

AND (1) A can hit

target 4 times in 5 shots, B hits 3 times in 4 shots, and C hits twice in 3 shots. They fire together. Find the probability that at least two shots hit the target. (2) The odds

(A) $\frac{13}{30}$

(B) $\frac{5}{6}$

(C) $\frac{11}{40}$

(D) None of these

that A agrees with the truth are $\frac{3}{2}$ and the odds that B agrees with the truth are $\frac{5}{3}$. In what percent of cases are they likely to agree with each other on an identical point? (3) A 1 pip

tears (D) 12

(B) 37.5 %

(C) 45 %

(D) None of these

pipe A is 3 times faster than second pipe B and takes 32 minutes less than pipe B.

When will the cistern be full if both pipes are opened together? (4) The sum

(A) 25 minutes

(B) 30 minutes

(C) 35 minutes

(D) 40 minutes

of two numbers, one of which is one-third of the other, is 36. The smaller number is:

(A) 6

(B) 12

(C) 18

(D) 24

the price of a water geyser is Rs. 1,265. If the manufacturer gains 10%, the wholesaler gains 15% and the retailer gains 25%, then the cost of the product is: (6) A man left

- (A) Rs. 800
- (B) Rs. 900
- (C) Rs. 700
- (D) Rs. 600

one-half of his property for his wife, one-third for his son and the remainder for his daughter. If the daughter's share was Rs. 45,000, how much money did the man leave? (7) Anil is

- (A) Rs. 245,000
- (B) Rs. 260,000
- (C) Rs. 270,000
- (D) Rs. 275,000

at present one-fourth the age of his father. After 16 years he will become half of the age of his father. Find the present age of Anil's father. (8) Anachin

- (A) 40 years
- (B) 36 years
- (C) 32 years
- (D) 28 years

is sold at a profit of 10%. Had it been sold for Rs. 40 less, there would have been a loss of 10%. What was the cost price of the machine? (9) In a class

- (A) Rs. 175
- (B) Rs. 200
- (C) Rs. 225
- (D) None of these

of 5 students with Roll No. 1 to 5, a student is picked at random to answer a question. Find the probability that the roll number of the selected student is

either a multiple of 5 or 7.

- (A) $\frac{6}{25}$
 - (B) $\frac{4}{25}$
 - (C) $\frac{8}{25}$
 - (D) $\frac{7}{25}$
-

(10) What percent of selling price would be 34% of cost price if gross profit is 26% of the selling price?

- (A) 17.16%
 - (B) 74%
 - (C) 25.16%
 - (D) 88.40%
-

(11) The tax on a commodity is diminished by 10% and its consumption increased by 10%. The effect on the revenue derived from it changes by $K\%$. Find the value of K .

- (A) 1
 - (B) -2
 - (C) -1
 - (D) 2
-

(12) Ratio of Ashok's age to Pradeep's age is 4 : 3. Ashok will be 26 years old after 6 years. How old is Pradeep now?

- (A) 18 years
 - (B) 21 years
 - (C) 15 years
 - (D) 24 years
-

(13) The incomes of Chanda and Kim are in the ratio 5 : 3 and their expenditures are in the ratio 2 : 1. If each saves Rs. 1,000, then Chanda's expenditure is

- (A) Rs. 6,000
- (B) Rs. 8,000

- (C) Rs. 4,000
(D) None of these
-

(14) A student purchased a computer system and a colour printer. If he sold the computer system at 10 loss and the colour printer at 20 gain, he would not lose anything. But if he sells the computer system at 5 gain and the colour printer at 15 loss, he would lose Rs. 800 in the bargain. How much did he pay for the colour printer?

- (A) Rs. 8,000
(B) Rs. 16,000
(C) Rs. 9,000
(D) Rs. 5,334
-

(15) X and Y entered into partnership with Rs. 700 and Rs. 600 respectively. After 3 months, X withdrew $\frac{2}{7}$ of his stock but after 3 months, he puts back $\frac{3}{5}$ of what he had withdrawn. The profit at the end of the year is Rs. 726. How much of this should X receive?

- (A) Rs. 336
(B) Rs. 366
(C) Rs. 633
(D) Rs. 663
-

(16) A man sitting in a train travelling at the rate of 50 km/hr observes that it takes 9 sec for a goods train travelling in the opposite direction to pass him. If the goods train is 187.5 m long, find its speed.

- (A) 25 km/hr
(B) 40 km/hr
(C) 35 km/hr
(D) 36 km/hr
-

(17) A runs $1\frac{2}{3}$ times as fast as B. If A gives B a start of 80m, how far must the winning

post be, so that A and B might reach it at the same time?

- (A) 200 m
 - (B) 300 m
 - (C) 270 m
 - (D) 160 m
-

(18) A team of workers was employed by a contractor who undertook to finish 360 pieces of an article in a certain number of days. Making four more pieces per day than was planned, they could complete the job a day ahead of schedule. How many days will they take to complete the job according to the new planning?

- (A) 8 days
 - (B) 9 days
 - (C) 10 days
 - (D) 12 days
-

(19) The work done by a woman in 8 hours is equal to the work done by a man in 6 hours and by a boy in 12 hours. If working 6 hours per day, 9 men can complete a work in 6 days, then in how many days can 12 men, 12 women and 12 boys together finish the same working 8 hours per day?

- (A) $2\frac{1}{2}$ days
 - (B) $1\frac{1}{2}$ days
 - (C) $3\frac{1}{2}$ days
 - (D) None of these
-

(20) At the start of a seminar, the ratio of the number of male participants to the number of female participants was 3 : 1. During the tea break, 16 participants left and 6 more female participants registered. The ratio of the male to the female participants became 2:1. The total number of participants at the start of the seminar was

- (A) 64
- (B) 48
- (C) 54

(D) Data Insufficient

(21) A man can row 30 km upstream and 44 km downstream in 10 hours. Also, he can row 40 km upstream and 55 km downstream in 13 hours. The rate of the current is

- (A) 3 km/hr
 - (B) 3.5 km/hr
 - (C) 4 km/hr
 - (D) 4.5 km/hr
-

(22) There are two identical vessels, X and Y. Y is filled with water to the brim and X is empty. There are two pails A and B, such that B can hold half as much water as A. One operation is said to be executed when water is transferred from Y to X using A once and water is transferred to Y from X using B once. If A can hold a litre of water and it takes 40 operations to equate the water level in X and Y, what is the total volume of water in the system?

- (A) 10 litres
 - (B) 20 litres
 - (C) 40 litres
 - (D) $20\frac{1}{4}$ litres
-

(23) One type of liquid contains 25% of milk, the other type of liquid contains 30% of milk. A can is filled with 6 parts of the first liquid and 4 parts of the second liquid. Find the percentage of milk in the new mixture.

- (A) 23%
 - (B) 27%
 - (C) 50%
 - (D) 13%
-

(24) A solution of sugar syrup has 15% sugar. Another solution has 5% sugar. How

many litres of the second solution must be added to 20 litres of the first solution to make a solution of 10% sugar?

- (A) 10 litres
 - (B) 5 litres
 - (C) 15 litres
 - (D) 20 litres
-

(25) A salesman's terms were changed from a flat commission of 5% on all his sales to a fixed salary of Rs. 1,000 plus 2.5% commission on all sales exceeding Rs. 4,000. If his remuneration as per the new scheme was Rs. 600 more than by the first scheme, what were his sales worth?

- (A) Rs. 11,000
 - (B) Rs. 17,000
 - (C) Rs. 16,000
 - (D) Rs. 12,000
-

(26) In a class with a certain number of students, if one student weighing 50 kg is added, then the average weight of the class increases by 1 kg. If one more student weighing 50 kg is added, then the average weight of the class increases by 1.5 kg over the original average. What is the original average weight (in kg) of the class?

- (A) 46
 - (B) 4
 - (C) 2
 - (D) 47
-

(27) The average marks of a student in 8 subjects is 87. Of these, the highest marks are 2 more than the one next in value. If these two subjects are eliminated, the average marks of the remaining subjects are 85. What are the highest marks obtained by him?

- (A) 94
- (B) 91

(C) 89

(D) 96

(28) An 8-litre cylinder contains a mixture of oxygen and nitrogen, the volume of oxygen being 16% of total volume. A few litres of the mixture is released and an equal amount of nitrogen is added. Then the same amount of the mixture as before is released and replaced by nitrogen for the second time. As result, the oxygen content becomes 9% of total volume. How many litres of mixture is released each time?

(A) 7 litres

(B) 5 litres

(C) 2 litres

(D) None of these

(29) Two gallons of a mixture of spirit and water contain 12% of water. They are added to 3 gallons of another mixture, containing 7% of water and half a gallon of water is then added to the whole. Find the percentage of water in the resulting mixture.

(A) $17\frac{3}{11}\%$

(B) $16\frac{12}{11}\%$

(C) $14\frac{1}{11}\%$

(D) None of these

(30) If a bucket is 80% full, then it contains 2 litres more water than when it is $66\frac{2}{3}\%$ full. What is the capacity of the bucket?

(A) 10 litres

(B) 15 litres

(C) $16\frac{2}{3}$ litres

(D) 20 litres

(31) In how many ways can 4 girls and 5 boys be arranged in a row so that all the four girls are together?

- (A) 17280
 - (B) 720
 - (C) 2880
 - (D) 10000
-

(32) A number lock on a suitcase has 3 wheels each labelled with 10 digits from 0 to 9. If opening of the lock is a particular sequence of three digits with no repeats, how many such sequences will be possible?

- (A) 720
 - (B) 760
 - (C) 680
 - (D) 780
-

(33) The electricity bill of a certain establishment is partly fixed and partly varies as the number of units of electricity consumed. When in a certain month 540 units are consumed, the bill is Rs. 1,800. In another month 620 units are consumed and the bill is Rs. 2,040. In yet another month 500 units are consumed. The bill for that month would be

- (A) Rs. 1,560
 - (B) Rs. 1,680
 - (C) Rs. 1,840
 - (D) Rs. 1,950
-

(34) Two cyclists start on a circular track from a given point but in opposite directions with speeds of 7 m/sec and 8 m/sec respectively. If the circumference of the circle is 300 metres, after what time will they meet at the starting point for the first time?

- (A) 20 sec
- (B) 100 sec
- (C) 300 sec
- (D) 200 sec

(35) A portion of a 30 m long tree is broken by a tornado and the top strikes the ground making an angle of 30° with the ground level. The height of the point where the tree is broken is equal to

- (A) $\frac{30}{\sqrt{3}}$ m
 - (B) 10 m
 - (C) $30\sqrt{3}$ m
 - (D) 60 m
-

(36) The speed of a boat in still water is 4 km/hr and the speed of current is 2 km/hr. If the time taken to reach a certain distance upstream is 9 hours, find the time it will take to go the same distance downstream.

- (A) 2 hrs
 - (B) 2.5 hrs
 - (C) 3.5 hrs
 - (D) 3 hrs
-

(37) A man rows 8 km/hr in still water. If the river is running at 2 km/hr, it takes 32 minutes to row to a place and back. How far is the place?

- (A) 1.5 km
 - (B) 2.5 km
 - (C) 2 km
 - (D) 3 km
-

(38) A man swimming in a stream which flows at $1\frac{1}{2}$ km/hr finds that in a given time he can swim twice as far with the stream as he can against it. At what rate does he swim?

- (A) $4\frac{1}{2}$ km/hr
 - (B) $5\frac{1}{2}$ km/hr
 - (C) $7\frac{1}{2}$ km/hr
 - (D) None of these
-

(39) The number that must be added to each of the numbers 8, 21, 13 and 31 to make the ratio of the first two numbers equal to the ratio of the last two numbers is

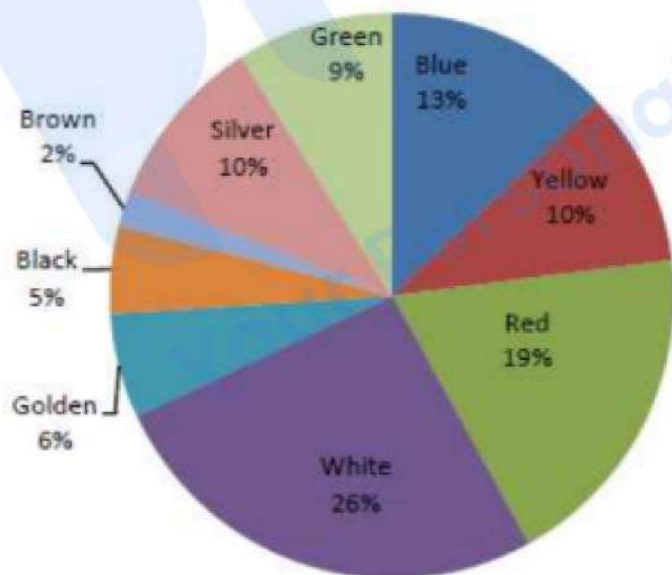
- (A) 7
 - (B) 5
 - (C) 9
 - (D) None of these
-

(40) Out of eight crew members, three particular members can sit only on the left side. Another two particular members can sit only on the right side. Find the number of ways in which the crew can be arranged so that four men can sit on each side.

- (A) 865
 - (B) 864
 - (C) 863
 - (D) 1728
-

Section-B(DI)

(41) Which of the following color options consists of 50% of all the cycles?



- (A) Black, Golden, Blue, Red
- (B) Blue, Black, Red, Silver

- (C) White, Golden, Blue, Black
 - (D) None of these
-

(42) Cycles of which colour when increased by two percent and then combined with that of red cycles will make 30 percent of the total?

- (A) Golden
 - (B) Blue
 - (C) Black
 - (D) None of these
-

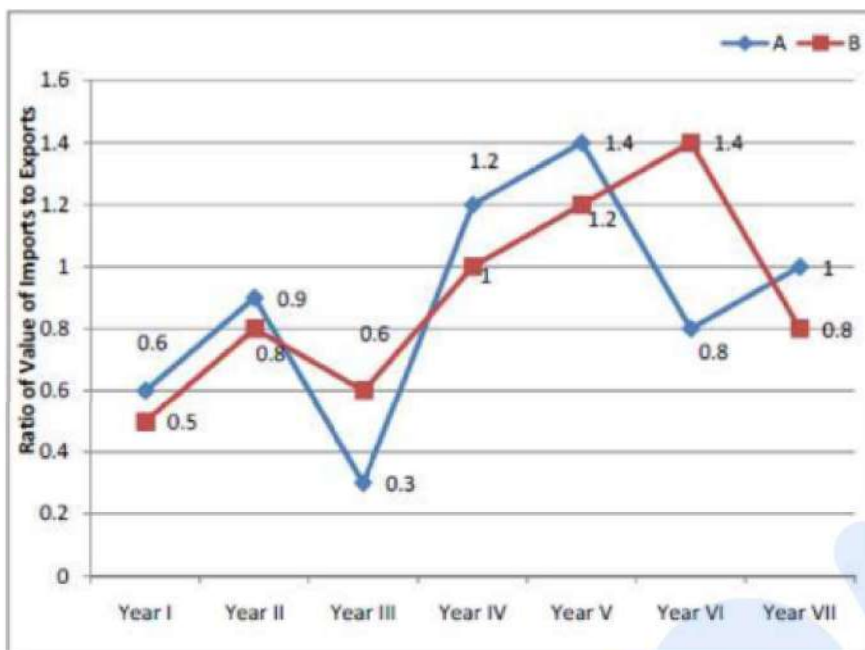
(43) If in a certain period the total production of all cycles was 95,400, then how many more blue cycles were sold than green?

- (A) 2,580
 - (B) 3,618
 - (C) 2,850
 - (D) 3,816
-

(44) Cycles of which colour are 20% less popular than white coloured cycles directly in percentage?

- (A) Black
 - (B) Golden
 - (C) Blue
 - (D) Red
-

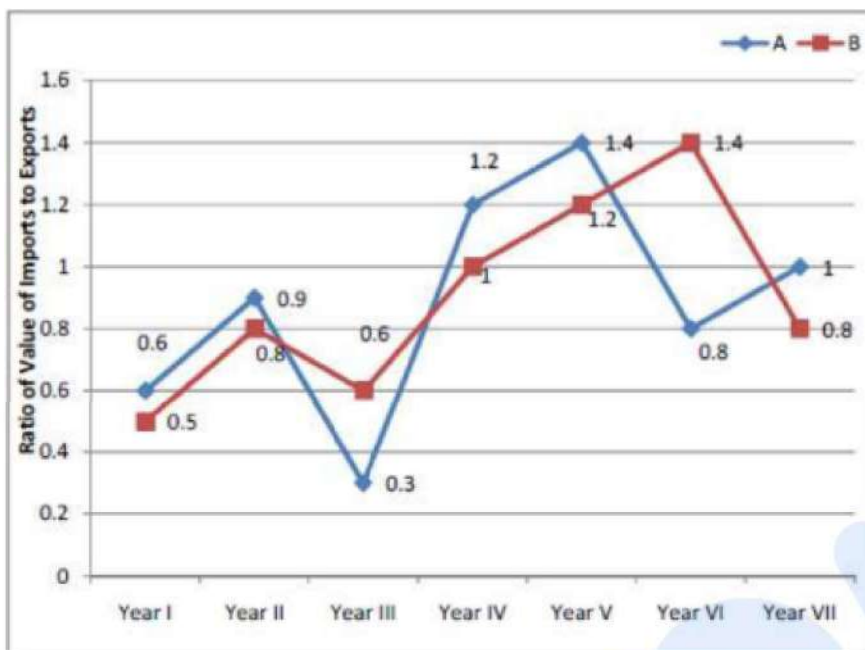
(45) The following graph shows the ratio of imports to exports by two companies A and B over the years.



If the imports of company A in Year VI were Rs. 10.40 crore, what were the exports of company A in the same year?

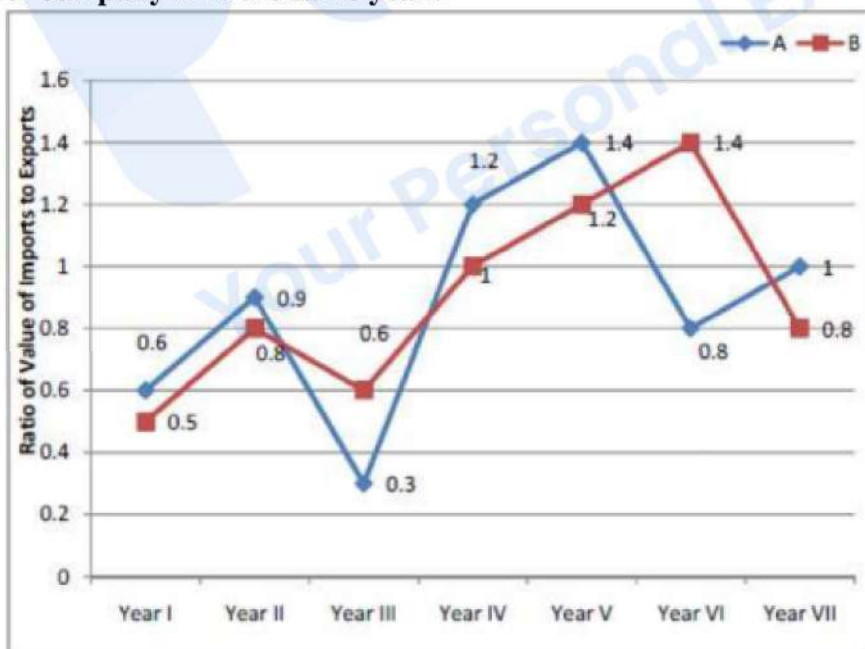
- (A) 13 crore
- (B) 12.75 crore
- (C) 12.50 crore
- (D) None of these

(46) It is supposed that Imports – Exports = x for company A in Year I and the imports of company A in Year I were Rs. 3.6 crore, and it is also supposed that Imports – Exports = a for company B in Year V and the exports of company B in Year V were Rs. 5 crore. What is the relationship between a and x?



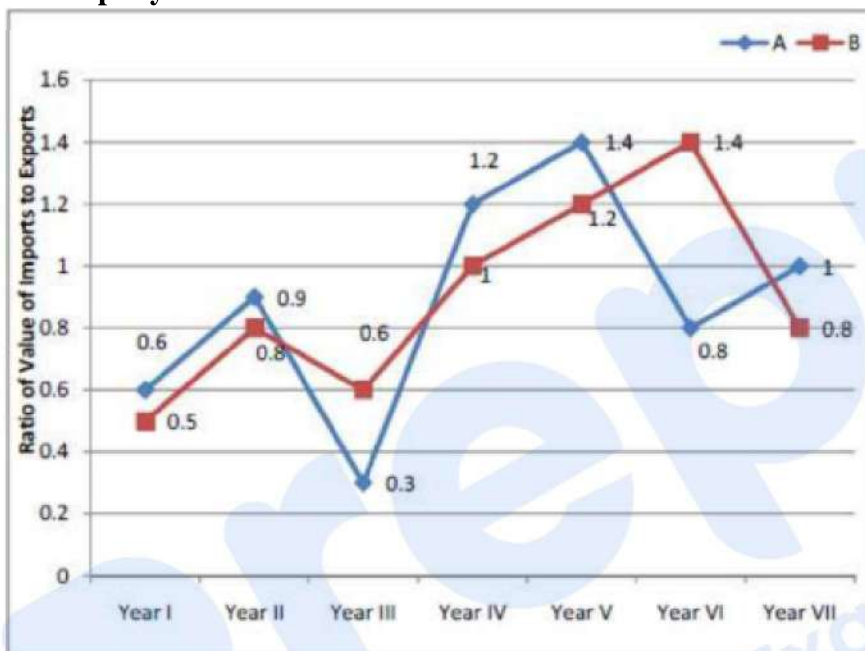
- (A) $x > a$
 (B) $x = a$
 (C) $a > x$
 (D) None of these

(47) If the exports of company B in Year III were Rs. 2.19 crore, what were the imports of company B in the same year?



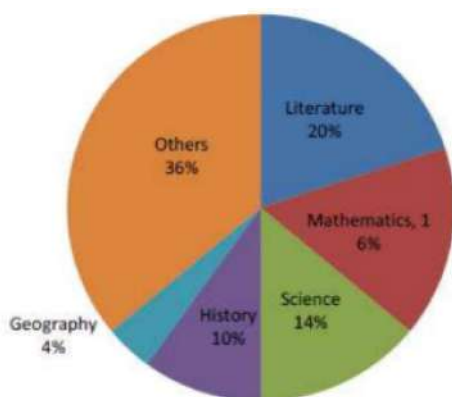
- (A) 3.65 crore
 (B) 7.40 crore
 (C) 1.314 crore
 (D) 1.414 crore

(48) If the imports of company A in Year V were Rs. 8.40 crore, what were the exports of company B in Year VII?

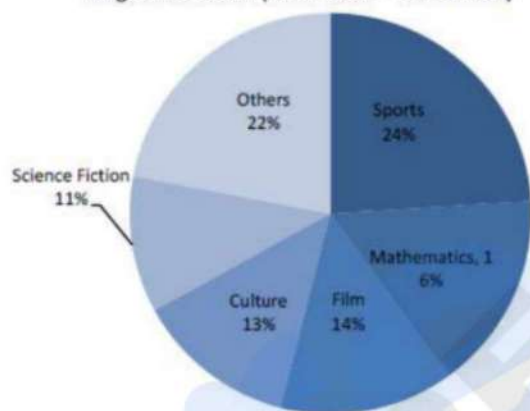


- (A) 6 crore
 (B) 7.40 crore
 (C) 7.20 crore
 (D) Data inadequate

(49) By how much percentage is the value of history books higher than that of film magazines?

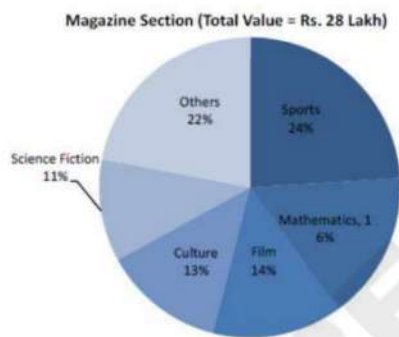
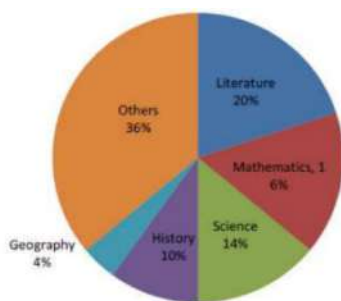


Magazine Section (Total Value = Rs. 28 Lakh)



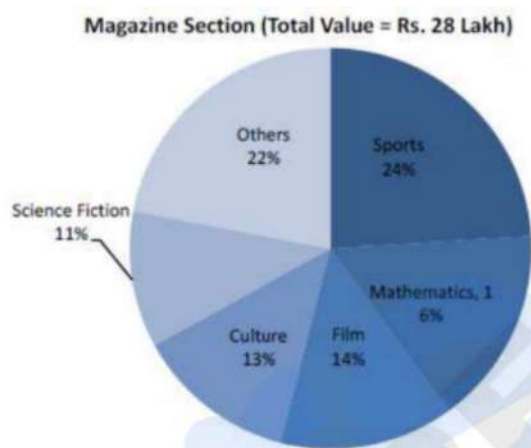
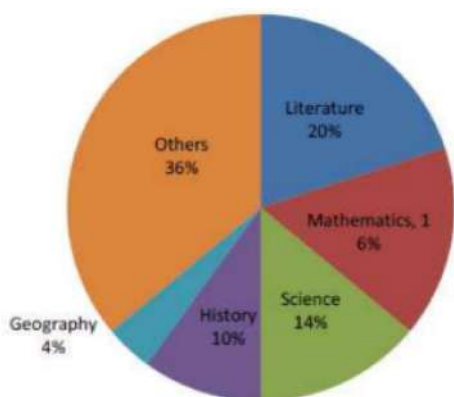
- (A) 172%
- (B) 27.2%
- (C) 272%
- (D) 72%

(50) Which of the following statements is false?



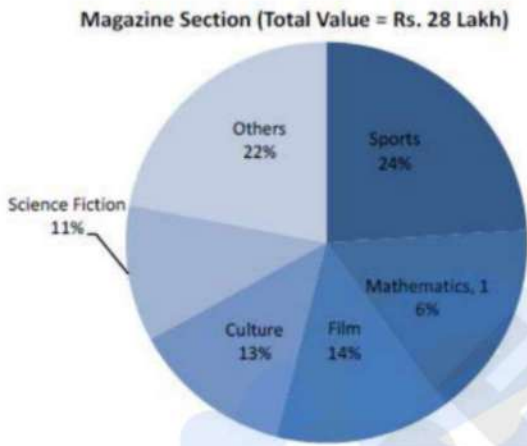
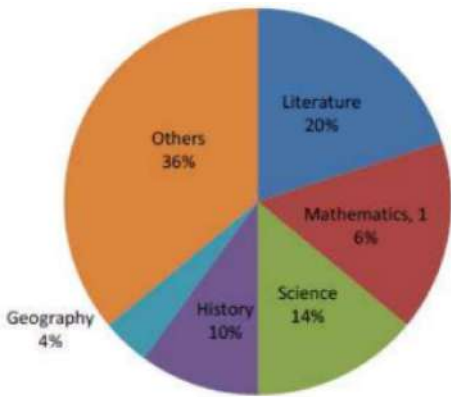
- (A) Literature, Mathematics, and Science group comprise nearly 50% of the book section.
- (B) Sports, Culture, and Film account for more than half of the magazines.
- (C) The value of Sports magazines is higher than that of Geography books.
- (D) None of these

(51) What is the invested amount for literature as a percentage of the total investment of the library in books and magazine section?



- (A) 16.8%
- (B) 15.5%
- (C) 13.6%
- (D) 14%

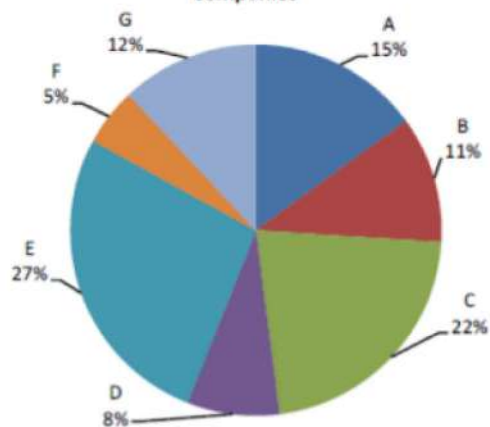
(52) What is the amount of reading material available related to the science group in both sections put together as a percentage of the total value invested in the library?



- (A) 16.5%
- (B) 1.55%
- (C) 13.5%
- (D) 18.4%

(53) What is the total profit earned by company G for item I and II together?

Percentages of the Total Production by the Seven Companies

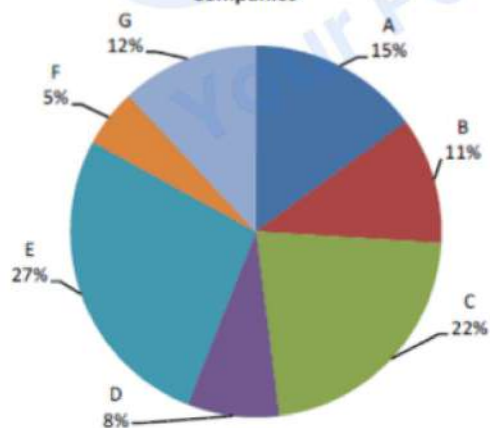


Company	Ratio of Production		Percentage Profit Earned	
	Item I	Item II	Item I	Item II
A	2	3	25	20
B	3	2	32	35
C	4	1	20	22
D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

- (A) Rs. 78 lakh
 (B) Rs. 1.62 crore
 (C) Rs. 16.2 lakh
 (D) None of these

(54) What is the total profit earned by company B on production of item I and the profit earned by company A on production of item II?

Percentages of the Total Production by the Seven Companies

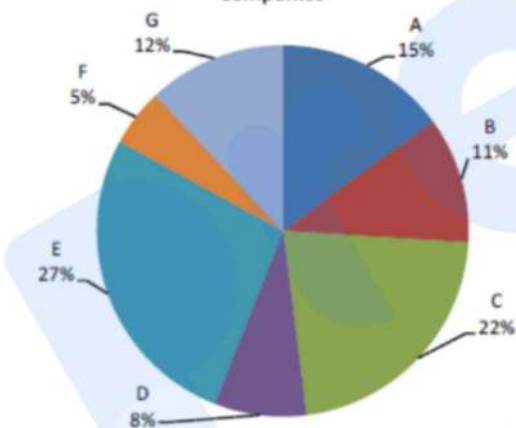


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C	4	1	20	22
D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

- (A) Rs. 9.78 crore
 (B) Rs. 97.8 lakh
 (C) Rs. 52.8 lakh
 (D) Rs. 30.65 lakh

(55) What is the total cost of the production of item I by companies A and C together (in Rs. crore)?

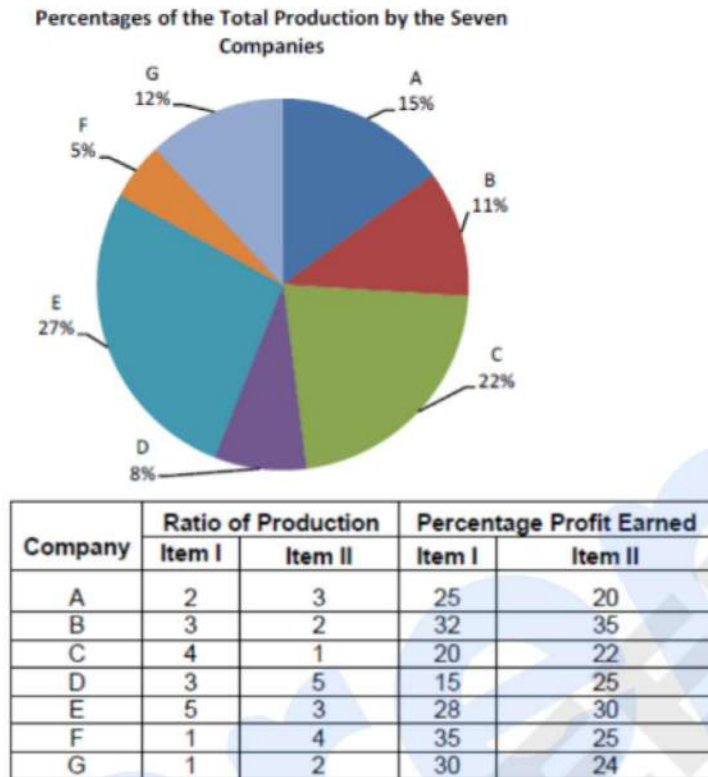
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D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

- (A) 9.25
 (B) 5.9
 (C) 4.1625
 (D) None of these

(56) Cost of production of item I by company F is what percent of the cost of production of item II by company D?



- (A) 16%
- (B) 33.33%
- (C) 20%
- (D) 12.5%

(57) What is the cost of laying the carpet in a rectangular hall?

Statement I. Cost of the carpet is Rs. 450 per square metre.

Statement II. Perimeter of the hall is 50 meters.

- (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
- (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
- (C) If the data either in statement I alone or in statement II alone are sufficient to answer the question.

(D) If the data even in both statements I and II together are not sufficient to answer the question.

(58) What is the average daily wages of a worker who works for five days; he made Rs. 80 the first day?

I. The worker made a total of Rs. 400 for the first four days of work.

II. The worker made 20% more each day than he did on the previous day.

(A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

(B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

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(59) What is the difference between the shares of profits of Rekha and Nutan out of a profit of Rs. 6,000 at the end of the year?

Statement I. Rekha invested Rs. 50,000 and withdrew Rs. 1,000 after 4 months.

Statement II. For the last 8 months, Nutan's capital was 125% of Rekha's.

(A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

(B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

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(60) What will be the compound interest on a sum after 3 years?

I. The compound interest on the sum at 5% per annum for 2 years is Rs. 12.50 more than the

simple interest.

II. The difference between compound interest and simple interest on the sum for 3 years at 5% per annum is Rs. 38,125.

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-

(61) What is the height of a right-angled triangle?

Statement I. The area of the right-angled triangle is equal to the area of a rectangle whose breadth is 15 m.

Statement II. The length of the rectangle is 12 m.

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-

(62) The area of a square is equal to the area of a circle. What is the circumference of the circle?

Statement I. The diagonal of the square is X inches.

Statement II. The side of the square is Y inches.

- (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

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(63) Rate of Interest, Dividend Payout Ratio, and the Retained Earnings of Five Companies

Company	Interest (Rs. 000)	Rate of Interest (%)	Dividend Payout Ratio (%)	Retained Earnings (Rs. lakh)
A	234	18	22.50	155
B	576	24	19.60	402
C	129.6	16	8.75	365
D	144	9	32.50	270
E	180	15	28.00	216

Question: Profit earned is either paid out as dividend or ploughed back in business as retained earnings. Interest is paid on borrowings.

By how much do the borrowings of company B exceed that of company A?

- (A) Rs.13,20,000
- (B) Rs.12,10,000
- (C) Rs.10,00,000
- (D) Rs.11,00,000

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A	234	18	22.50	155
B	576	24	19.60	402
C	129.6	16	8.75	365
D	144	9	32.50	270
E	180	15	28.00	216

Question: Profit earned is either paid out as dividend or ploughed back in business as retained earnings. Interest is paid on borrowings.

By how much does the dividend paid by company D exceed the dividend paid by company

B?

- (A) Rs.32 lakh
- (B) Rs.23 lakh
- (C) Rs.320 lakh
- (D) Rs.230 lakh

(65) Rate of Interest, Dividend Payout Ratio, and the Retained Earnings of Five

Companies

Company	Interest (Rs. 000)	Rate of Interest (%)	Dividend Payout Ratio (%)	Retained Earnings (Rs. lakh)
A	234	18	22.50	155
B	576	24	19.60	402
C	129.6	16	8.75	365
D	144	9	32.50	270
E	180	15	28.00	216

Question: Profit earned is either paid out as dividend or ploughed back in business as retained earnings. Interest is paid on borrowings.

What is the sum of profits made by companies A and B?

- (A) Rs.600 lakh
- (B) Rs.500 lakh
- (C) Rs.700 lakh
- (D) Rs.800 lakh

(66) Rate of Interest, Dividend Payout Ratio, and the Retained Earnings of Five

Companies

Company	Interest (Rs. 000)	Rate of Interest (%)	Dividend Payout Ratio (%)	Retained Earnings (Rs. lakh)
A	234	18	22.50	155
B	576	24	19.60	402
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D	144	9	32.50	270
E	180	15	28.00	216

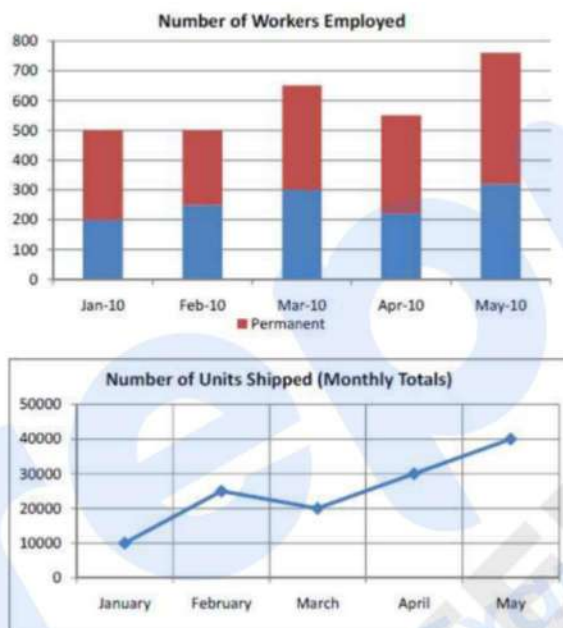
Question: Profit earned is either paid out as dividend or ploughed back in business as retained earnings. Interest is paid on borrowings.

What is the sum of the borrowings of all five companies?

- (A) Rs.14.6 lakh

- (B) Rs.146 lakh
- (C) Rs.14.6 crore
- (D) None of these

(67) Study the following bar graph and line graph giving details of Number of Workers Employed and Number of Units Shipped respectively of M/s Mega Corp Limited to answer the question.

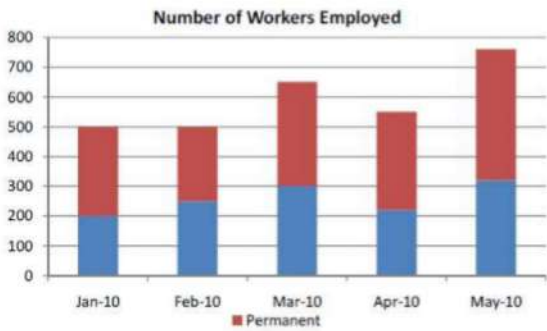


Question: What was the difference, if any, between the number of permanent workers employed by M/s Mega Corp Limited on March 1 and the number of permanent workers employed on April 1?

- (A) 0
- (B) 20
- (C) 100
- (D) 150

(68) What was the total number of units shipped by M/s Mega Corp Limited for the months of January, February, and March?

- (A) 40,000
- (B) 55,000



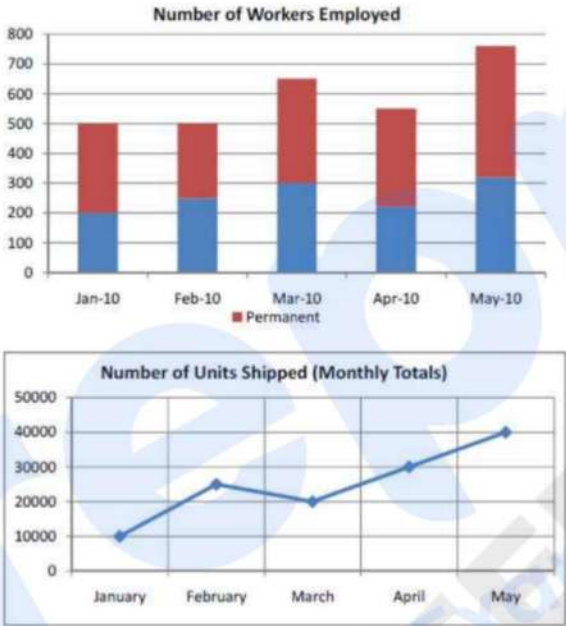
- (C) 60,000
- (D) 70,000

(69) If on May 1, 60% of the permanent workers and 40% of the temporary workers employed by M/s Mega Corp Limited were women, how many of the workers employed by M/s Mega Corp Limited at that time were women?



- (A) 200
- (B) 120
- (C) 390
- (D) 260

(70) By what percent did the number of temporary workers employed by M/s Mega Corp Limited increase from April 1 to May 1?



- (A) 45%
- (B) 25%
- (C) 20%
- (D) 12%

(71) Column A and Column B consist of two quantities. You are to compare the two quantities.

Column A	Column B
Perimeter of a square with each side equal to 6 cm	Perimeter of a regular pentagon with each side equal to 4 cm

What is the comparison between the quantities in Column A and Column B?

- (A) if the quantity in Column A is greater than the quantity in Column B.
- (B) if the quantity in Column B is greater than the quantity in Column A.

- (C) if the quantities are equal.
(D) if the comparison cannot be made.
-

(72) Column A and Column B consist of two quantities. You are to compare the two quantities. What is the comparison between the quantities in Column A and Column B?

Column A

Half of 60 % of 30

Column B

$\frac{1}{5}$ th of 50 % of 60

- (A) if the quantity in Column A is greater than the quantity in Column B.
(B) if the quantity in Column B is greater than the quantity in Column A.
(C) if the quantities are equal.
(D) if the comparison cannot be made.
-

(73) Column A and Column B consist of two quantities. You are to compare the two quantities. What is the comparison between the quantities in Column A and Column B?

Column A

The number of posts needed for a fence
144 feet long and posts are placed 12 feet apart

Column B

12 posts

- (A) if the quantity in Column A is greater than the quantity in Column B
(B) if the quantity in Column B is greater than the quantity in Column A
(C) if the quantities are equal
(D) if the comparison cannot be made
-

(74) Column A and Column B consist of two quantities. You are to compare the two quantities. What is the comparison between the quantities in Column A and Column B?

Column A

Time elapsed from 2:55 P.M. to 3:15 P.M. on the same afternoon

Column B

$\frac{1}{3}$ hour

- (A) if the quantity in Column A is greater than the quantity in Column B.
(B) if the quantity in Column B is greater than the quantity in Column A.
(C) if the quantities are equal.

(D) if the comparison cannot be made.

(75) Column A and Column B consist of two quantities. You are to compare the two quantities. What is the comparison between the quantities in Column A and Column B?

Column A

$\frac{1}{3}$ of 8

Column B

$66\frac{2}{3}\%$ of 4

- (A) if the quantity in Column A is greater than the quantity in Column B.
 (B) if the quantity in Column B is greater than the quantity in Column A.
 (C) if the quantities are equal.
 (D) if the comparison cannot be made.

(76) Column A and Column B consist of two quantities. You are to compare the two quantities. What is the comparison between the quantities in Column A and Column B?

Column A

Cube root of Three

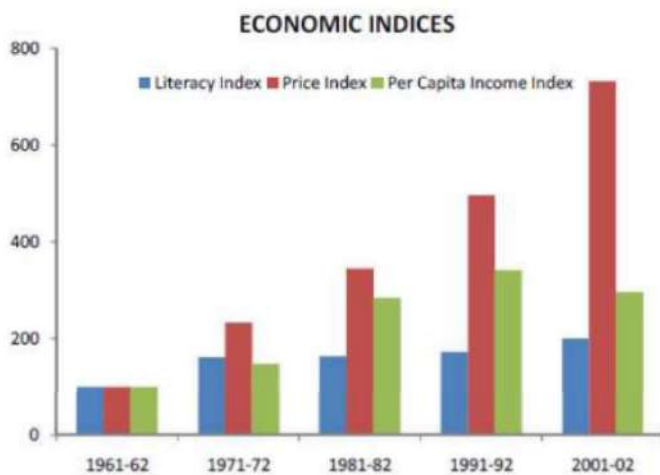
Column B

Fourth root of Four

- A) if the quantity in Column A is greater than the quantity in Column B
 B) if the quantity in Column B is greater than the quantity in Column A
 C) if the quantities are equal
 D) if the comparison cannot be made

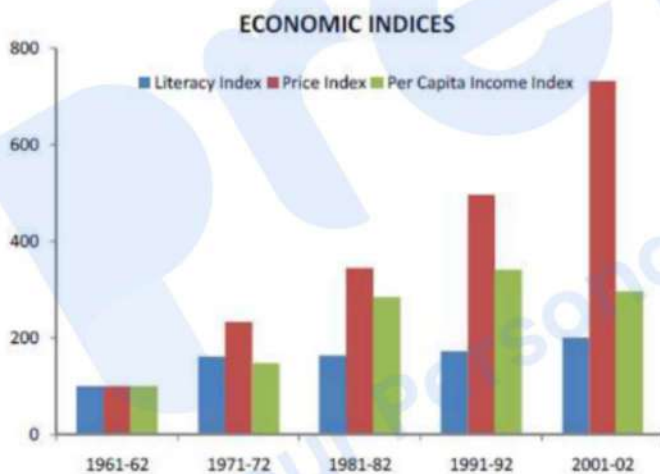
- (A) if the quantity in Column A is greater than the quantity in Column B.
 (B) if the quantity in Column B is greater than the quantity in Column A.
 (C) if the quantities are equal.
 (D) if the comparison cannot be made.

(77) Study the following bar graph giving Economic Indices for the period 1961-62 to 2001-02 to answer the question. What is the average annual percentage increase in literacy index from 1961-62 to 2001-02?



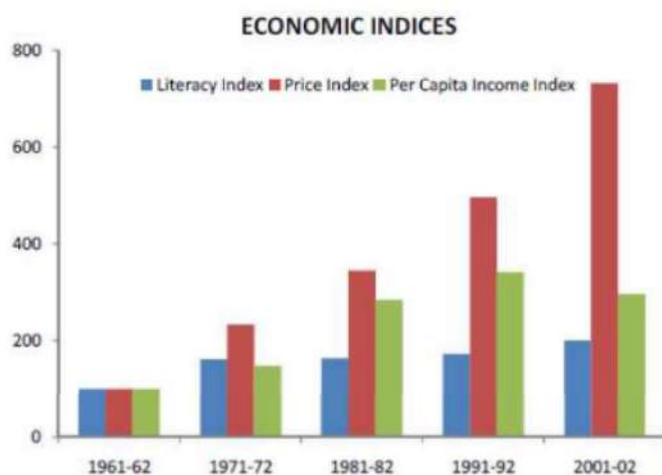
- (A) 2.5 %
 (B) 15.8 %
 (C) 18.3 %
 (D) 6.25 %

(78) What is the economic index with the maximum percentage increase?



- (A) Literacy, 1971-72
 (B) Price, 2001-02
 (C) Per Capita Income, 1981-82
 (D) Price, 1971-72

(79) In which period does per capita income index increase faster than the price index?



- (A) 1971-72
- (B) 2001-02
- (C) 1981-82
- (D) 1991-92

(80) Study the following bar graph giving Economic Indices for the period 1961-62 to 2001-02 to answer the question. What are the respective indices of literacy, price, and per capita income for 2001-02, taking 1971-72 as the base period?

- (A) 124.1, 313.8, 200
- (B) 313.8, 124, 201
- (C) 313.8, 124.1, 190
- (D) 124.1, 313.8, 194

Section-C (General Knowledge)

81. A folk painting style, named 'Madhubani', originated in which state of India?

- (A) Bihar
- (B) Jharkhand
- (C) Chhattisgarh
- (D) Uttar Pradesh

82. The symbol for Swachh Bharat Abhiyan contains

- (A) Stick of Mahatma Gandhi
 - (B) Image of Mahatma Gandhi
 - (C) Specs of Mahatma Gandhi
 - (D) Two Green Leaves
-

83. Indian Institute of Space Science and Technology is located in

- (A) Bengaturu
 - (B) Chennai
 - (C) Hyderabad
 - (D) Thiruvananthapuram
-

84. Ashgabat, known as ‘the city of white marble’, is the capital city of

- (A) Turkmenistan
 - (B) Slovakia
 - (C) Tajikistan
 - (D) Uzbekistan
-

85. Which mission’s Portal for Affordable Credit and Interest Subvention Access (Paisha) under Ministry of Housing and Urban Affairs won the 2019 SKOCH Governance Gold Award?

- (A) North Eastern Region Urban Development Programme - NERUDP
 - (B) Deendayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY-NULM)
 - (C) Pradhan Mantri Awas Yojana
 - (D) Jawaharlal Nehru National Urban Renewal Mission
-

86. World Mosquito Day is observed annually on

- (A) August 17
- (B) August 18
- (C) August 20
- (D) August 19

87. Name the first space shuttle launched.

- (A) Victory
- (B) Enigma
- (C) Columbia
- (D) Virginia

88. Which Football Club had won the 2019 Durand Cup for the second time in the 131 years?

- (A) Real Kashmir
- (B) Gokulam Kerala
- (C) Chennai City
- (D) Army Green

89. Who won the Golden Boot and Golden Ball award for top goal scoring and best player category in the 2019 Durand Cup?

- (A) Jose Antonio Vicuna
- (B) Fernando Santiago Valera
- (C) Marcus Joseph
- (D) CK Ubaid

90. The Indian National Calendar is based on

- (A) Christian era
 - (B) Saka era
 - (C) Vikram era
 - (D) Hijri era
-

91. Which country has the largest rail network in the world?

- (A) India
 - (B) U.K.
 - (C) China
 - (D) U.S.A.
-

92. Saina Nehwal is India's No. 1 player in which sport?

- (A) Badminton
 - (B) Squash
 - (C) Golf
 - (D) Swimming
-

93. The classical dance form Kathakali originated in which Indian state?

- (A) Orissa
 - (B) Tamil Nadu
 - (C) West Bengal
 - (D) Kerala
-

94. Who invented the periodic table?

- (A) Einstein
 - (B) Newton
 - (C) Mendel
 - (D) Dmitri Mendeleev
-

95. Lysosomes, which are known as suicidal bags, are produced by which organelle?

- (A) Mitochondria
 - (B) Golgi body
 - (C) Ribosome
 - (D) Peroxisome
-

96. Which of the following banks launched 'Pocket', India's first digital bank on mobile phones?

- (A) Axis Bank
 - (B) ICICI Bank
 - (C) HDFC Bank
 - (D) SBI
-

97. Which one of the following countries will hold the presidency of the BRICS New Development Bank for the first six years?

- (A) India
 - (B) China
 - (C) South Africa
 - (D) Russia
-

98. A minor planet is named after which one of the following Indian Legends?

- (A) Viswanathan Anand
 - (B) Sachin Tendulkar
 - (C) A. R. Rahman
 - (D) Milkha Singh
-

99., the 'founding father' and Architect of modern Singapore, passed away on 23 March 2015.

- (A) Mr. Lee Kuan Yew
 - (B) Mr. Lee Hsien Loong
 - (C) Mr. Urn Hng Kiang
 - (D) Mr. Lee Li Lian
-

100. Which country has launched the world's first ever Biometric Seafarer Identity Document (BSID) which captures the facial biometric data of seafarers?

- (A) China

- (B) Bangladesh
 - (C) Sri Lanka
 - (D) India
-

101. Where was the 18th meeting of Conference of the Parties (CoP18) of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) held?

- (A) Geneva, Switzerland
 - (B) Beijing, China
 - (C) Washington D.C., U.S.
 - (D) London, United Kingdom
-

102. Name the subspecies of giraffe, which was declared endangered in the 18th meeting of Conference of the Parties (CoP18) of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

- (A) West African giraffe
 - (B) Rothschild's giraffe
 - (C) Masai giraffe
 - (D) Reticulated giraffe
-

103. After how many years, Economic Capital Framework (ECF) has to be reviewed as per the Bimal Jalan Committee?

- (A) 5 years
 - (B) 4 years
 - (C) 3 years
 - (D) 10 years
-

104. Which principal organ of the United Nations has virtually accomplished its object?

- (A) The Security Council
- (B) The General Assembly
- (C) The International Court of Justice

(D) The Trusteeship Council

105. Who among the following has been named as the new heir of the Mysore Royal Family?

- (A) Yaduveer Gopal Raj Urs
 - (B) Chaduranga Kantharajas Urs
 - (C) Aditya Gurudev Urs
 - (D) Chandra Shekar Urs
-

106. Who among the following is known as the Metro man of India?

- (A) Rajendran
 - (B) E. Sridharan
 - (C) N. Mishra
 - (D) K. S. Rao
-

107. The Prime Minister has launched the "Give it Up" campaign for voluntarily giving up

- (A) use of tobacco products
 - (B) use of plastic
 - (C) LPG subsidy
 - (D) black money
-

108. Which country has launched the "Let Girls Learn" initiative aimed at educating 62 million girls around the world?

- (A) United States
 - (B) New Zealand
 - (C) India
 - (D) Australia
-

109. Advance ticket booking facility for railway passengers is available days before the start of the journey

- (A) 60
 - (B) 90
 - (C) 120
 - (D) None of these
-

110. Name India's first company that provides lifetime credit of up to Rs. 5 lakh instantly to its customers.

- (A) Bajaj Finserv
 - (B) Indiabulls
 - (C) KreditBee
 - (D) MoneyTap
-

111. Name the Indian Cricketer, whose life time ban was reduced to seven year ban, which comes to end by 2020.

- (A) Ajay Jadeja
 - (B) S. Sreesanth
 - (C) Ajay Sharma
 - (D) Mohammad Azharuddin
-

112. Who among the following was not a moderate?

- (A) Feroz Shah Mehta
 - (B) Surendranath Banerji
 - (C) Bipin Chandra Pal
 - (D) Gopal Krishna Gokhale
-

113. The best method for improving the nutrient composition of a diet is by

- (A) combining various foods
- (B) use of sprouted cereals and pulses

- (C) use of boiled foods
 - (D) use of processed foods
-

114. 'No two electrons in an atom can have the same set of four quantum numbers' is

- (A) Newton's law
 - (B) Bohr's law
 - (C) Aufbau principle
 - (D) Pauli's exclusion principle
-

115. Consider the following statements I. The Western Ghats are relatively higher in their northern region II. Doda Beta is the highest peak in the Western Ghats

Which among the above statements is/are incorrect?

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

116. Arjuna Award is given for

- (A) bravery on battlefield
 - (B) outstanding performance in sports
 - (C) exceptional service in emergency
 - (D) exceptional service to slum dwellers
-

117. Which day of the year is celebrated as World Radio day?

- (A) 13 February
 - (B) 15 February
 - (C) 13 March
 - (D) 15 March
-

118. Which movie won the Oscar in the best picture category in the 87th Academy Awards?

- (A) The Theory of Everything
 - (B) Glory
 - (C) Still Alice
 - (D) Birdman
-

119. Acid used in Car battery is

- (A) Hydrochloric acid
 - (B) Boric acid
 - (C) Sulphuric acid
 - (D) Carbonic acid
-

120. The Maze Tower in which city has been recognised by Guinness World Records as representing the largest vertical maze?

- (A) Shanghai
 - (B) Dubai
 - (C) Hong Kong
 - (D) New York
-

Section-D (Reasoning)

121. Statement: The patient's condition would improve after operation.

Assumptions: I. The patient can be operated upon in this condition. II. The patient cannot be operated upon in this condition.

- (A) if only assumption I is implicit
 - (B) if only assumption II is implicit
 - (C) if neither assumption I nor II is implicit
 - (D) if both assumptions I and II are implicit
-

122. The government has decided to disinvest large chunks of its equity in select public sector undertakings for a better fiscal management.

Assumptions: I. The amount generated out of the disinvestments process may reduce substantially the mounting fiscal deficits. II. There will be enough demand in the market for the shares of these undertakings.

- (A) if only assumption I is implicit
 - (B) if only assumption II is implicit
 - (C) if neither assumption I nor II is implicit
 - (D) if both assumptions I and II are implicit
-

123. All existing inequalities can be reduced, if not utterly eradicated, by action of governments or by revolutionary change of government.

Assumptions: I. Inequality is a man-made phenomenon. II. No person would voluntarily part with what he possesses.

- (A) if only assumption I is implicit
 - (B) if only assumption II is implicit
 - (C) if neither assumption I nor II is implicit
 - (D) if both assumptions I and II are implicit
-

124. "You are hereby appointed as a programmer with a probation period of one year and your performance will be reviewed at the end of the period for confirmation." – A line in an appointment letter.

Assumptions: I. The performance of an individual generally is not known at the time of appointment offer. II. Generally an individual tries to prove his worth in the probation period.

- (A) if only assumption I is implicit
 - (B) if only assumption II is implicit
 - (C) if neither assumption I nor II is implicit
 - (D) if both assumptions I and II are implicit
-

125. Should judiciary be independent of the executive?

Arguments: I. Yes, this would help curb the unlawful activities of the executive. II. No, the executive would not be able to take bold measures.

- (A) if only argument I is strong
 - (B) if only argument II is strong
 - (C) if neither argument I nor II is strong
 - (D) if both arguments I and II are strong
-

126. Should open book systems be introduced in examinations?

Arguments: I. Yes, because it will avoid mass copying. II. No, because then all students will get 100

- (A) if only argument I is strong
 - (B) if only argument II is strong
 - (C) if neither argument I nor II is strong
 - (D) if both arguments I and II are strong
-

127. Should religion be taught in our schools?

Arguments: I. Yes, do the parents not wish to develop their wards into mature individuals? II. No, how can one dream of such a step when we want the young generation to fulfill its role?

- (A) if only argument I is strong
 - (B) if only argument II is strong
 - (C) if neither argument I nor II is strong
 - (D) if both arguments I and II are strong
-

128. Should family planning be made compulsory in India?

Arguments: I. Yes, looking at the miserable conditions in India, there is no other go. II. No, in India there are people of various religions and family planning is against the tenets of some of the religions.

- (A) if only argument I is strong
- (B) if only argument II is strong

- (C) if neither argument I nor II is strong
 - (D) if both arguments I and II are strong
-

129. Statement: Black cloud follows thunder; rains follow thunder.

Conclusions: I. Thunder is the cause of rain. II. Black cloud is the cause of thunder.

- (A) if only conclusion I is strong
 - (B) if only conclusion II is strong
 - (C) if neither conclusion I nor II is strong
 - (D) if both conclusion I and II are strong
-

130. Statement: The secret of success is consistency of purpose.

Conclusions: I. It is difficult for a person to be consistent. II. Single-minded devotion will highly help for achieving success.

- (A) if only conclusion I is strong
 - (B) if only conclusion II is strong
 - (C) if neither conclusion I nor II is strong
 - (D) if both conclusion I and II are strong
-

131. Statement: Today out of the world population of several thousand million, the majority of men have to live under governments which refuse them personal liberty and the right to dissent.

Conclusions: I. People are indifferent to personal liberty and the right to dissent. II. People desire personal liberty and the right to dissent.

- (A) if only conclusion I follows
 - (B) if only conclusion II follows
 - (C) if neither conclusion I nor II follows
 - (D) if both conclusion I and II follow
-

132. Statement: The use of non-conventional sources of energy will eliminate the energy crisis in the world.

Conclusions: I. Modern technology is gradually replacing the conventional sources of energy. II. The excessive exploitation of the environment has led to depletion of conventional sources of energy.

- (A) if only conclusion I is strong
 - (B) if only conclusion II is strong
 - (C) if neither conclusion I nor II is strong
 - (D) if both conclusion I and II are strong
-

133. Among five boys, Vineet is taller than Manick, but not as tall as Ravi. Jacob is taller than Dilip but shorter than Manick. Who is the tallest in their group?

- (A) Ravi
 - (B) Manick
 - (C) Vineet
 - (D) Dilip
-

134. If P is taller than Q, R is shorter than P, S is taller than T but shorter than Q, then who among them is the tallest?

- (A) P
 - (B) Q
 - (C) S
 - (D) T
-

135. My bag can carry no more than ten books. I must carry at least one book each of management, mathematics, physics and fiction. Also for every management book I must carry two or more fiction books, and for every mathematics book I must carry two or more physics books. I earn 4, 3, 2, and 1 points for each management, mathematics, physics and fiction book, respectively. I carry in my bag. I want to maximize the points I can earn by carrying the most appropriate combination of books in my bag. The maximum points that I can earn are

- (A) 20

- (B) 21
 - (C) 22
 - (D) 23
-

136. Eighty kilogram of store material is to be transported to a location 10 km away. Any number of couriers can be used to transport the material. The material can be packed in any number of units of 10, 20 or 40 kg. Courier charges are Rs. 10 per hour. Couriers travel at the speed of 10 km/hr if they are not carrying any load, at 5 km/hr if carrying 10 kg, at 2 km/hr if carrying 20 kg and at 1 km/hr if carrying 40 kg. A courier cannot carry more than 40 kg of load. The minimum cost at which 80 kg of store material can be transported to its destination will be (given the total quantity must be sent by using one kind of packs only, a combination of packs is not allowed)

- (A) Rs. 180
 - (B) Rs. 160
 - (C) Rs. 140
 - (D) Rs. 120
-

137. From a point, Rajneesh started walking towards east and walked 35 m. He then turned towards his right and walked 20 m and he again turned right and walked 35 m. Finally, he turned to his left and walked 20 m and he reached his destination. Now, how far is he from his starting point?

- (A) 50 m
 - (B) 55 m
 - (C) 20 m
 - (D) 40 m
 - (E) 35 m
-

138. A directional post is erected on a crossing. In an accident, it was turned in such a way that the actual east is now point towards north. A passerby went in a wrong direction thinking it is west. In which direction is he actually travelling now?

- (A) South
 - (B) North
 - (C) East
 - (D) West
 - (E) Data insufficient
-

139. Kittu is in between Mohan and Sohan, Raju is to the left of Sohan and Shyam is to the right of Mohan. If all of the friends are sitting facing South, then who is on their extreme right?

- (A) Mohan
 - (B) Sohan
 - (C) Kittu
 - (D) Shyam
 - (E) Raju
-

140. In a queue, Sadiq is 14th from the front and Joseph is 17th from the end, while Jane is in between Sadiq and Joseph. If Sadiq be ahead of Joseph and there be 48 persons in the queue, how many persons are there between Sadiq and Jane?

- (A) 5
 - (B) 6
 - (C) 7
 - (D) 8
-

141. A cube is to be coloured in such a way as to avoid the same colour on adjacent surfaces. What is the minimum number of colours you will require?

- (A) Three
 - (B) Four
 - (C) Six
 - (D) Nine
-

142. Persons X, Y, Z and Q live in red, green, yellow or blue coloured houses placed in a sequence on a street. Z lives in a yellow house. The green house is adjacent to the blue house. X does not live adjacent to Z. The yellow house is in between the green and red house. The colour of the house X lives in is

- (A) yellow
 - (B) green
 - (C) red
 - (D) None of these
-

143. D-4, F-6, H-8, J-10, '?'

- (A) K-12
 - (B) M-14
 - (C) L-12
 - (D) M-13
-

144. 3F, 6G, 11I, 18L, '?'

- (A) 21O
 - (B) 25N
 - (C) 27P
 - (D) 27Q
-

145. A, G, L, P, S, '?'

- (A) U
 - (B) W
 - (C) X
 - (D) Y
-

146. AI, BJ, CK, '?'

- (A) DL
- (B) DM

(C) GH

(D) LM

147. 6, 11, 21, 36, 56, '?'

(A) 42

(B) 51

(C) 81

(D) 91

148. 1, 9, 17, 33, 49, 73, '?'

(A) 97

(B) 98

(C) 99

(D) 100

149. Ram's age was square of a number last year and it will be cube of a number next year. How long must he wait before his age is again the cube of a number?

(A) 39 years

(B) 10 years

(C) 38 years

(D) 64 years

150. A, B, C and D play a game of cards. A says to B, 'If I give you 8 cards, you will have as many as C has and I shall have 3 less than what C has. Also if I take 6 cards from C, I shall have twice as many as D has.' If B and D together have 50 cards, how many cards has A got?

(A) 23

(B) 27

(C) 37

(D) 40

151. Introducing Rajesh, Neha said, "his brother's father is the only son of my grandfather". How is Rajesh related to Neha?

- (A) Brother
- (B) Daughter
- (C) Mother
- (D) Niece
- (5) Sister

152. Saroj is mother-in-law of Vani who is sister-in-law of Deepak. Rajesh is father of Ramesh, the only brother of Deepak. How is Saroj related to Deepak?

- (A) Mother-in-law
- (B) Aunt
- (C) Wife
- (D) Mother
- (5) Sister

153. A famous singer recently won a lawsuit against an advertising firm for using another singer in a commercial to evoke the famous singer's well-known rendition of a certain song. As a result of the lawsuit, advertising firms will stop using imitators in commercials. Therefore, advertising costs will rise, since famous singer's services cost more than those of their imitators.

The conclusions above are based on which of the following assumptions?

- (A) Most people are unable to distinguish a famous singer's rendition of a song from a good imitator's rendition of the same song.
 - (B) Commercials using famous singers are usually more effective than commercials using imitator's rendition of the same song.
 - (C) The original versions of some well-known songs are unavailable for use in commercials.
 - (D) The advertising industry will use well-known renditions of songs in commercials.
-

154. Whenever a major airplane accident occurs, there is a dramatic increase in the number of airplane mishaps reported in the media, a phenomenon that may last for as a few months after the accident. Airline officials assert that the publicity given to the gruesomeness of major airplane accidents focuses media attention on the airline industry, and the increase in the number of reported accidents is caused by an increase in the number of news sources covering airline accidents, not by an increase in the number of accidents.

Which of the following choices explains the discrepancies stated above?

- (A) The publicity surrounding airline accidents is largely limited to the country in which the crash occurred.
- (B) Airline accidents tend to occur far more often during certain peak travel months.
- (C) News organizations do not have any guidelines to help them decide how severe an accident is.
- (D) Airplane accidents receive coverage by news sources find it advantageous to do so.

155. In a certain code TEACHER is written as VGCEJGT. How is CHILDREN written in that code?

- (A) EJKNEGTP
- (B) EGKNFITP
- (C) EJKNFTGP
- (D) EJKNFTG

156. In a certain code, 'BASIC' is written as 'DDULE'. How is 'LEADER' written in that code?

- (A) NHCGGU
- (B) OHDGHU
- (C) NGCFGT
- (D) OGDFHT

157. The prices of foodgrains and vegetables have substantially increased due to

prolonged strike call given by the truck owners association.

- (A) if only Course of action I is strong
 - (B) if only Course of action II is strong
 - (C) if neither Course of action I nor II are strong
 - (D) if both Course of action I and II are strong
-

158. There has been an unprecedented increase in the number of requests for berths in most of the long distance trains during the current holiday season.

- (A) if only Course of action I is strong
 - (B) if only Course of action II is strong
 - (C) if neither Course of action I nor II are strong
 - (D) if both Course of action I and II are strong
-

159. There has been significant drop in the water level of all the lakes supplying water to the city.

- (A) if only Course of action I is strong
 - (B) if only Course of action II is strong
 - (C) if neither Course of action I nor II are strong
 - (D) if both Course of action I and II are strong
-

160. A large number of people visiting India from country 'X' has been tested positive for carrying viruses of a killer disease.

- (A) if only Course of action I is strong
 - (B) if only Course of action II is strong
 - (C) if neither Course of action I nor II are strong
 - (D) if both Course of action I and II are strong
-

Section-E (Verbal)

161. Astrologers are habitually prone to goof-ups; now have an excuse for why their predictions have been going haywire: the emergence of newer and newer planets that

have caused their calculations to go awry. For the international team of astronomers who recently discovered eight new planets, the arrivals are, however, a cause for excitement. Indeed, even as the rest of the world continues to be consumed by a morbid passion for shiny new war machines, deadly chemicals and sinister war tactics, astronomers have been doggedly searching the heavens for more heavenly bodies in the belief that the search will take us closer to a more exalted goal ” that of knowing the truth about us and the universe. Reality is much bigger than it seems the part we call the universe is the merest tip of the iceberg, one scientist remarked. How true. In the beginning, skeptics wouldn’t accept that the earth actually moves, let alone that it revolves around the sun because of an unshaken belief that the earth was the centre of the universe. We’ve come a long way. Today, scientists have spotted nearly 80 extra-solar planets using sophisticated instruments. What’s more, our universe may not be the only universe in the cosmos; there could well be several parallel universes teeming with many galaxies, solar systems and planets, although none of this may be perceptible to the naked eye. Perhaps sages who say that truth is not easily perceptible, mean just this ” what is evidently before us is not the whole truth.

Scientists say that everything in the tangible universe has its shadowy counterpart in other, parallel universes. In fact, it is by observing the play of cosmic light and shadow through powerful devices that scientists have been able to feel shapes or see shadows that indicate the existence of other heavenly bodies without actually seeing them. The international team of scientists involved in the present discovery conducted their search through telescopes in Australia, Belgium, UK and the US. Two of the newly discovered eight planets are believed to have circular orbits very like the Earth’s, while the others have well-defined elliptical orbits much like Pluto’s. This is significant because a planet with a circular orbit would more likely be hospitable to life forms than would one with an elliptical orbit. In the latter, the planet experiences extreme temperatures depending on whether it is proximate to or distant from the energy-giving star it’s circumambulating. As in the case of other recent discoveries ” such as finding traces of microbes in a meteorite ” this too strengthens the belief that we are not alone in the universe. So would we be exchanging inter galactic e-mails soon? Perhaps not as yet, given that our closest neighbouring galaxy is millions of light years away. What is

within our immediate grasp, though, is exploring the viability of establishing human settlements in space ” an endeavour that has assumed urgency what with biological terrorism and the like threatening humankind on earth. As Stephen Hawking recently said, I don’t think the human race will survive the next thousand years unless we spread into space. There are too many accidents that can befall life on a single planet.

According to the passage, it can be inferred that

- (A) finding traces of microbes in a meteorite proves the existence of life on other planets.
- (B) finding traces of microbes in a meteorite contributed the belief into truth that we are not alone in the universe.
- (C) finding traces of microbes in a meteorite made it possible to exchange galactic e-mails in future.
- (D) finding traces of microbes in a meteorite made us think about exploring the viability of establishing human settlements in space.

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- (A) It is unlikely that the human race can survive the next thousand years.
- (B) It seems quite likely that the human race can survive the next thousand years.
- (C) Accidents will wipe out the human race from this planet by accident within the next one thousand years.
- (D) The age of human race is one thousand years.

163. Astrologers habitually prone to goof-ups now have an excuse for why their predictions have been going haywire: the emergence of newer and newer planets that have caused their calculations to go awry. For the international team of astronomers who recently discovered eight new planets, the arrivals are, however, a cause for excitement. Indeed, even as the rest of the world continues to be consumed by a morbid passion for shiny new war machines, deadly chemicals and sinister war tactics, astronomers have been doggedly searching the heavens for more heavenly bodies in the belief that the search will take us closer to a more exalted goal ” that of knowing the truth about us and the universe. 'Reality is much bigger than it seems, the part we call the universe is the merest tip of the iceberg' one scientist remarked. How true. In the beginning, skeptics wouldn't accept that the earth actually moves, let alone that it revolves around the sun because of an unshaken belief that the earth was the centre of the universe. We've come a long way. Today, scientists have spotted nearly 80 extra-solar planets using sophisticated instruments. What's more, our universe may not be the only universe in the cosmos; there could well be several parallel universes teeming with many galaxies, solar systems and planets, although none of this may be perceptible to the naked eye. Perhaps sages who say that truth is not easily perceptible, mean just this ” what is evidently before us is not the whole truth. Scientists say that 'everything in the tangible universe has its shadowy counterpart in other, parallel universes'. In fact, it is by observing the play of cosmic light and shadow through powerful devices that scientists have been able to 'feel' shapes or 'see' shadows that indicate the existence of other heavenly bodies without actually seeing them. The international team of scientists involved in the present discovery conducted their search through telescopes in Australia, Belgium, UK and the US. Two of the newly discovered eight planets are believed to have circular orbits very like the Earth's, while the others have well-defined elliptical orbits much like Pluto's. This is significant because a planet with a circular orbit would more likely be hospitable to life forms than would one with an elliptical orbit. In the latter, the planet experiences extreme temperatures depending on whether it is proximate to or distant from the energy-giving star it's circumambulating. As in the case of other recent discoveries ” such as finding traces of microbes in a meteorite ” this too strengthens the belief that we're not alone in the

universe. So would we be exchanging inter galactic e-mails soon? Perhaps not as yet, given that our closest neighbouring galaxy is millions of light years away. What is within our immediate grasp, though, is exploring the viability of establishing human settlements in space ” an endeavour that has assumed urgency what with biological terrorism and the like threatening humankind on earth. As Stephen Hawking recently said, 'I don't think the human race will survive the next thousand years unless we spread into space. There are too many accidents that can befall life on a single planet'.

According to the passage, we can infer that

- (A) Parallel universes are half truth and half truth is not perceptible.
- (B) Parallel universes are not easily perceptible because they are not the whole truth.
- (C) Parallel universes are not easily perceptible and what we perceive is not the whole truth.
- (D) Truth is always easily perceptible.

164. Astrologers habitually prone to goof-ups now have an excuse for why their predictions have been going haywire: the emergence of newer and newer planets that have caused their calculations to go awry. For the international team of astronomers who recently discovered eight new planets, the arrivals are, however, a cause for excitement. Indeed, even as the rest of the world continues to be consumed by a morbid passion for shiny new war machines, deadly chemicals and sinister war tactics, astronomers have been doggedly searching the heavens for more heavenly bodies in the belief that the search will take us closer to a more exalted goal ” that of knowing the truth about us and the universe. 'Reality is much bigger than it seems, 'the part we call the universe is the merest tip of the iceberg' one scientist remarked. How true. In the beginning, skeptics wouldn't accept that the earth actually moves, let alone that it revolves around the sun because of an unshaken belief that the earth was the centre of the universe. We've come a long way. Today, scientists have spotted nearly 80 extra-solar planets using sophisticated instruments. What's more, our universe may not be the only universe in the cosmos; there could well be several parallel universes teeming with many galaxies, solar systems and planets, although none of this may be perceptible to the naked eye. Perhaps sages who say that truth is not easily perceptible,

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- (A) Somber
- (B) Wistful
- (C) Serene
- (D) Elated

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terrorism and the like threatening humankind on earth. As Stephen Hawking recently said, 'I don't think the human race will survive the next thousand years unless we spread into space. There are too many accidents that can befall life on a single planet'. According to the passage, it can be inferred that

- (A) A planet with a circular orbit is more likely to be hospitable to life than one with an elliptical orbit because the latter experiences very low temperatures.
- (B) A planet with a circular orbit is more likely to be hospitable to life forms than would one with an elliptical orbit since the latter is proximate to the energy-giving star it is circumambulating.
- (C) A planet with a circular orbit is more likely to be hospitable to life forms than would one with an elliptical orbit because the latter experiences extreme temperatures.
- (D) Both A and C

166. The 1983 re-organization was done with the objective of renewal; it was indeed a very complex exercise handled deftly by A.V. Ranga Rao and C.R. Swaminathan. We created a team of newly joined young scientists with just one experienced person and gave them the challenge of building the strap down inertial guidance system, an on board computer and a ram rocket in propulsion system. This exercise was being attempted for the first time in the country and the technology involved was comparable with world-class systems. The guidance technology is centered around the gyro and accelerometer package, and the electronics to process the sensor output. The on-board computer carries the mission computations and flight sequencing. A ram rocket system breathes air to sustain its high velocity for long durations after it is put through a booster rocket. The young teams not only designed these systems but also developed them into operational equipment. Later, Prithvi and then Agni used similar guidance systems, with excellent results. The effort of these young teams made the country self-reliant in the area of projectile technologies. It was a good demonstration of the 'renewal factor'. Our intellectual capacity was renewed through contact with enthusiastic young minds and had achieved these outstanding results. Now, besides the renewal of manpower, emphasis had to be laid on augmenting the strength of project groups. Often, people seek to satisfy their social egoistic and self-actualization needs at

their workplaces. A good leader must identify two different sets of environmental features. One, which satisfies a person's need and the other, which creates dissatisfaction with his work. We have already observed that people look for those characteristics in their work that relate to the values and goals which they consider important as giving meaning to their lives. If a job meets the employees' need for achievement, recognition, responsibility, growth and advancement, they will work hard to achieve goals. Once the work is satisfying, a person then looks at the environment and circumstances in the workplace. He observes the policies of the administration, qualities of his leader, security, status and working conditions. Then, he correlates these factors to the interpersonal relations he has with his peers and examines his personal life in the light of these factors. It is the agglomerate of all these aspects that decide the degree and quality of a person's effort and performance.

The matrix organization evolved in 1983 proved excellent in meeting all these requirements. So, while retaining this structure of the laboratory, we undertook a task-design exercise. The scientists working in technology directorates were made system managers to interact exclusively with one project. An external fabrication wing was formed under P.K. Biswas, a developmental fabrication technologist of long standing, to deal with the public sector undertakings (PSUs) and private sector firms associated with the development of the missile hardware. This reduced pressure on the in-house fabrication facilities and enabled them to concentrate on jobs which could not be undertaken outside, which in fact, occupied all three shifts.

- (A) I should be able to identify the contradicting environmental features to which a person reacts.
- (B) II should keep a tab on a person's individual need fulfillment.
- (C) III should well understand the external factors which dissatisfy a person.
- (D) I, II and III

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standing, to deal with the public sector undertakings (PSUs) and private sector firms associated with the development of the missile hardware. This reduced pressure on the in-house fabrication facilities and enabled them to concentrate on jobs which could not be undertaken outside, which in fact, occupied all three shifts. From the passage, it can be inferred that

- (A) social, egoistic and self-actualization needs could be catastrophic at the workplace.
- (B) social, egoistic and self-actualization needs are catastrophic at the workplace.
- (C) social, egoistic and self-actualization needs should be eliminated.
- (D) social, egoistic and self-actualization needs should be taken care of.

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- (A) it was responsible for the project's success.
- (B) the young were rejuvenated on coming in contact with the experienced.
- (C) the old scientists were refocused on their job.
- (D) the young intellectually stimulated the experienced.

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associated with the development of the missile hardware. This reduced pressure on the in-house fabrication facilities and enabled them to concentrate on jobs which could not be undertaken outside, which in fact, occupied all three shifts. From the passage, it can be inferred about the project that

- (A) India had attained nothing like this before.
- (B) Project components were developed ingeniously.
- (C) Laudable efforts were made by the team members.
- (D) All of the above.

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- (A) lack of faith in the older generation to achieve things.
- (B) bias towards young scientists.
- (C) perception of the level of difficulty of the project.
- (D) I, II and III

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The author holds that the “rather ugly but beneficial rectangle of plastic” has proved to be a “handy technological slave” in

- (A) storing the talas played upon the tabla, at various tempos.
- (B) ensuring the continuance of an ancient tradition.
- (C) transporting North Indian classical music across geographical borders.
- (D) capturing the transient moment of oral transmission.

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According to the author; the inadequacy of teaching North Indian classical music

through a codified, notation based system is best illustrated by

- (A) a loss of the structural beauty of the ragas.
- (B) a fusion of two opposing approaches creating mundane music.
- (C) the conversion of free-flowing ragas into a stilted set piece.
- (D) its failure to produce any noteworthy student or performer.

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Which of the following statements best conveys the overall idea of the passage?

- (A) North Indian and Western classical music are structurally different.
- (B) Western music is the intellectual property of the genius while the North Indian raga is the inheritance of a culture.
- (C) Creation as well as performance is important in the North Indian classical tradition.
- (D) North Indian classical music is orally transmitted while Western classical music depends on written down notations.

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The author's contention that the notion of property lies at the Western conception of genius is best indicated by which one of the following?

- (A) The creative output of a genius is invariably written down and recorded.
- (B) The link between the creator and his output is unambiguous.
- (C) The word "genius" is derived from a Latin word which means "to beget".
- (D) The music composer notates his music and thus becomes the "father" of a particular piece of music.

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- (A) teaching of North Indian classical music by word of mouth and direct demonstration.
- (B) use of the recorded cassette as a transmission medium between the music teacher and the trainee.
- (C) written down notation sheets of musical compositions.
- (D) conductor's baton and the orchestra.

176. Business is a fine balance between opportunity and risk. In an ideal world the entrepreneur identifies a new opportunity, a product, a process or a service that would increase user satisfaction. Successful businesses identify opportunities early, and ride a wave, at minimum risk, to deliver sustained growth and profitability. Bad or incomplete identification of an opportunity or an inadequate understanding of risk can destroy businesses. The last 18 months have seen a significant number of businesses destroyed all over the world. Opportunities available to Indian firms eight months ago are now history; risk has increased manifold.

The high growth environment and the go-go nature of growth in the last decade trivialized the need for a systematic identification of opportunity and a comprehensive assessment of risk. The pie was so big and growing so quickly, that almost anything made sense and money. Indian firms expanded capacity, market footprint, acquired firms in high-cost regimes, increased exports as a component of the sales and profit,

salaries and wages rocketed and there was an opportunity for every stakeholder at seemingly no risk. All and sundry began to think of themselves as world-beaters. Now that they have been beaten by the world it is time to reset the approach to avoid a Ctrl-Alt-Del situation. Identifying and seizing opportunities require a profound understanding of markets and customer expectations. Product, process and service have to be tailored to the ‘emerging’ customer need rather than the current need. The new paradigm is: what can we make that you want to buy as against – we have a product you have to buy! Indian corporates need to develop products and services that are centered around unmet needs of customers and go out and market, rather than sell, them. This requires understanding market reality, shifts and drivers on an ongoing continuous basis. Indian firms need to invest in understanding factors critical to their success – the physical, political, economic, social, technology and trade frameworks that will drive the competencies they need to acquire to leverage an opportunity. This requires a realistic estimate of the value chains that deliver results at least risk and their own strengths and weaknesses to manage and mitigate the risks while making the most of the opportunity. The iPhone is an excellent example of this approach. In a commoditizing market Apple identified the needs that users, young, old and mid-age, wanted and produced a user- friendly product. The factor critical to its success is its ease of connectivity, high-speed download off the Internet and elegant looks, not to mention superb feature list. The least concern for the user is the phone attributes, which, in any case, are good! In contrast, all the leading players of two years ago are now playing catch-up with iPhone, which, incidentally, offers a limited range of models, in contrast to the dizzying array and colours from other phone-makers! A good risk reduction exercise. Risk needs to be understood in its totality. Risk, defined as the possibility that events may not turn out as planned or expected, has many dimensions to it, much of it ignored in a high growth era, and all of which become relevant and rear up when least desired, in difficult times. The primary risk Indian corporate need to contend with is strategic risk – the ability to identify and seize an opportunity and allot resources to ensure delivery. It is sad to see the ‘retail revolution’ leaders of mid-2008, languishing in sour deals. The closure of 20 per cent of these ‘modern format stores’ is a telling commentary on the poor assessment of strategic risk. Minimizing strategic

risk increases the competitiveness of the firm.

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“In contrast, all the leading players of two years ago are now playing catch-up with iPhone.” What does this sentence imply?

- (A) Several retired sports people are now using iPhones to listen to catchy music.
- (B) The leading companies of two years ago are trying to catch up with the latest by launching their own versions of the iPhone.
- (C) Many leading music companies of yesteryear are offering catchy tunes for iPhones.
- (D) None of these.

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- (A) About a fifth of the “modern format stores” have shut down because of their poor assessment of strategic risk.
- (B) Diversification is a nice way to seek opportunities, without risk.
- (C) In a high growth area, businesses tend to ignore risk.
- (D) ‘Marketing’ and not ‘Selling’ is the new way to do business.

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- (A) Balancing Risk and Opportunity in Business
- (B) Effect of Recession on Businesses
- (C) Business Strategies for the Future
- (D) Identifying Businesses for the "Emerging" Customers

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I. Strategic Risk

II. Operational Risk

III. Recession

(A) Strategic Risk

(B) Operational Risk

(C) Environmental Risk

(D) I and II

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- (A) Real estate.
- (B) Retail revolution.
- (C) Garment industry.
- (D) iPhone.

181. A poem written on the death of someone loved and lost

- (A) Ode
- (B) Epic
- (C) Sonnet

(D) Elegy

182. A group of three novels or plays, each complete in itself

- (A) Triplet
 - (B) Triumvir
 - (C) Trilogy
 - (D) Trivet
-

183. Language difficult to understand because of bad form

- (A) Rhetoric
 - (B) Jargon
 - (C) Pedantic
 - (D) Verbatim
-

184. A child of unusual or remarkable talent

- (A) Scholar
 - (B) Diligent
 - (C) Freak
 - (D) Prodigy
-

185. The young boy's attempts to explain to his girlfriend why he had failed to show for their movie date did little to ease her feelings.

- (A) impassioned, disconsolate
 - (B) veracious, vacuous
 - (C) unbelievable, gluttonous
 - (D) chronic, vicarious
-

186. Companies that try to improve employees' performance by rewards encourage negative kinds of behavior, instead of a genuine interest in doing the work well.

- (A) giving, seeking
 - (B) seeking, bestowing
 - (C) conferring, discrediting
 - (D) withholding, fostering
-

187. When you are living with your values and principles, you can be straightforward, honest and

- (A) core, up-front
 - (B) inherited, distinct
 - (C) innate, durable
 - (D) cultural, perceptive
-

188. Unless new reserves are found soon, the world's supply of coal is being in such a way that with demand continuing to grow at present rates reserves will be by the year 2050.

- (A) consumed, completed
 - (B) depleted, exhausted
 - (C) reduced, augmented
 - (D) burnt, destroyed
-

189. Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

- A. Last March, I was invited to present a paper on the topic of whether the mistakes of the 20th century would be repeated in the 21st century as well.
 - B. The economic crisis hadn't become grave then.
 - C. But today the world is in the midst of the biggest economic crisis since 1929.
 - D. The key difference between then and now is that the old power structures have finally disappeared.
 - E. Now even the US is pleading for financial help from China.
- (A) BCDEA

- (B) CDEAB
- (C) EABCD
- (D) DABCE

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193. The trend toward a decrease in the working hours is already evident in the longer weekend given to employees in many multinational organizations.

(A) The trend toward a decrease in the working hours is already evident in the longer weekend given to employees in many multinational organizations.

(B) The trend toward a decrease in the working hours is all ready evident in the longer weekend given to employees in many multinational organizations.

(C) The trend toward a decrease in the working hours is already evident in the longer weekend given to employees in many multinational organization.

(D) The trend toward a decrease in the working hours is all already evident in the longer weekend given to employees in many multinational organizations.

194. Ever since the sting operation, there has been much opposition from who maintain that it was an unauthorized act.

(A) they

- (B) they who
 - (C) those
 - (D) those maintaining
-

195. Had he realized how close he was to failing, he would not have gone to the party.

- (A) Had he realized how close he was to failing, he would not have gone to the party.
 - (B) If he would have realized how close he was to failing, he would not have gone to the party.
 - (C) Had he had realized how close he was to failing, he would not have gone to the party.
 - (D) When he realized how close he was to failing, he did not go to the party.
-

196. Except for you and I, everyone brought a present for the little birthday boy.

- (A) Except for him and I, everyone brought a present for the little birthday boy.
 - (B) With the exception of you and I, everyone brought a present for the little birthday boy.
 - (C) Except for you and I, everyone had brought a present for the little birthday boy.
 - (D) Except for you and me, everyone brought a present for the little birthday boy.
-

197. Although farmers complained that the company's new product was expensive, malodorous, and

- (A) dangerous to handle
 - (B) there was few who
 - (C) would dispute its effectiveness
 - (D) as an insecticide
-

198. When it became apparent to Clive that not one of the remaining jurors going to believe his client's alibi, he began to reconsider the District Attorney's offer of a plea bargain.

- (A) it became apparent
- (B) were going
- (C) client's

(D) offer

199. High Fidelity, a successful book and film

(A) became

(B) successful

(C) by presenting

(D) as a common man

200. Though Patricia's resume was, her personal charisma was

(A) not nearly

(B) as long and impressive as

(C) the other applicant

(D) so great that Mr. Alvarez hired her on the spot.
