0 1 0 2 0 3 0 4

20. The mill was locked-out since 15th June, 1999.

 $\begin{smallmatrix} \mathsf{C} & 1 & \mathsf{C} & 2 & \mathsf{C} & 3 & \mathsf{C} & 4 \end{smallmatrix}$

Directions for questions 21 to 25: Select the word nearly similar in meaning	g to	the
capitalized word.		

21. INFRA above below right left
22. DOWDY Corpulent rakish elegant unstylish
23. LISSOME dainty Supple thin lazy
24. ERGO Official in therefore of early of before
25. IMMURE ripen shut in exempt betray

Directions for questions 26 to 31: Select the word nearly opposite in meaning to the capitalized word.

```
26. SIMULATED

false real hard heavy

27. PROLIX

brief tall bitter stringent

28. SUPERNAL

earthly ghostly official bold

29. PERTINACIOUS

gentle crude rough slight

30. MORIBUND

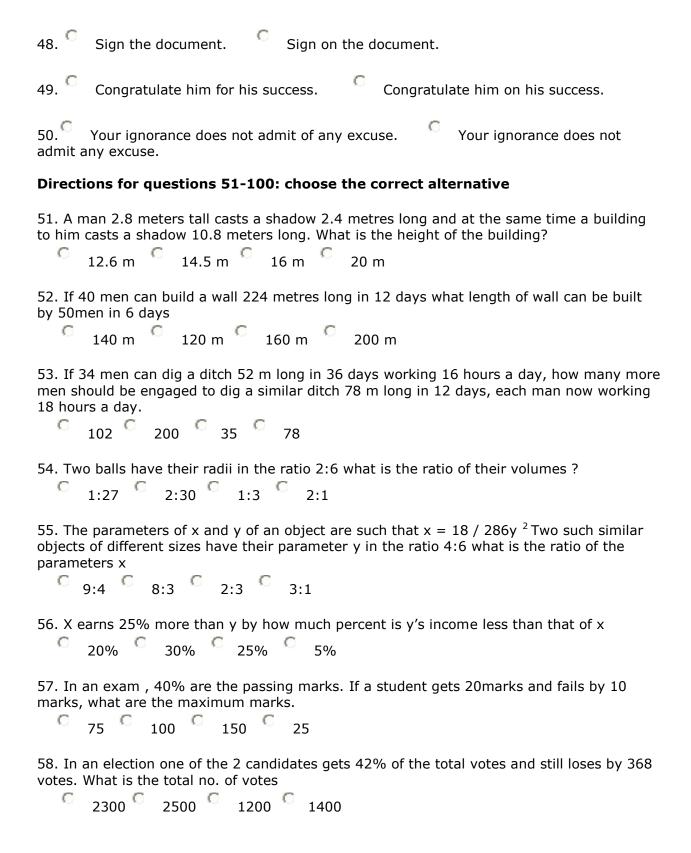
qrowing declining swaying dying
```

Directions for questions 31 to 38: Each question below contains six statements followed by four sets of combinations of three. Choose the set in which statements are logically related.

- 31. A. Suhas is a teacher.
 - B. Sheetal is Suhas' wife.
 - C. Some wives are intelligent.
 - D. No teacher is intelligent.

	F. S	Suhas i	s not	ot intel intellig ABE	gent		С	ADF				
32	B. S C. C D. H E. I F. N	Succes Obsess Hardwo ntelliga No unsa	s is ti ion c ork is ence ucces	and inthe observante o	essionan man tial f ntia rsor	on of y, su for so I for n lact	our occes occes succ ks ha	time. s bein ss. ess. ard wo		intelli	gence.	
33	B. C C. F D. A E. F F. R	Cowboy Ram ar All thos Ram ar Ram ar	ys are nd Go se wh nd Go nd Go	opal and the known pal do dislike pal dis pal car BCD	n to not ke oi like inot	disli disli ne ai each both	ike oke ended he could be coul	ne and ach ot er are er. cowbo	her. cowbo	ys.		
34	B. A C. A D. A E. A	All P ne All P ne All P w All P alv All P ne	ever sever to the	ay yes say no. sell the sy no m mean say yes ADE	trut lean no.	h. no		ACE				
35	B. <i>A</i> C. N D. <i>A</i> E. <i>A</i>	All corr No corr All polit All polit Corrupt	rupt prupt prupt principal	person people a person is are d s are c s every EDA	are on the second secon	dece ecen nt. pt. ere.	nt. t.	ACI)			
36	B. N C. S D. S E. S F. S	Many o Shyam Shyam Sunder Sunder	is go is go is go is go is ba	ood at se who bod at sood at sood at sed at Standart Stan	are Math Stats Stats	goo ıs. s.	d at	Stats	are bad	d at M	aths.	
37	B. <i>A</i>	All hock Boris is	key p s a go	s playe layers ood hoo ood ten	are key	good play	ten er.		ckey players.	layers		

E. Pele is a good hockey player. F. Boris is a good tennis player.
ADE BCF ACE ACF
38. A. No clerk is a thinker. B. Some clerks are not smart. C. Some clerks are smart. D. No clerk is smart. E. Some thinkers are clerks. F. No clerk is smart. BDE ADF CDF ACD
Directions for questions 39 to 44: From among the given alternatives choose the one that best completes the meaning of the sentence.
39. The rabbit a few shreds from the lettuce leaf but was clearly not hungry. Chewed gobbled gnawed nibbled
40. In most of the pre-election speeches a lot of importance was given to the country's situation. C economic industrious commercial economical
41. His P.A. was amazingly efficient, as near as a human being can be. unmistakable infallible meticulous incorrigible
42. She was a kindly old woman with a lively intelligence and her many remarks were enjoyed by the company. C laughable facetious witty malicious
43. She goes to College by bicycle as the local bus service is far from reliable assured certain dependent
44. It is not possible to the full value of her contribution to female education. underrate appreciate assess esteem
Directions for questions 45 to 50: Each of the following sentences/groups contain two expressions of which only one is correct. Choose the correct one.
45. C Order four cups of coffee. C Order for four cups of coffee.
46. Picked up a quarrel. picked a quarrel.
47. I had no pencil to write with.



C 82 C 85 C 75 C 80
61. If a and b are integer and \ddot{O} ab = 9 which of the following cannot be the value of a+b \ddot{C} 82 \ddot{O} 30 \ddot{C} 25 \ddot{C} 18
62. Tap A can fill a tank in 4 hours Because of a leak it took 5 hours to fill the tank . In how much time, the leak can drain all the water of the tank. $\begin{array}{cccccccccccccccccccccccccccccccccccc$
63. In what proportion should water be added to a liquid costing Rs.20 per liter so as to make a profit of 20% by selling the mixture at Rs. 15. $3:5 1:2 2:3 3:5$
64. If I sell a dog for Rs.650 and a cat for Rs. 300. I gain 20% on the original cost of both but if I sell the dog for Rs.675 and the cat for its original price I lose 20%. The original cost of the cat is $\begin{array}{cccccccccccccccccccccccccccccccccccc$
65. Manoj buys 100 articles on which he has to pay Rs. 20 as carriage. The articles were marked for sale at Rs.10. He sells 80 of them at this price and the remaining after allowing a discount of 10% on the marked price. At the end he finds that he has made a profit of 30% on his outlay. Find the amount he pays for each article $\begin{array}{cccccccccccccccccccccccccccccccccccc$
66. At a party, first the ratio of boys to girls was 5 to 4. If 20 boys left the ratio became 1: 1, how many people were there originally at the party. 220 200 180 150
67. There are 4 picture nails and 6 different pictures. In how many different ways can pictures be hung on all nails. $\begin{array}{cccccccccccccccccccccccccccccccccccc$
68. Ashok marks his goods such that he can reduce 10% for cash and yet make 20% profit what is the marked price of an article which costs Rs.120 160 180 200 150

 $59.\ Rice$ is now being sold at Rs. $30\ kg.$ Last month its rate was Rs. $26\ Kg.$ By how much % should a family reduce its consumption so as to keep the expenditure fixed

60. A batsman increases his average by 4 runs when he makes 126 runs in his 12^{th} innings.

13.33 % 15% 20% 12%

What is his average after 12 innings.

69. In a game of cricket P's runs are to Q's runs & Q's runs are to R's runs as 4:5. The score 300 runs altogether. How many runs are scored by Q's
C 130 C 100 C 150 C 120
70. In an examination 10% candidates fail in English, 15% in History and 5% in both. If 2000 candidates pass in both the subjects, Find the total number of candidates appearing in the examination. $\begin{array}{cccccccccccccccccccccccccccccccccccc$
2300 3000 4000 3300
71. An employee reduces the number of employees in the ratio of 7 : 5 and increase the wages in the ratio 10 : 11. Find the difference in the amount of the wage bill, if the earlier bill was Rs. 960 206 208 210 212
206 208 210 212
72. The average speed of a bus including stoppages was 25 kms/hr and excluding stoppages was 30 kms/hr. How many minutes did the bus stop per hour. $\begin{array}{ccccccccccccccccccccccccccccccccccc$
73. Two pipes x and y can fill a cistern is 15 and 20 minutes respectively both pipes being opened, when should the first pipe be turned off so that the cistern may be just filled in 10 minutes
8.3 minutes 9 minutes 8 minutes 7.5 minutes
74. Supposing a clock pendulum takes 8 seconds to strike 8 how long will the same clock take to strike 11 12 sec. 11 sec. 11.42 sec 10 sec.
12 sec. 11 sec. 11.42 sec 10 sec.
75. A rainy day occurs once in every 15 days. Half of the rainy days produce rainbows what % of all the days have not rainbows. $ \begin{array}{cccccccccccccccccccccccccccccccccc$
76. A bag contains 5 blue marbles, 5 green marbles and 3 red marbles. The marbles are removed one by one in a dark room. What % of marble must be removed to insure that at least two of each color have been taken out.
95% 90% 92.3% 86.6%
77. By selling 100 Bhajiyas the seller gains the selling price of 20 Bhajiyas. The gain of the seller is
C 25% C 30% C 35% C 40%
78. At what rate % S.I on Rs.2000 produce the same interest in 5 years as Rs.3000 for 4 years at 5% p.a
7% 6.75% 6.5% 6%

82. The average weight of a group of 20 men is increased by 3 kg when one of the men of weight 136 kg is replaced by a new man what is the weight of the new man? 196 kg 200 kg 85 kg 155 kg. 83. 60 cows were purchased for Rs.2400. The average cost of 24 cows out of them is Rs. 500 find the average cost of the remaining cows. Rs.333.33 Rs.533.33 Rs.650 Rs.700
500 find the average cost of the remaining cows.
84. The average daily temperature from 9^{th} January to 16^{th} January (both days inclusive) was 38.6° and that from the 10^{th} to 17^{th} (both days inclusive) was 39.2°. The temperature on the 9^{th} was 34.6°. What was the temperature on 17^{th} Jan? 39.4° 60° 35° 36.3°
85. The average salary per head of the entire staff of an office including the officers & clerk is Rs.180. The average salary of the officers is Rs.1200 and that of clerks is RS.168. If the no. of officers is 24, find no. of clerks in the office. $\begin{array}{cccccccccccccccccccccccccccccccccccc$
86. Visitors to a show were charged Rs. 30 each on the 1^{st} day Rs.15 on the second, Rs.5 on the 3^{rd} and the total attendance on 3 days were in the ratio $4:10:26$ respectively. Find the average charges per person for the whole show. Rs.10 Rs.20 Rs.15 Rs.30
87. A mixture of 140 litres of wine and water contains 20% of the water. How much water must be added to make water 74% of the resulting mixture? 291 358 561 356
88. A man rows with the stream at the rate of 28 km/h and against the stream at 18 km/h. What is the speed of the boat in still water and the speed of the stream 23 km/h & 5 km/h 26 km/h & 2 km/h 6 km/h & 12 km/h None of these

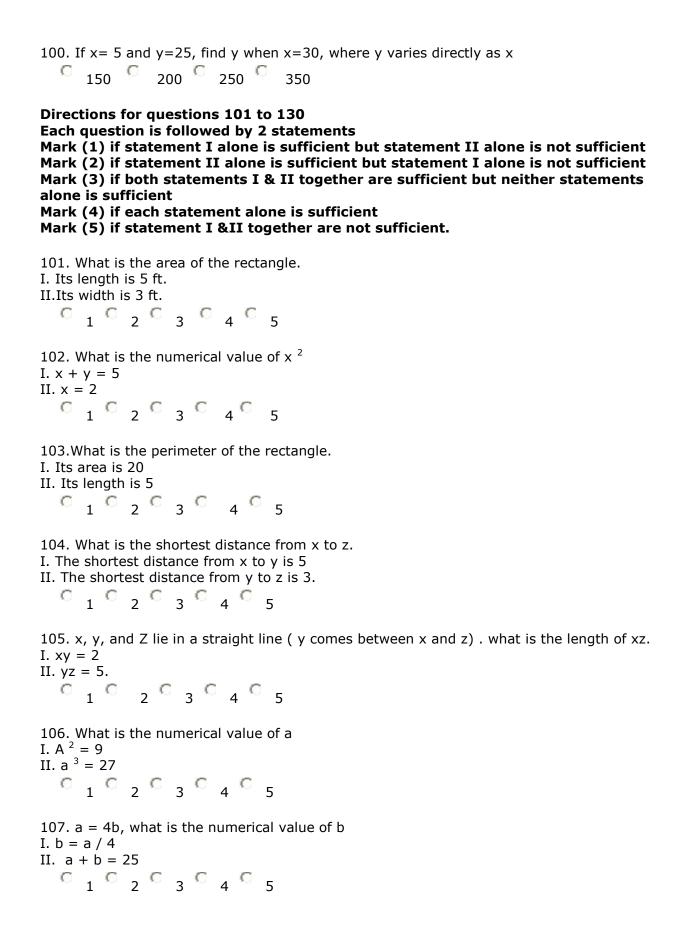
80. A professor was to demonstrate an experiment to 10 student. If she can show the experiment to only 4 student at a time in how many ways can she make the group for the

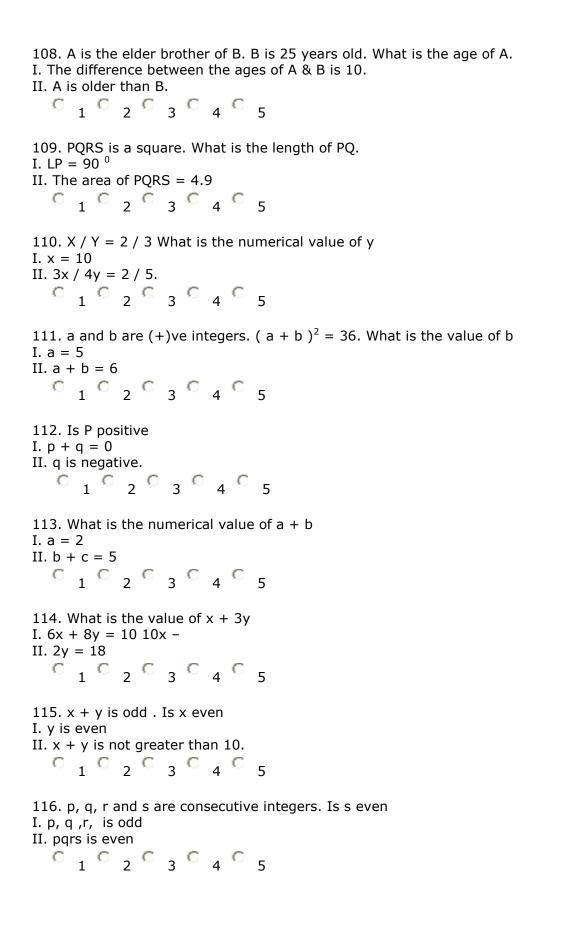
79. Complete the given series -2 , -16, -54, -128 -250 -300 -260 -150

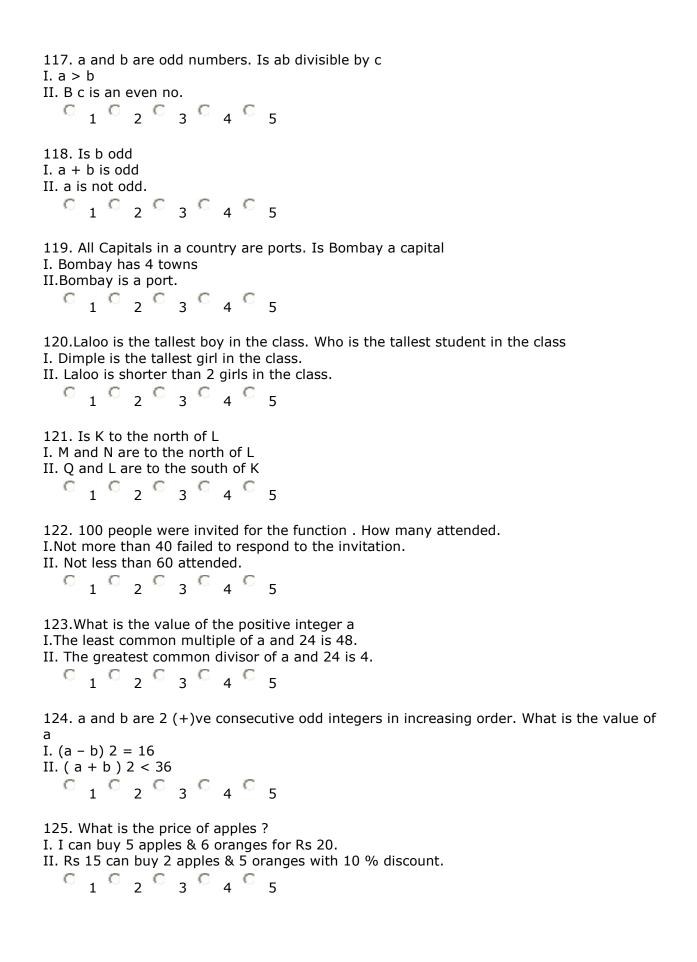
C ₂₁₀ C ₂₂₀ C ₃₂₀ C ₂₄₀

experiment

89. A man can row at 9 km/h in still water. It takes him twice as long to row up as to row down the river. What is the rate of the stream $\frac{1}{2}$
3 km/h 6 km/h 5 km/h 4 km/h
90. A man rows at the rate of 10 km/h in still water. If the river runs at the rate of 3 km/h, it takes him 1 hour to row to a place and lack. What is the distance 4.55 km 5365 km 2.30 km 10 km
91. In a Km.race, p beats T by 70 meters or 14 seconds. What is P's time over the course 3 min & 6 sec. 4 min & 5 sec. 2 min 1 min
92. A sells a book at a profit of 40% had he bought it at 40% less and sold it for Rs. 10 less, he would have gained 50% what is the C.P of the book. Rs.20 Rs.50 Rs.30 Rs.25
93. The value of a machine depreciates @ 20% after every year. What was its purchase price if at the end of the 3 years its value is Rs. 17496. Rs. 1,36,687.50 Rs.1,50,000 Rs.1,23,453.50 None of these.
94. A purchases Rs.50 shares in a company which pays 9% dividend. The money invested by the person is that much as gives 10% on investment. At what price did he buy the shares ? Rs. 45 $^{\circ}$ Rs.50 $^{\circ}$ Rs.20 $^{\circ}$ Rs.35
95. A can do a piece of work in 24 days and b alone can do it in 30days. What time will they take to complete the job if they work together. 40/3 days 20/7 days 26/3 days 45 days
96. Ashok Began business with Rs.7500. After 6 month Bharat joined him with a certain capital. At the end of the tear the profit were divided in the ratio of Rs. 2:3. How much did B invest. Rs. 22500 Rs. 20000 Rs. 6500
97. 100 gallons of a mixture of alcohol and spirit contain 25% spirit. How much spirit must be added to it to make the spirit 30% of the new mixture ? 4.5 gallons 5.6 gallons 7.1 gallons 8.3 gallons
98. Complete the series 58, 29, 64, 32, 94,
99. X can do piece of work in 8 days y in 10days and Z in 12 days. Y & Z do it for 4 days and then Z is replaced by x fine when the works will be finished? 4.2 days 6 days 2.8 more days 3 days







- 126. What would be the ratio of mother's age and daughter's age 3 years from now.
- I. The ratio of mother's age and daughter's age now is 3:1 and would be 4:2 ten years later
- II. The sum of their ages is 75 & the ratio of their ages was 5 : 2 , y years back.



- 127. What is the sales of Wheat A. The total sales of wheat A & B is 6000.
- I. when sales of wheat A is increased, that of wheat B decreases.
- II. The sales of wheat A is twice that of B.

-				-		-		-	
3	1	30	2	~	3	~	4	30	5

- 128. What is the selling price of the radio.
- I. The ratio of S.P. to cost is 0.75
- II. The radio is sold at a loss of f10% of cost.



- 129. What is the value of x
- I. 2x + 3y = 20
- II. 6x + 2y = 15

$$\begin{smallmatrix} \mathsf{C} & & \mathsf{C} & \mathsf{C$$

- 130. The total capacity of production for type 1 T.V. & type 2 T.V. is 10, 500 units. Using a total
- of 60 ton of raw material for production of 100^{th} types of T.V. & operating at full capacity , what is the production of type 1 if,
- I. rate of consumption of materials for type 1 is 5 kg/T.V.
- II. rate of consumption of materials for type 2 is 10 kg/T.V.



Directions for question 131 to 155: Refer to the data given to answer the given questions

The following is the financial result of a company in (Rs.Lacs)

Particulars	Current Quarter	Corresponding Previous Quarter	Previous Year
Sales	4772	5157	22171
Other Income	24	24	135
Expenditure	4686	4520	18985
Interest	172	192	810
Gross Profit	- 62	469	2511
Depreciation	112	103	417
Profit before tax	- 174	366	1937
Tax	0	148	562
Net Profit	- 174	218	1377

131. The company has made	
a loss in the current year	
a loss in the current quarter	
a loss in the previous year	
a loss in the previous quarter.	
132. The total income of the company is 4796 4744 4772 4848 (Hint : Total Income is sum of sales & other income)	
133. The company has shown as regards to Sales	
an income of 6.42 % over previous quarter.	
A decline of 8.06% over previous quarter.	
A decline of 7.46 % over previous quarter.	
a decline of 6.42 % over previous quarter	
134. It sales are going to follow last years trend then the projected sales for current year would be 22171 19846 19826 20515	
135. If the Company is getting a one time order of 5000 lacs and otherwise sales follow las years trend then the sales projected is 25515 27171 24848 24851	t
25515 27171 24848 24851	
136. Interest as an expenditure over previous year quarter has gone	
up by 10.4% over previous year	
down by 10.4 % over previous year	
data given is insufficient	
None of the above.	
137. Depreciation as a percentage of sales in the two-quarter has	
remained unchanged	
decrease in the current quarter	
increase in the current quarter	
none of the above.	
138. If companies are taxed at 40% then in order to pay tax same as the previous quarter it must have to make a profit before tax of	
290 in the remaining quarters.	

0	300 in the remaining quarters.370 in the remaining quarters.544 in the remaining quarters.
139. ⁻	The expenditure has in Comparison to the Previous Quarter. increased C decreased remained same none of the above
140. I	Expenditure has in the current quarter decrease by 3.67% over previous quarter increase by 3.67% over previous quarter remained unchanged over previous quarter none of the above.
141. ⁻ O O O	The percentage of Total expenditure to sales in the two quarters has remained unchanged gone down by 10.5% gone down by 10.5% None of the above.
142. I	If the company has the same performance in the next quarter but no loans then There is a profit of 62 lacs. There is a loss of 62 lacs There is a gross profit of 172 lacs There is a gross profit of 110 lacs.
	If the company is taxed at 40% men in case there is no loan it would pay tax of 44 lacs. Tax of 40 lacs. Tax of 148 lacs.
144.] ©	If the depreciation is halved in the next quarter and there is no loan it would pay tax of 44 lacs tax of 21.6 lacs no tax tax of 54 lacs.
145. I	Last year the company paid tax at the rate of 46 % 40% 28.91% 50%

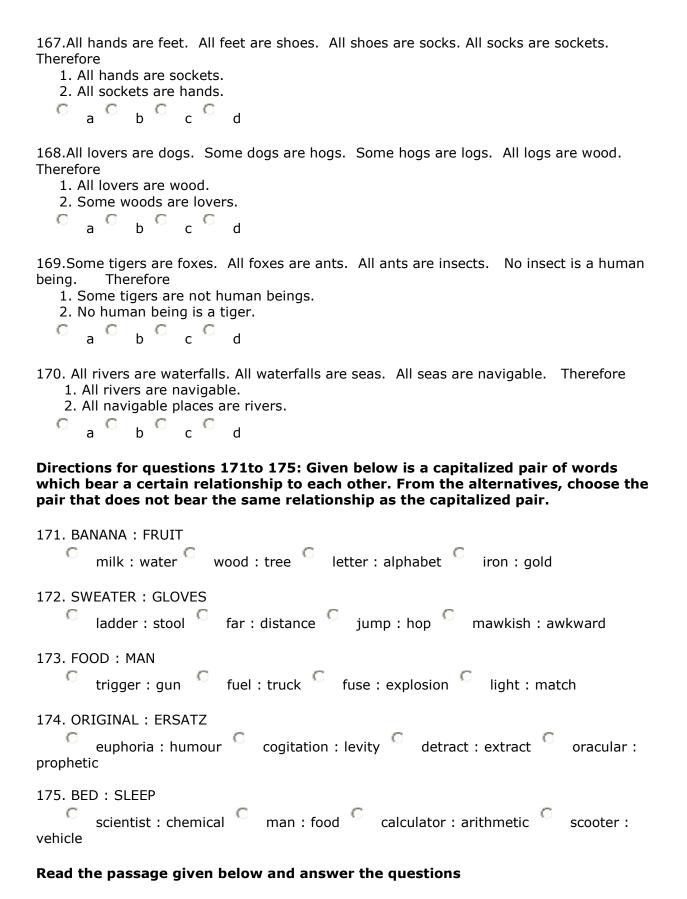
Given below is a statistical record of usage of 4 soaps in terms of number of persons over 5 years in a locality.

Products	1994	1995	1996	1997	1998
Α	500	400	600	400	350

В	400	450	300	370	420
С	540	600	700	320	400
D	100	150	200	250	270
A C E	product which C est fall in usage c in 1997 of B in 1996	D	increasing tre	nd is	
	of A in 1998				
n case	of D in 1994				
A in 96 A & D in 95	n 96 + 95 resp				
	uct showing a o		l in the last 3 y	years of the sur	vey is
150. The Popu 1996	lation of the lo		_		
years is	uct which incre		ame numbers i	in absolute tern	ns in the first foui
a.The rate of i	uct D in 1995 & ncrease was sa of users increa	me	me no.		
	ollowing is true B alon		nd B together	C None of	the above.
	he highest sale B can't be de				
	five years the			soap used C in 1996	

155.	in all the five years the lowest number of users used
C	C in 1996 B in 1997 D in 1994 A in 1996.
	tions for questions 156 to 161: Choose the correct set of three sentences make a logical sequence.
	 (a) Meena is a nice girl. (b) Teena is a nice girl too. (c) All nice girls like a pilot. (d) Meena likes Teena. (e) Meena likes pilots. (f) Teena likes Meena.
О	abd C dba C ace C abf
157. ©	 (a) Whale lay eggs. (b) Mammals have hair. (c) Whale are fish. (d) Kangaroos are mammals. (e) All fish lay eggs. (f) Kangaroos have hair. ace dfb aef cea
158.	 (a) Some men are singers. (b) Some men are not singers. (c) Sangita may be a singer. (d) Some women are singers. (e) Some women are not singers. (f) Sangita is a woman. abd dfc def ecf
159. C	 (a) Sheela likes to look adult. (b) Sheela is a girl. (c) Girls play a lot. (d) Sheela likes gardening. (e) Sheela likes to wear Saree. (f) All adults wear Saree. aef afe bcd fea
160.	 (a) Sachin is a cricketer. (b) All cricketers play ball. (c) All cricketers bat. (d) Sachin plays ball. (e) cricketers are fond of chocolates. (f) Chocolates affect the teeth. abc aef efd bad
161.	(a) There is no life after death.(b) Life after death has not been proved.

(c) There is life after death. (d) There is no life. (e) There may be life after death. (f) Life after death has not been disproved. bfe cba def bfa
162. (a) All gold is metal. (b) Some Gold is metal. (c) All metal is not Gold. (d) Some gold is not metal. (e) Silver is also metal. (f) All metal is Silver. abc aec ade abd
Directions for questions 163 to 166: In the following questions, two statements are followed by two inferences. Write (a), if only inference 1 follows. (b), if only inference 2 follows. (c), if both of them follow. (d), if neither of them follows.
 163. All cables are tables. All tables are sturdy. So 1. Some sturdy things are cables. 2. Some cables are sturdy. a b c d
 164.All coins are rupees. Some rupees are paper currency. So 1. All coins are paper currency. 2. Some coins are paper currency. a b c d
 165.Leopard is an animal. Leopard are fast runners. So 1. All animals are fast runners. 2. Some fast runners are animals. a b c d
 166.If you are an officer you can attest this paper. You are an officer. So 1. You can attest this paper. 2. You cannot attest this paper. a b c d
Directions for questions 167 to 170: On the basis of more than two statements two inference are drawn. You are to mark (a), if only conclusion 1 follows. (b), if only conclusion 2 follows. (c), if both the conclusions follow. (d), if neither of the conclusion follows.



Passage -1

In its more extreme forms persecution mania is a recognized form of insanity. Some people imagine that others wish to kill them, or imprison them, or to do them some other grave injury. Often the wish to protect themselves against imaginary persecutors leads them into acts of violence which make it necessary to restrain their liberty. This, like many other forms of insanity, is only an exaggeration of a tendency not at all uncommon among people who count as normal. I do not propose to discuss the extreme forms, which are a matter for a psychiatrist. It is the milder forms that I wish to consider, because they are a very frequent cause of unhappiness, and because, not having gone so far as toe produce definite insanity, they are still capable of being dealt with by the patient himself, provided he can be induced to diagnose the trouble rightly and to see that its origin lies within himself and not in the supposed hostility or unkindness of others.

We are all familiar with the type of person, man or woman, who according to his own account, is perpetually the victim of ingratitude, unkindness, and treachery. People of this kind are often extraordinarily plausible, and secure warm sympathy from those who have not known them long, There is, as a rule, nothing inherently improbable about each separate story that they relate. The kind of ill-treatment of which they complain does undoubtedly sometimes occur. What in the end rouses the hearer's suspicions is the multiplicity of villains whom it has been the sufferer's ill-fortune to meet with.

In accordance with the doctrine of probability, different people living in a given society are likely in the course of their lives to meet with about the same amount of bad treatment. Of one person in a given set receives, according to his own account, universal ill-treatment, the likelihood is that the cause lies in himself, and that the either imagines injuries from which in fact he has not suffered, or unconsciously behaves in such a way as to arouse uncontrollable irritation. Experienced people therefore becomes suspicious of those who by their own account are invariable ill-treated by the world; they tend, by their lack of sympathy, to confirm these unfortunate people in the view that everyone is against them. The trouble, in fact is a difficult one to deal with, since it is inflamed alike by sympathy and by lack of sympathy. The person inclined to persecution mania, when he finds a hard-luck story believed, will embellish it until he reaches the frontier of credibility; when, on the other had, he finds it disbelieved, he has merely another example of the peculiar hard-heartedness, and this understanding, and this understanding must be conveyed to the patient if its is to serve its purpose.

pacien	thits is to serve its purposer	
176. P	Persecution mania is	
О	a form of temporary insanity.	
0	an exaggerated form of insanity.	
0	in its more extreme forms, an incurable form of insanity	
С	none of the above.	
177. The liberty of a person suffering from extreme persecution mania has to restrained because		
C these.	his ills are imaginary he might turn violent he is insane none of	

O	persecution is present in most normal people.
C	like persecution, many other forms of insanity quite uncommon in many normal
people	•
0	[1] & [2]
(in a milder form, many forms of insanity are common among normal people.
patient	he author feels that the milder variety of persecution mania can be dealt with by the himself because
0	his affliction has not so far produced definite insanity.
O	he can induce himself to diagnose his trouble rightly.
O	he can realize that the origin of his disease lies in himself.
0	[2] & [3].
except	Il the following facts, about people suffering from mild persecution mania are true, that
О	they are apparently reasonable.
C	there is nothing improbable about the stories they tell.
O	the kind of ill-treatments they complain of do sometimes occur.
0	they get warm sympathy from those who have known them for long.
Passag	e – 2

178. The author would seem to suggest that

After singing for their supper, bees sleep soundly. When they hover around, sucking fluid from hibiscus flowers during the day, their wings beat about 60 times a second.

An expenditure led by Dr.John Joseph from the University of Aarhus in Denmark went to Brazil to see how bees manage their energy supplies. It concentrated on the grounds of the Biological Museum in Santa Teresa, 500 kilometers north of Rio de Janeiro.

The park boasts of 3,200 wild bees from 15 species, including the tiny Lophornis Magnifica, whose name refers to its green, red, and white plumange rather than its size. Its body would fir onto this paragraph with room to spare.

They found that a hovering ten-gram bees used about half a liter of oxygen every hour. In terms of oxygen per gram, that is about ten times the amount an energetic person might use up in the same time. To pump all this oxygen around its body a bees' heartbeat has to be high - about 1,440 beats per minute, compared to around 110 for an exercising human. The oxygen is used to burn up food, making the energy that keeps the bird warm and powers its wings. Eating lets it hover, and hovering lets it eat.

During the day such an energetic metabolism keeps a bees' body temperature at about 40° c. But the bees cannot store enough food in their tiny bodies to keep their temperature that high all night. So, at night L. Magnifica slows its metabolism enough to cut its body

temperature by $20-30^{\circ}$ c. It may breathe around 50-100 times less oxygen than during the day, which means that it uses by 50-100 times less food. It works well, but it does mean that waking up is hard to do.

Dr. Joseph found that the bees uses almost as much oxygen shivering itself awake in the morning as it does when hovering. It takes the bees about 15-20 minutes to raise its temperature back up to is day-time level – all the time using up energy. With only small food reserves, the bees – especially small ones like L. Magnifica – sometimes get only one chance to wake up. If they nod off again, they sleep the sleep of the dead.

181. Which of the following statement is false?

~	There are only 15 species of the bees in the world.
C Lophoi	Of the bees found on the grounds of the Biological Museum in Santa Teresa, magnifica is one of the tiniest.
С	The bees survive on fluid from flowers.
О	The name Lophornis magnifica does not refer to the size of the bee.
0 0 0	2. The bees needs to maintain a high rate of heart beat to send the abnormally high amount of oxygen round its body. to digest food. to generate energy. to keep itself warm. 3. Which of the following statements is false? The less the weight of a bees, the greater are its chances of dying in its torpor. A normal human being needs less than a half a litre of oxygen per hour. The task of the expedition led by Dr-Joseph was to examine how bees managed energy supplies.
18 0 0 0	4. Which of the following statements is true? The bees eats while it hovers. In order to keep its night temperature low the bees eats little at night. Eating gives the bees energy to hover and hovering makes it hungry. The larger the body of a bees, the faster it hovers.
down t	Which of the following measures, even if successfully adopted, is unlikely to bring the death rate among bees? A device to shorten the time span the bees take to raise their body temperature waking up. A device to make them store more energy in their bodies before and during their

- Making them take more nutritious food than fluid from the flowers.
- A device to make them breathe at night at the same rate as during the day.

CAT FULL LENGTH TEST 6: EXPLANATORY ANSWERS

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2.[1] 3.[4] 4.[3]
                                 5.[3]
                                          6.[4]
                                                 7.[1]
                                                            8.[4]
1.[2]
                                                                    9.[3]
                                                                              10.[4]
11.[3]
       12.[3] 13.[2]
                          14.[3]
                                   15.[3] 16.[3] 17.[5]
                                                              18.[2] 19.[1]
                                                                                20.[1]
21.[2] 22.[4]
                  23.[2]
                           24.[2]
                                    25.[2] 26.[2]
                                                      27.[1]
                                                               28.[1] 29.[1] 30.[1]
31.[4] 32.[4]
                  33.[4]
                           34.[2]
                                    35.[1] 36.[1]
                                                      37.[2]
                                                               38.[2]
                                                                        39.[4] 40.[1]
                           44.[3] 45.[1] 46.[2] 47.[1]
41.[2] 42.[3] 43.[1]
                                                               48.[1] 49.[2]
                                                                                 50.[1]
51. Let the ht. Of the bldg be h metres
2.8/2.4 = h/10.8
h = 2.8 \times 10.8 / 2.4 = 12.6 \text{ meters Hence (1)}
52. M_1 T_1 / W_1 = M_2 T_2 / W_2
40 X 12 / 224 = 50 X 6 / X \ X = 140
\ length of wall built = \underline{140} metres Hence (1)
53. M1 = 34, R_1 = 16_1 T_1 = 36_1 W_1 = 52_1 M_2 = 2_1 R_2 = 18_1
T_2 = 12_1 W_2 = 78
(34 \times 16 \times 35) / 52 = (M_2 \times 18 \times 12) / 78
19584 / 52 = 216 M_2 / 78
1123 \text{ M}_2 = 1527552
M_2 = 136
\ No. of extra men to be employed
= 136 - 34 = 102
Hence (1)
54. V1 : V2 = (R_3)^3 : (R_2)^3
= 2^3 : 6^3
= 8:216
= 1 : 27
Hence (1)
55. X_1 : X_2 = 1 / Y_1^2 : 1 / Y_2^2
= 1 / 16 : 1/ 36
X_1: X_2 = 36: 16 = 9:4
Hence (1)
56. Let y's income be Rs.100.
Then X's income = Rs.125
Χ
      Υ
125
     100
       ? = 100 \times 100 / 125 = 80
100
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\ Y's Income is 20% less than x.
Hence (1)
57. Total passing marks = 20 + 10 = 30
40 % of maximum marks = 30
58. In an election, one of the 2 candidates gets 42% of the total voted and still loses
Let the total no. of votes be 100
Votes secured by defeated candidate = 42
Votes secured by winning candidate = 58
Diff = 16
= 368 \times 100 / 16 = 2300
Hence (1)
59. Let earlier consumption be 1 kg
\ earlier expend = Rs.26
Now Rs. 30 gives 1 Kg
\ Rs. 26 gives 26 / 30 Kg.
\ Reduction in consumption = 1 - 26 / 30 = 4 / 30 \text{ Kg}.
Hence (1)
60. Average score after 11 innings = 126 - (4 \times 12)
= 126 - 48 = 78
\ Average Score after 12 innings = 78 + 4 = 82
61. ab = 81
Factor of 81 are 81,1 or 27, 3, or 9, 9, Their Sum is equal to 82,30,18 But there are no
factors whose sum is 25.
Hence (3).
62. Without Leakage ¼ tank can be filled in 1 hours with leakage 1/5 tank can be filled in 1
hour.
\ leakage per hour = 1/4- /5
= 1/20 Time taken to drain
all the water is 20 Hours
Hence [1].
63. Let a & b be the amount of liquid and water in the mixture
(1.2)(20) a = 15(a+b)
24 a = 15a + 15b
9a = 15b
3a = 5b
\ the ratio = 3:5
Hence [4]
64. Let d and c be the original cost of the dog and the cat
650 + 300 = 102 (d + c)
675 + c = 0.8 (d + c)
950 = 1.2 d + 1.2 c
0.2 c - 0.8 = -675
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12d + 12c = 9500
48 d - 12 c = 40500
60 d = 31000
\ d = 516.67
c = Rs. 275 hence [2].
65. Let the costprice of each article be x
(100 + 20) \times 1.30 = 10 \times 80 + 20 \times 9
130 \times + 26 = 800 + 180
x = Rs. 7.33
Hence [3].
66. Let the number of boys and girls be b and g initally
B/g = 5/4 and b-20/g = 1
B/b - 20 = 5/4
4b = 5b-100
b = 100
and number of girls = 100-20 = 80
Therefore total number of people at the party = 180 Hence [3].
67. Required number of arrangement = 6 p _4 = 6 ^1 / 2 ^1
= 360
Hence [2].
68. x - 10 x / 100 = 144
9x = 1440
x = 160
Hence [1].
69. Let P , Q & R be the respective scores
P/Q = Q/R = 4/5
P = 4Q/5 \text{ AND } R = 5Q/4
P+Q+R = Q(4/5 + 1 + 5/4) = 305
=Q(3005)=305
Q = 300
Hence [2].
70. % of candidates who failed in at least one subject = 15 + 10 - 5 = 20\%
% passed in both = 80%
80\% = 2000
Therefore total number of candidates = 2500
Hence [1].
71. Ratio of employes = 7/5
Ratio of wages = 10/11
Let amount of later bill be x
7 \times 10 / 5 \times 11 = 960 / x
70/55 = 960/x
x = Rs. 754.3
\setminus diff = Rs. 206
Hence [1].
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72. In one hour the bus will travel 30 km without stopping and 25 km with stoppages. It
stops for the time in which it will travel a distance of 5 km with speed 30 km/ hr.
\ time of stoppage = 5 \times 60 / 30
= 10 minutes
Hence [2].
73. Let pipe x be turned of in 't' minutes
(1/15) t + 10 (1/20) = 1
t/15 + \frac{1}{2} = 1
2t + 15 / 30 = 1
2t + 15 = 30
2t = 15
t = 7.5 minutes
Hence [4]
74. To strike 8 the pendulum has to perform seven oscillations for which it takes 8 seconds
to strike 11 the clock will have to perform 10 oscillations for that it will take 10 x 8 / 7
= 11.42 \text{ sec.}
Hence [3].
75. Only one day out of 30 days produces the rainbow
\ out of 30 days 29 days can not produce rainbows
\ their % is 100 x 29/30
= 96.6%Hence [4].
76. We consider the worst case since we must have atleast two marbles of each colour first
11 marbles may be blue, green and 1 red once we draw the 12<sup>th</sup> marble there has to be at
least two month of each colour
\ Required \% = 12 \times 10/13
= 92.3%
Hence [3].
77. his profit % is 20/80 x 100
= 25%
Hence [1].
78. Let the rate of interest be r
2000 \times r \times 5 / 100 = 3000 \times 4 \times 5 / 100
2000 r = 12000
r = 6 \% \text{ Hence } [4].
79. The series is -1^3 \times 2, -2^3 \times 2, -3^3 \times 2, -4^3 \times 2, -5^3 \times 2
80. required no. of groups = 10_{c4}
= 210
Hence [1].
81. Average price of swan = Rs.148
\ Total price of 26 swan = Rs 26 x 148 = Rs.3848.
Total price of 26 swans & 18 parrot = Rs.2583.70
\ Price of 18 parrot = 1264.30
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\ Average price of 1 parrot = 1264.30/18 = Rs. 70.24
Hence (1)
82. Total increase in weight = 20 \times 3 = 60 \text{ kg}.
\ Weight of the new man = 136 + 60 = 196 kg
Hence (1)
83. Cost of 24 cows = 24 \times 500 = 12000
\ Cost of remaining 36 cows = 12000
\ Average cost = 12000 / 36 = 333.33
Hence (1)
84. Sum of the temperatures from 9^{th} to 16^{th} = 38.6 \times 8 = 308.8
Sum of the temperature from 10^{th} to 16^{th} = 274.2
Sum of the temperature from 10^{th} to 17^{th} = 39.2 \times 8 = 313.6
Temperature on 17^{th} Jan = 313.6 - 274.2 = 39.4
Hence (1).
85. Salary of officers = 1200 \times 24 = 28800
Let no. of clerks be x
Salary of clerks = 168 x
Total salary = 28800 + 168 \times
Average = (28800 + 168 x) / (x + 24) = 180
28800 + 168x = 180x + 4320
12x = 24480
Hence (1).
86. Let the person attending on the 1<sup>st</sup>, 2<sup>nd</sup>, & 3<sup>rd</sup> day
Be 4x, 10x & 28x respectively.
Total collection = 120x + 150x + 130x = 400x
Average charge = 400x / 40x = Rs. 10
Hence (1)
87. The mixture contains 20 \times 140/100 = 28 litres of water
It contain (140 - 28) = 112 litres of wine.
Let x litres of water be added.
(28 + x) / 140 + x = 74/100
2800 + 100x = 10360 + 74x
26 x = 7560
Hence (1)
88. Speed of boat in still water = \frac{1}{2} (28+18) = 23 kmph
Speed of the stream = \frac{1}{2} (28-18) = 5 kmph
Hence (1).
89. Let the man's rate upstream be x kmph
\ Man's rate downstream be 2x kmph
\frac{1}{2}(2x + x) = 9
x + x/2 = 9
3x = 18
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\ x = 6 \text{ kmph}
\ Man's rate downstrem = 12 kmph
Rate of current = \frac{1}{2} (12-6) = \frac{3 \text{ Kmph}}{12}
Hence (1)
90. Man's rate downstream = 13 kmph
Man's rate upstream = 7 \text{ kmph}
Let the distance be x km.
Total time taken to row x km & lack
= x / 13 + x / 7 = 1
20x/91 = 1
Hence (1)
91. T runs 70 meteres in 14 seconds
\ T's time over the course = 14/70 \times 1000 seconds
= 200 seconds
= 186 seconds
= 3 minutes, 6 seconds.
Hence (1)
92. Let C.P be Rs.100; Grain = 40%
New C.P = 40\% less = Rs.60
If gain is 50% then S.P = RS. 150 \times 60 / 100 = Rs.90
Diff in S.P = Rs. 140-90 = Rs.50
Diff in S.P C.P
50
            100
10
= 100 \times 10 / 50 = Rs. 20
Hence (1).
93. Let purchase price be Rs. P
P(1-20/100)3 = 17496
P \times 80/100 \times 80/100 \times 80/100 = 17496
P = Rs. 1,36,687.50
Hence (1).
94. F.V. of 1 shares = Rs.50.
\ Dividend on 1 share = Rs. 50 \times 9/100 = Rs. 9/2
Rs.10 is an income on an invt. Of Rs.100
Rs. 9/2 is an income on an invt. Of Rs. 100 \times 9/2 / 10 = Rs. 45
\ Price if 1 share = Rs. 45 Hence (1).
95.A. In 1 days A+B = 1/24 + 1/30 = 546/720 = 3/40 work
\ Both can complete the work in 40/3 days.
Hence (1).
96. Let Bharat investement be Rs. X
2/(7500 \times 12) = 3/6x
12x = 3 \times 7500 \times 12
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x = 7500 \times 3 = 22500 Rs.
Hence [1].
97. Amount of spirit in 100 gallons = 25 gallons
If x gallon of spirit is added to make it
30% of the new micture
(100 + x) 30/100 = 25 + x
(100 + x) 30 = 100 (25+x)
3000 + 30 x = 2500 + 100 x
x = 7.1 litres
Hence [3].
98. The series is Number, Number/2 and so on
99. x,y,z's work per day is 1/8, 1/10, 1/12
in 2 days y+z = 2(1/10+1/12)
= 2 (6+5)/60
= 11/30
Remaining work = 19/30
Y z's work per day = 11/60
X, y's work per day = 9/40.
Work to be done by x&y = 19/30
No. of days to finish the work = 19/30 \times 40/9
= 2.8 days
Hence [3].
100. x = ky
K = x/y = 1/5
When x = 30, 1/5 = 30/y
Y = 150
Hence [1]
101. Area can be found using both statements
Hence [3]
102. Statement (I) above gives the value of x^2.
Hence [1]
103. Perimeter = 2(I + b)
From statement (2) I = 5
From statement (1) 20 = 5b
Hence combining both statements we can get perimeter.
Hence [3]
104. Since we do not know the positions of x, y, & z, we cannot find the answer.
Hence (4)
105. Using both statements, xz = xy + yz
Hence [3]
106. From statement (1) a = +3 or -3
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from statement (2) a = cube root of 27 = +3
Hence [2]
107. Statement (1) is just a repetition to the question
But from statement (2) 4b + b = 25
5b = 25, b = 5
Hence [2]
108. From statement (1) we get the age of A
statement (2) is repetitive.
Hence [1]
109. From statement (2), if the length of each side is a, then
A 2 = 49
Hence I (P Q) = 7 Units
Hence [2]
110. Statement (1) alone is sufficient to answer the question.
Hence [1]
111. From statement (1) A + b = 6 (since given that a & b are +ve)
Thus value of b can be obtained
Hence [1]
112. Both statements are required
Hence [ 3 ]
113. Both the statements are not sufficient since we don't find the value of a + b.
Hence [4]
114. Using both the statements we get 2 simultaneous equations which when solved give
the values for x + y. Hence [3]
115. Statement (2) is irrelevant.
From statement (1) if we assume that x + y be 7 & y be 4
X = 3 Hence we conclude that x is not even.
Hence [1]
116. From statement (1) we get that p is odd, q is odd & r is odd.
From statement (2) pqrs is even.
So combining both statements, s has to even.
Hence[3]
117. Given that ab is odd.
From statement (2) c is an even no.
An odd. No. is not divisible by an even no.
Hence [2]
118. Both statements are not sufficient.
Hence [4]
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119. From statement (2) we cannot say whether all ports are capitals
Statement (1) is irrelevant
Hence [4]
120. From statements (1) & (2) IF Laloo is shorter than 2 girls, then a girl has to be the
tallest. We Know that Dimple is the tallest girl
Hence [3]
121. From statement (2), we find that K is to the north of L
Hence [2]
122. From both statements, we do not get the exact number of people.
Hence [4]
123. Both statements are required
Hence [ 3 ]
124. From both statements we cannot find the answer.
Hence [4]
125. Both statements are irrelevant
Hence [4]
126. From statement (2) we can get the ratio.
Hence. [2]
127. From statement (2) we get
X + 2x = 6000
x = 2000
Hence [2]
128. From both statements we don't get the value of c.p. or profit or s.p.
Hence [4]
129. Using both the simultaneous equations, we get the value of x.
Hence [3]
130. Since we know only the capacity from both statements, we can find the production.
Hence [3]
131. b 132. a 133. c 134. d
                                   135. a 136. b
                                                              138. d 139. a 140. b
                                                     137. c
        142. d (No loans means no interest to be paid)
143. a (No tax depreciation is still 112 lacs)
                                            144. b
                                                     145. c
146.d
        147. a 148. b 149. c
                                   150. a The Population of the locality was highest in
1996.
         152. b 153. b (These are not actual sales but no. of people using it. For eg.
Soap can be used by 4 people)
                                 154. d 155. c
```

156. (c) 157. (d) 158. (b) 159.(b) 160.(d) 161.(a) 162. (b) 163. (a) 164 (d) 165. (b) 166. (a) 167.(a) 168.(d) 169.(a) 170.(a) 171. (c) 172.(a) 173.(b) 174. (b) 175.(c)

176. [4] 177. [2] 178. [4] 179. [1] 180. [4] 181. [4] 182. [1] 183. [2] 184. [3] 185. [4]