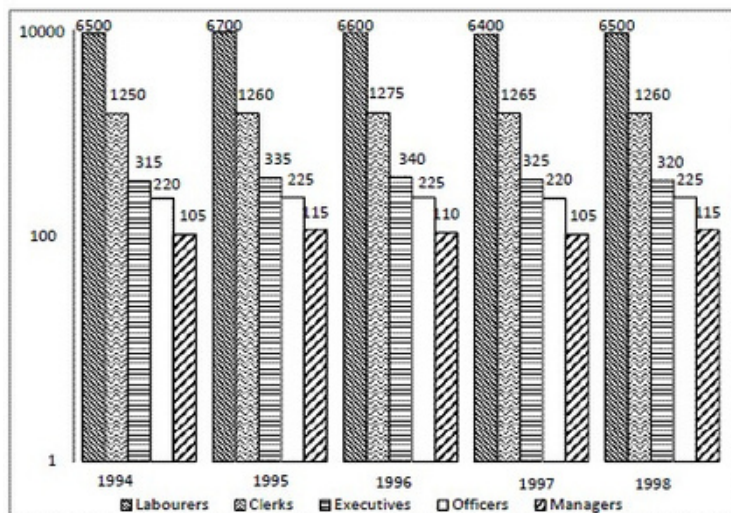


# Actual MAT 01

## Section : DI

### Question No. : 1

**DIRECTION for the question:** Study the following bar-diagram which shows the number of laborers, clerks, executives, officers and managers of a certain company over the period of five years.

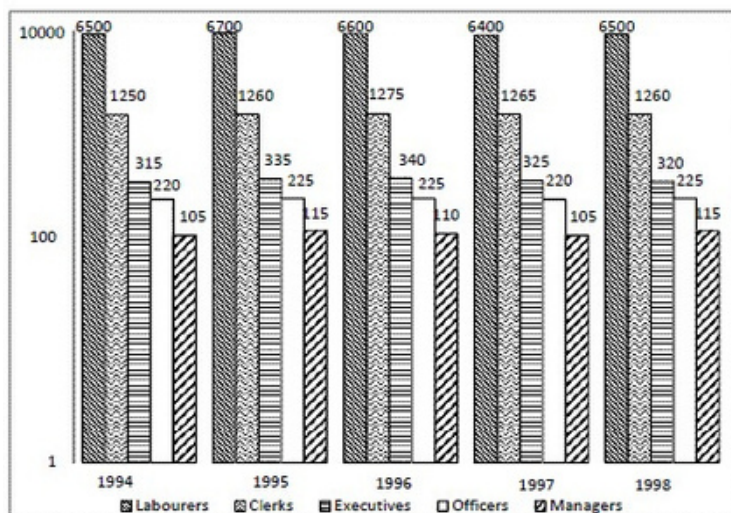


What is the approximate ratio of the average number of labourers and that of managers over the five years?

- A) 1 : 60   B) 61 : 1   C) 59 : 1   D) 57 : 1

### Question No. : 2

**DIRECTION for the question:** Study the following bar-diagram which shows the number of laborers, clerks, executives, officers and managers of a certain company over the period of five years.



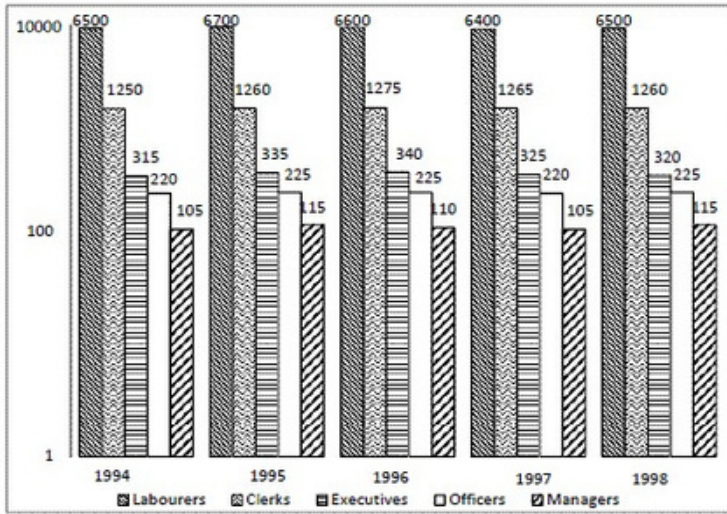
Find the percentage (approximately) of average number of clerks with respect to the average number of total employees of the company over the five years.

- A) 16   B) 15   C) 13   D) 18

### Question No. : 3

## Actual MAT 01

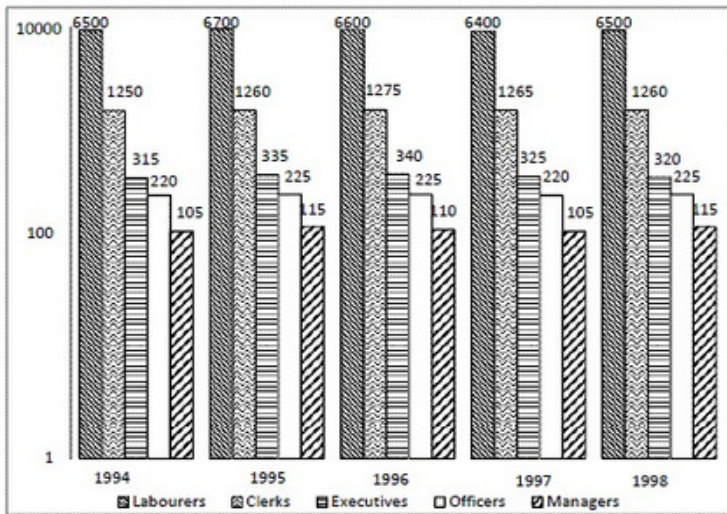
**DIRECTION for the question:** Study the following bar-diagram which shows the number of laborers, clerks, executives, officers and managers of a certain company over the period of five years.



Which year has shown decrease in every section of the number of employees?  
A) 1994 B) 1995 C) 1996 D) 1997

### Question No. : 4

**DIRECTION for the question:** Study the following bar-diagram which shows the number of laborers, clerks, executives, officers and managers of a certain company over the period of five years.



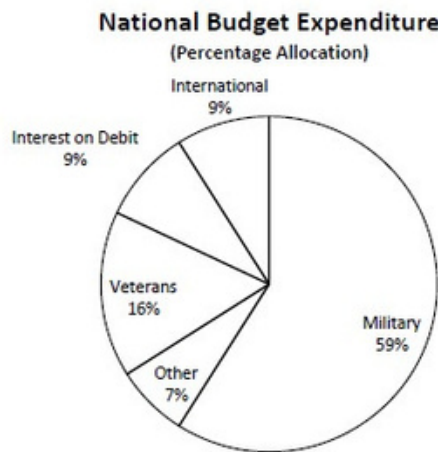
What is the percentage decrease in the average number of executive, officers and managers in 1998 as regards the same in 1995?

A) 2.3 B) 2.66 C) 2.22 D) 2.25

### Question No. : 5

## Actual MAT 01

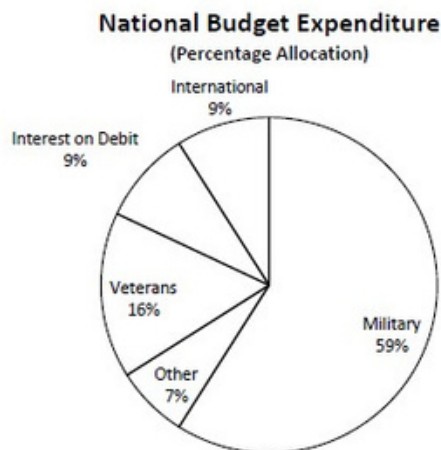
**DIRECTION for the question:** Answer the question based on the pie chart.



Approximately how many degrees should there be in the angle of the sector for military expenditure?  
A) 312.4 B) 341.4 C) 241.4 D) 212.4

### Question No. : 6

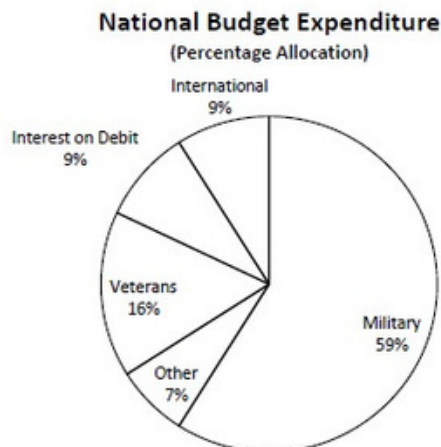
**DIRECTION for the question:** Answer the question based on the pie chart.



What is the ratio of military expenditure to veterans expenditure approximately?  
A) 59 : 16 B) 1 : 10 C) 54 : 10 D) None of these

### Question No. : 7

**DIRECTION for the question:** Answer the question based on the pie chart.

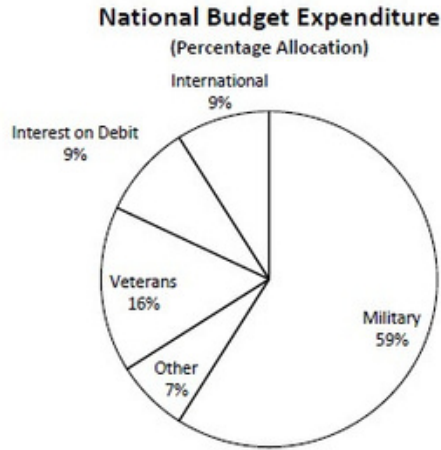


## Actual MAT 01

If India had a total expenditure of Rs. 120 billion, approximately how many billions did it spend on interest on debt?  
A) Rs. 8.10 billion B) Rs. 12.9 billion C) Rs. 10.8 billion D) Rs. 11.12 billion

### Question No. : 8

**DIRECTION for the question:** Answer the question based on the pie chart.



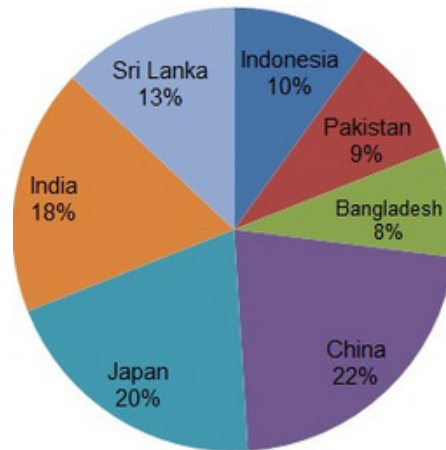
If Rs. 9 billion were spent for veterans, what would have been the total expenditure for that year?

A) Rs. 45.25 billion B) Rs. 54.25 billion C) Rs. 48.75 billion D) Rs. 56.25 billion

### Question No. : 9

**DIRECTIONS for the question:** Study the given graphs to answer the question.

Production of wheat in different countries

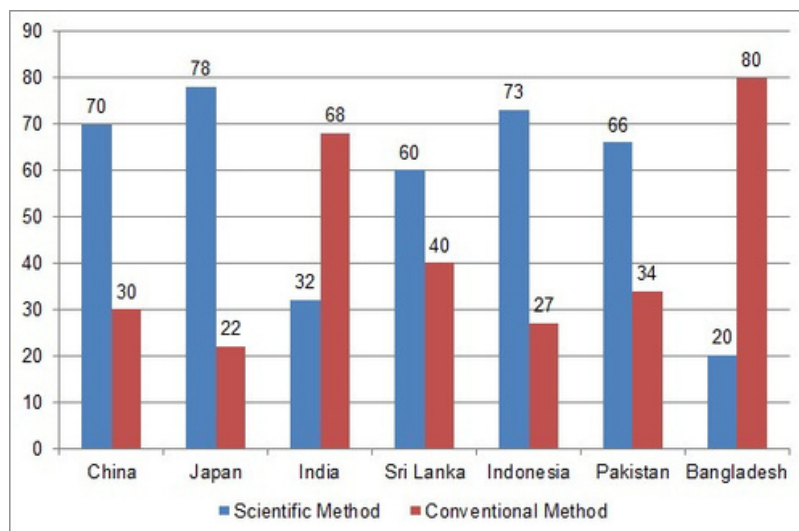


**Total Production = 50 Lakh Tonnes**

**Production: Scientific Vs Conventional Methods in Percentage**



## Actual MAT 01

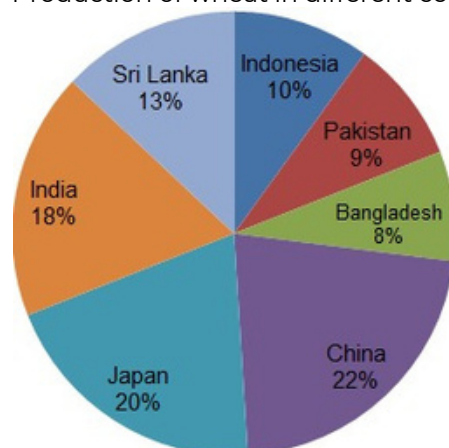


What is the difference between the production by scientific method and conventional method in Indonesia?  
 A) 2.3 lakh tonnes B) 2.8 lakh tonnes C) 2.5 lakh tonnes D) 3 lakh tonnes

### Question No. : 10

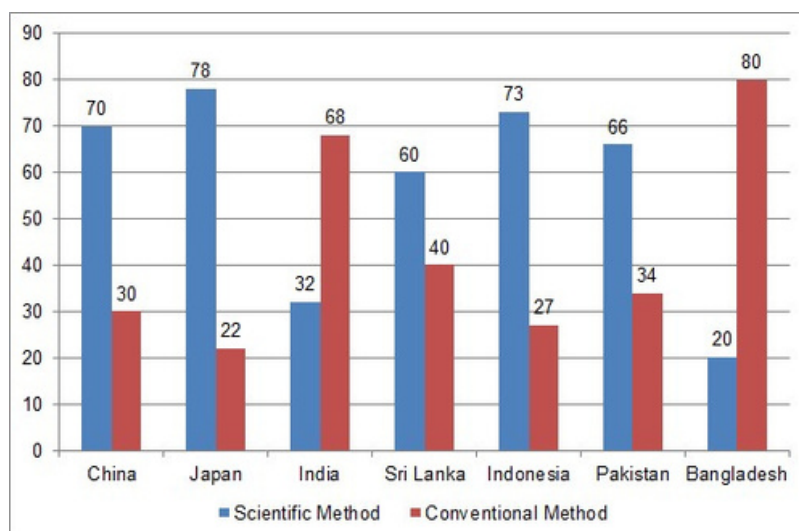
DIRECTIONS for the question: Study the given graphs to answer the question.

Production of wheat in different countries



Total Production = 50 Lakh Tonnes

Production: Scientific Vs Conventional Methods in Percentage



## Actual MAT 01

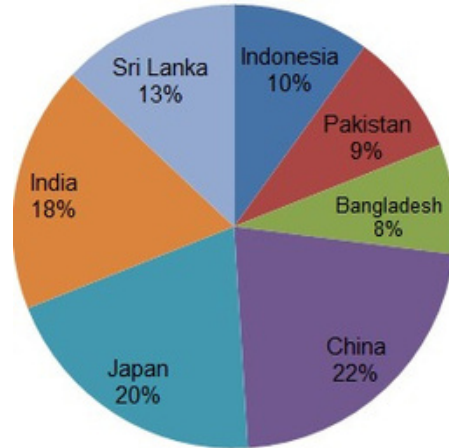
What is the average production of wheat by scientific method for all the countries?

A) 3.1 lakh tonnes B) 4.24 lakh tonnes C) 2.6 lakh tonnes D) 3.07 lakh tonnes

### Question No. : 11

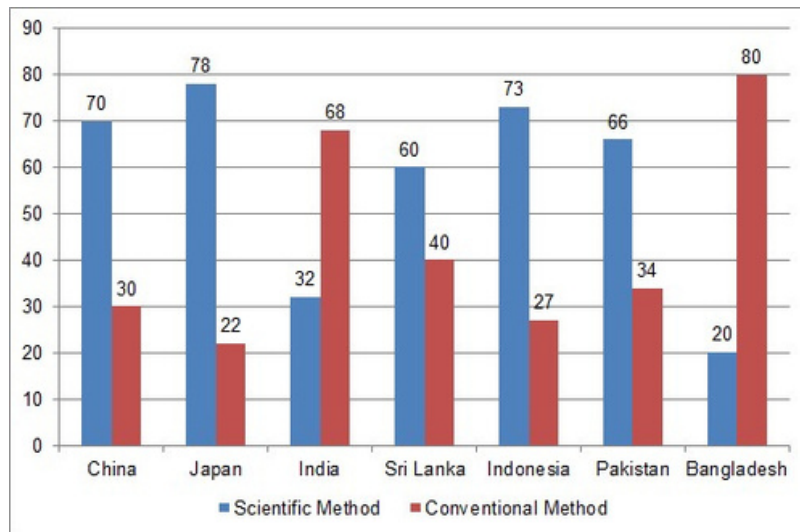
DIRECTIONS for the question: Study the given graphs to answer the question.

Production of wheat in different countries



Total Production = 50 Lakh Tonnes

Production: Scientific Vs Conventional Methods in Percentage



What is the ratio of production by conventional method in Pakistan to that by scientific method in Japan?

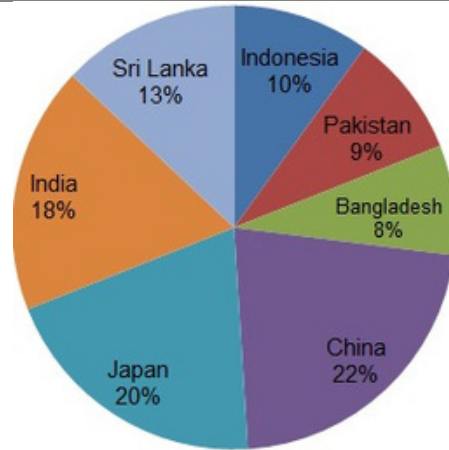
A)  $\frac{9}{40}$  B)  $\frac{99}{260}$  C)  $\frac{51}{260}$  D)  $\frac{48}{77}$

### Question No. : 12

DIRECTIONS for the question: Study the given graphs to answer the question.

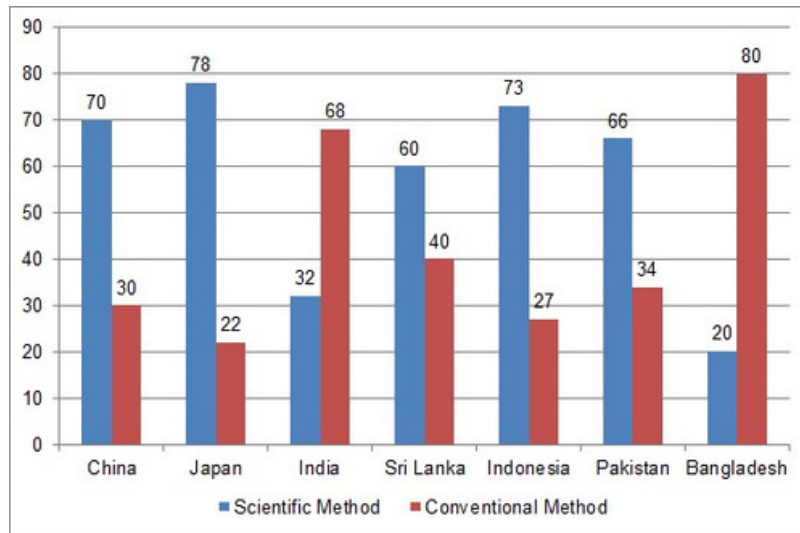
Production of wheat in different countries

## Actual MAT 01



Total Production = 50 Lakh Tonnes

### Production: Scientific Vs Conventional Methods in Percentage



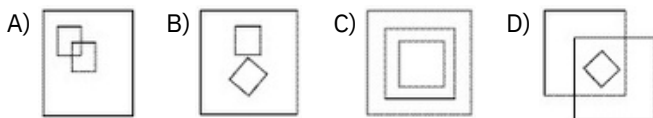
The production of wheat in Sri Lanka by conventional method is approximately how many times the production in India by scientific method?

- A) 1.2 B) 1.5 C) 0.9 D) None of these

**DIRECTIONS for the question:** In the given question below there is a group of three. From the four figures given below you have to find the figure that best represents the group.

#### Question No. : 13

Mosquitoes, Ants and Insects

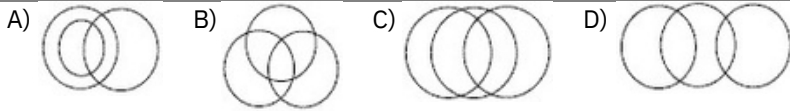


**DIRECTIONS for the question:** In the given question below there is a group of three. From the four figures given below you have to find the figure that best represents the group.

#### Question No. : 14

Cousins, Boys and Males

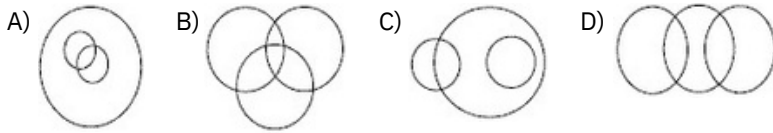
## Actual MAT 01



**DIRECTIONS for the question:** In the given question below there is a group of three. From the four figures given below you have to find the figure that best represents the group.

**Question No. : 15**

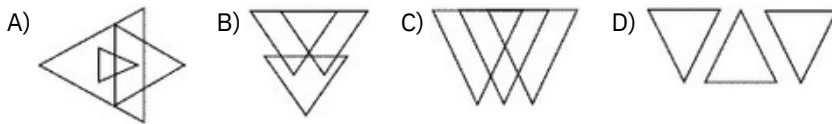
Athletes, Sprinters and Marathon runners



**DIRECTIONS for the question:** In the given question below there is a group of three. From the four figures given below you have to find the figure that best represents the group.

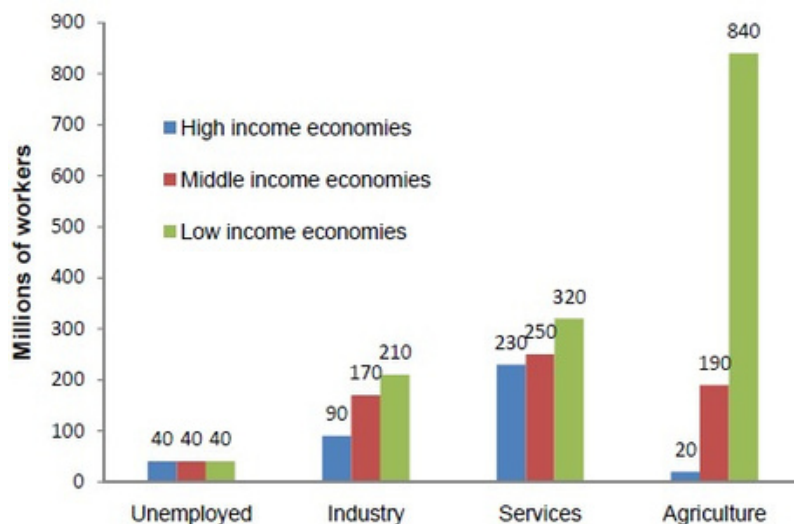
**Question No. : 16**

Males, Parrots and Pets



**Question No. : 17**

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.



The following additional information is available:

Total worldwide working population: 2440 million

Working population in Low income economies: 1410 million

Working population in Middle income economies: 650 million

Working population in High income economies: 380 million

Total unemployed population: 120 million

The following definitions hold true:

Poor or low income economies: Annual per capita income less than \$ 695

Rich or high income economies: Annual per capita income more than \$8626



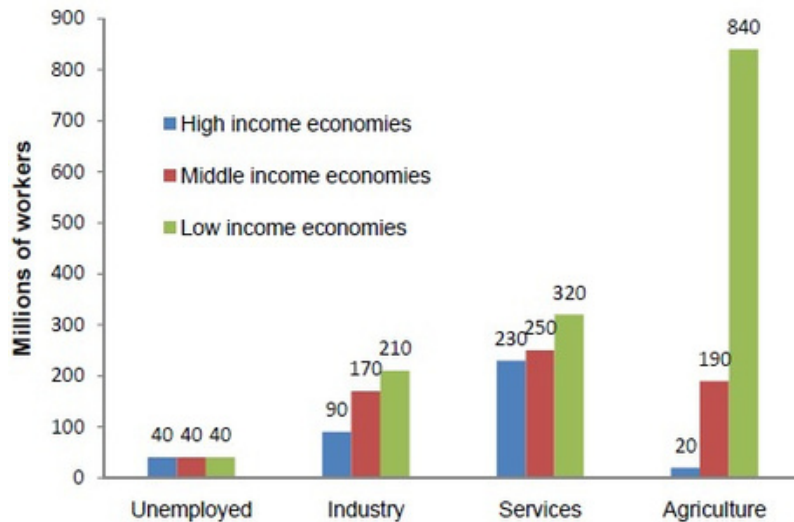
## Actual MAT 01

Approximately what percentage of the middle income economies total workforce is in services?

A) 23% B) 49% C) 38% D) 62%

### Question No. : 18

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.



The following additional information is available:

Total worldwide working population: 2440 million

Working population in Low income economies: 1410 million

Working population in Middle income economies: 650 million

Working population in High income economies: 380 million

Total unemployed population: 120 million

The following definitions hold true:

Poor or low income economies: Annual per capita income less than \$ 695

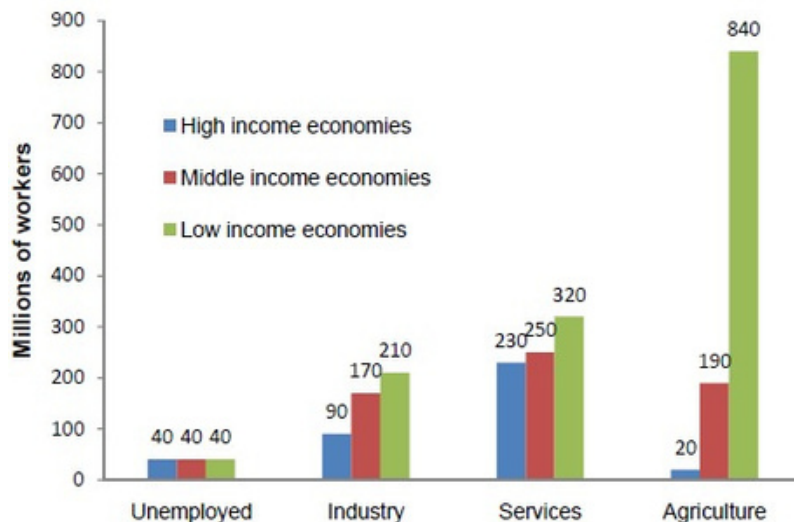
Rich or high income economies: Annual per capita income more than \$8626

The respective ratio of rich economies workforce working in industry to poor economies workforce working in services sector is closest to

A) 8 : 15 B) 15 : 8 C) 32 : 9 D) 9 : 32

### Question No. : 19

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.



The following additional information is available:

Total worldwide working population: 2440 million

Working population in Low income economies: 1410 million

## Actual MAT 01

Working population in Middle income economies: 650 million

Working population in High income economies: 380 million

Total unemployed population: 120 million

The following definitions hold true:

Poor or low income economies: Annual per capita income less than \$ 695

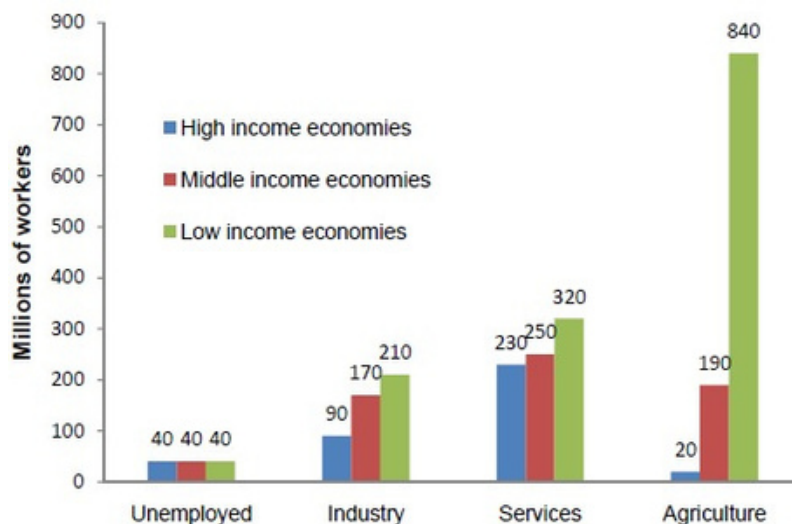
Rich or high income economies: Annual per capita income more than \$8626

Which of the following statements is/are not true?

- I. Of the total workforce in services, over 50% do not come from the poor economies.
  - II. Poor economies account for nearly one-third of the total unemployed workers in the world.
  - III. High income economies account for over 25% of the total industrial workforce.
  - IV. Middle income economies account for less than one-third of the total services sector employees in the world.
- A) All of the above    B) III only    C) III and IV    D) None of these

### Question No. : 20

**DIRECTIONS for the question:** Analyse the graph/s given below and answer the question that follows.



The following additional information is available:

Total worldwide working population: 2440 million

Working population in Low income economies: 1410 million

Working population in Middle income economies: 650 million

Working population in High income economies: 380 million

Total unemployed population: 120 million

The following definitions hold true:

Poor or low income economies: Annual per capita income less than \$ 695

Rich or high income economies: Annual per capita income more than \$8626

Approximately what percentage of the total working population in the world earns less than \$695 p.a.?

- A) 42%    B) 70%    C) 57.78%    D) Cannot be determined

**DIRECTIONS for the question:** Compare the two quantities in Column A and Column B.

### Question No. : 21

COLUMN A

COLUMN B

## Actual MAT 01

**DIRECTIONS for the question:** The question consists of two quantities, one in Column A and one in column B. Compare the two quantities and choose your answer option as

**Question No. : 26**

COLUMN A

COLUMN B

No. of ways to arrange 5 different books on a shelf

No. of minutes in two hours.

- A) If the quantity is greater in Column A. B) If both quantities are equal. C) If the quantity is greater in Column B.  
D) If no comparison can be made with the information given.

**DIRECTIONS for the question:** The question consist of two quantities, one in Column A and the other in Column B. Mark answer as

**Question No. : 27**

COLUMN A

COLUMN B

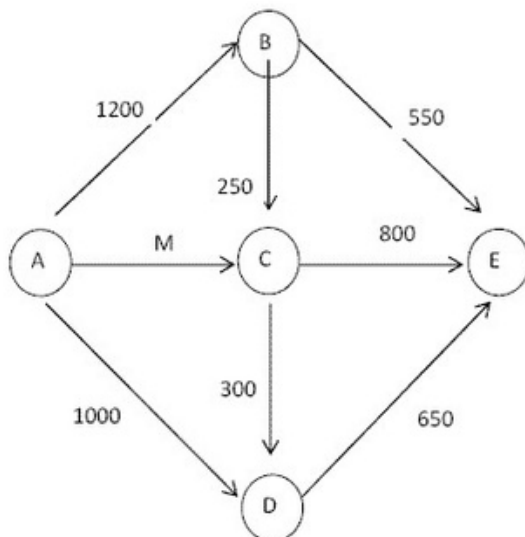
Area of a rectangular strip 157 cm long and 2 cm wide

Area of a circle with radius 10 cm (Take  $\pi = 22/7$ )

- A) If the quantity is greater in Column A. B) If both quantities are equal. C) If the quantity is greater in Column B.  
D) If no comparison can be made with the information given.

**Question No. : 28**

**DIRECTIONS for the question:** Answer the question based on the figure which represents the flow of natural gas through pipelines across major cities A,B,C,D and E (in suitable units). Assume that supply equals demands.



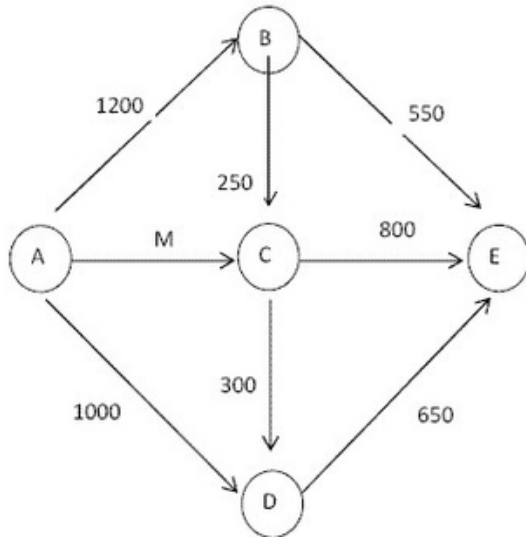
What is the number of units demanded in B?

- A) 400 B) 450 C) 350 D) 500

**Question No. : 29**

## Actual MAT 01

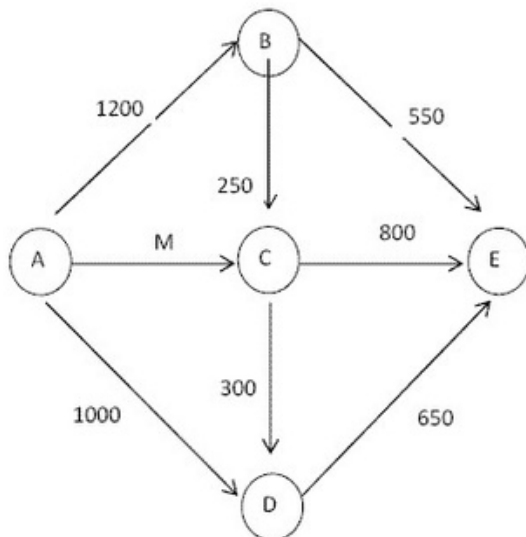
**DIRECTIONS for the question:** Answer the question based on the figure which represents the flow of natural gas through pipelines across major cities A,B,C,D and E (in suitable units). Assume that supply equals demands.



If the number of units demanded in C is 225, what is the value of M?  
A) 875 B) 775 C) 1075 D) 850

### Question No. : 30

**DIRECTIONS for the question:** Answer the question based on the figure which represents the flow of natural gas through pipelines across major cities A,B,C,D and E (in suitable units). Assume that supply equals demands.



If the total demand in E is 80% of the demand in A, what is the demand in A?  
A) 2400 B) 4500 C) 2500 D) None of these

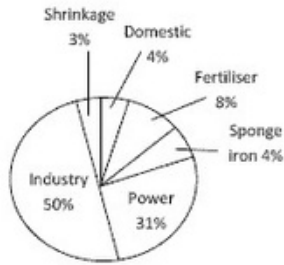
### Question No. : 31

## Actual MAT 01

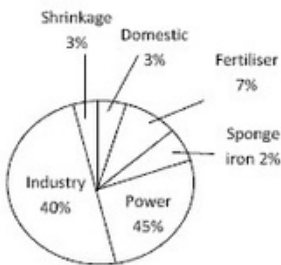
**DIRECTIONS for the question:** The following question is based on the table and pie charts. The table gives the demand for gas in Million Metric Standard Cubic Meters Per Day (MMSCMPD)

Region	Year 1999-2000	Year 2004-2005
North	49.48	64.81
West	37.00	78.13
South	39.90	88.31
East	20.16	52.65
Total	146.54	283.90

Sectorwise share: 1990 - 2000



Sectorwise share: 2004 - 2005



By what percentage did the Southern demand grow between 1999 and 2004?

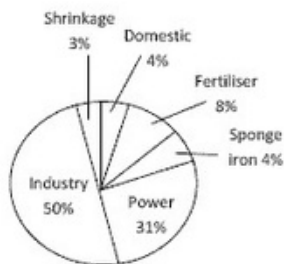
- A) 120.21% B) 121.32% C) 125.61% D) 134.1%

### Question No. : 34

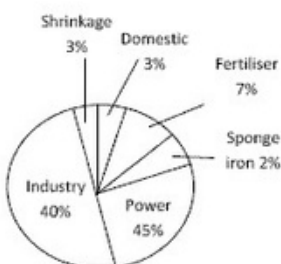
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Total	146.54	283.90

Sectorwise share: 1990 - 2000



Sectorwise share: 2004 - 2005



If the all-India sector wise demand distribution is exactly the same in south, what is the industry sector demand from north, east and west combined in 2004-05?

- A) 71.56 B) 77.456 C) 78.236 D) 81.236

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 35

Which is the smaller of the two numbers?

- The difference between these two numbers is one-third of the largest number.
- The sum of these two numbers is 30.



## Actual MAT 01

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 36

How many marks did Arun get in History?

- I. Average marks obtained by Arun in History, Maths and English are equal to the average marks in Maths and English.
- II. Arun got a total of 120 in Maths and English together.

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 37

What is the ratio between the present ages of a father and his son?

- I. Ratio of the ages of the father 20 years before and son 10 years before was 2:1.
- II. Sum of the present ages of the father and son is 50 years.

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 38

In a class, the ratio of boys and girls is 13:10. How many boys are there in the class?

## Actual MAT 01

- I. The number of boys is 30% more than that of girls.
- II. The number of girls is 15 less than that of boys.

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 39

By selling a product for Rs.100. How much profit was earned?

- I. 20% profit would have been earned if it had been sold for Rs. 90.
- II. The profit was one-third of the purchase price.

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

**DIRECTIONS for the question:** The following question consists of a question and two statements numbered I and II. Decide whether the data provided in the statements are sufficient to answer the question.

### Question No. : 40

What is the speed of a running train which takes 6 seconds to cross a signal post?

- I. The length of the train is 90 m.
- II. The train takes 18 seconds to cross a platform 180 m long.

Choose the correct option:

- 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 either in statement I alone or in statement II alone are sufficient to answer the question
- C) 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
- D) If the data in both statement I and II together are necessary to answer the question

## Section : Reasoning

## Actual MAT 01

**DIRECTION for the question:** Below is given a passage followed by a possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

India's economic and social progress is forever undermined by constant onslaught of drought followed by devastating floods. There is no denying that the country has registered growth in putting water to productive uses – for irrigation to realize the objectives of food security, or water conservation for crops requiring a considerable amount of water or even underground water for industrial and agricultural purposes. Despite this, the demand for water is visibly more than the supply of available and sustainable water. This is because water resources are not integrated in a systematic way to provide for varied uses.

**Question No. : 41**

**The need of the hour is to manage water resources by integrated method.**

- A) If the inference is 'definitely true' i.e. properly follows from the statement of facts given
- B) If the inference is 'probably false', though not 'definitely false' in the light of the facts given
- C) If the 'data are inadequate', i.e. from the facts given you cannot say whether the inference is likely to be true or false
- D) If the inference is 'definitely false', i.e. it cannot possibly be drawn from the facts given or it contradicts the given facts

**DIRECTION for the question:** Below is given a passage followed by a possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

India's economic and social progress is forever undermined by constant onslaught of drought followed by devastating floods. There is no denying that the country has registered growth in putting water to productive uses – for irrigation to realize the objectives of food security, or water conservation for crops requiring a considerable amount of water or even underground water for industrial and agricultural purposes. Despite this, the demand for water is visibly more than the supply of available and sustainable water. This is because water resources are not integrated in a systematic way to provide for varied uses.

**Question No. : 42**

**Unavailability of sufficient water has had an adverse effect on India's economic progress.**

- A) If the inference is 'definitely true' i.e. properly follows from the statement of facts given
- B) If the inference is 'probably false', though not 'definitely false' in the light of the facts given
- C) If the 'data are inadequate', i.e. from the facts given you cannot say whether the inference is likely to be true or false
- D) If the inference is 'definitely false', i.e. it cannot possibly be drawn from the facts given or it contradicts the given facts

**DIRECTION for the question:** Below is given a passage followed by a possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

India's economic and social progress is forever undermined by constant onslaught of drought followed by devastating floods. There is no denying that the country has registered growth in putting water to productive uses – for irrigation to realize the objectives of food security, or water conservation for crops requiring a considerable amount of water or even underground water for industrial and agricultural purposes. Despite this, the demand for water is visibly more than the supply of available and sustainable water. This is because water resources are not integrated in a systematic way to provide for varied uses.

**Question No. : 43**

**India does not lack in the supply of sustainable water for various purposes.**

- A) If the inference is 'definitely true' i.e. properly follows from the statement of facts given
- B) If the inference is 'probably false', though not 'definitely false' in the light of the facts given
- C) If the 'data are inadequate', i.e. from the facts given you cannot say whether the inference is likely to be true or false
- D) If the inference is 'definitely false', i.e. it cannot possibly be drawn from the facts given or it contradicts the given facts

**DIRECTION for the question:** Below is given a passage followed by a possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

India's economic and social progress is forever undermined by constant onslaught of drought followed by devastating floods. There is no denying that the country has registered growth in putting water to productive uses – for irrigation to realize the objectives of food security, or water conservation for crops requiring a considerable amount of water or even underground water for industrial and agricultural purposes. Despite this, the demand for water is visibly more than the supply of available and sustainable water. This is because water resources are not integrated in a systematic way to provide for varied uses.

**Question No. : 44**

**India has achieved the maximum level possible in the channeling of its water resources.**

- A) If the inference is 'definitely true' i.e. properly follows from the statement of facts given
- B) If the inference is 'probably false', though not 'definitely false' in the light of the facts given

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- C) If the 'data are inadequate', i.e. from the facts given you cannot say whether the inference is likely to be true or false  
D) If the inference is 'definitely false', i.e. it cannot possibly be drawn from the facts given or it contradicts the given facts

**DIRECTION for the question:** Below is given a passage followed by a possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

India's economic and social progress is forever undermined by constant onslaught of drought followed by devastating floods. There is no denying that the country has registered growth in putting water to productive uses – for irrigation to realize the objectives of food security, or water conservation for crops requiring a considerable amount of water or even underground water for industrial and agricultural purposes. Despite this, the demand for water is visibly more than the supply of available and sustainable water. This is because water resources are not integrated in a systematic way to provide for varied uses.

### Question No. : 45

The trend of conservation of water in India is a recent one.

- A) If the inference is 'definitely true' i.e. properly follows from the statement of facts given  
B) If the inference is 'probably false', though not 'definitely false' in the light of the facts given  
C) If the 'data are inadequate', i.e. from the facts given you cannot say whether the inference is likely to be true or false  
D) If the inference is 'definitely false', i.e. it cannot possibly be drawn from the facts given or it contradicts the given facts

**DIRECTIONS for the question:** Read the information given below and answer the question that follows:

### Question No. : 46

Mohan is the son of Arun's father's sister. Prakash is the son of Reva, who is the mother of Vikas and grandmother of Arun. Pranab is the father of Neela and the grandfather of Mohan. Reva is the wife of Pranab. How is the wife of Vikas related to Neela?

- A) Sister B) Sister-in-law C) Niece D) Daughter E) None of these

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

### Question No. : 47

Aman walks 1 km towards East and then he turns to South and walks 5 km. Again he turns to East and walks 2 km, after this he turns to North and walks 9 km. Now, how far is he from his starting point?

- A) 3 km B) 4 km C) 7 km D) 5 km

**DIRECTIONS for the question:** What should come in place of question mark (?) in the following number/alphabetic series?

### Question No. : 48

X U S P N K ?

- A) I B) M C) L D) Q

**DIRECTIONS for the question:** What should come in place of question mark (?) in the following number/alphabetic series?

### Question No. : 49

FDS, JHW, NLA, ?

- A) QND B) RQD C) RPE D) SOF

**DIRECTIONS for the question:** What should come in place of question mark (?) in the following number/alphabetic series?

### Question No. : 50

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4, 10, 22, 46, ?

A) 56 B) 76 C) 66 D) 94

**DIRECTIONS for the question:** What should come in place of question mark (?) in the following number/alphabetic series?

**Question No. : 51**

9, 15, 23, 33, ?

A) 44 B) 38 C) 36 D) 45

**DIRECTIONS for the question:** What should come in place of question mark (?) in the following number/alphabetic series?

**Question No. : 52**

C – 2, E – 3, G – 4, I – 5, ?

A) H – 6 B) K – 6 C) J – 8 D) L – 7

**DIRECTIONS for the question:** Read the information carefully and answer the question that follows:

**Question No. : 53**

In a certain code, PEAK is written as '3512' and DINE is written as '6895'. How is KIND written in that code?

A) 2396 B) 2896 C) 2986 D) 2596 E) 2869

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 54**

In a certain code, TERMINAL is written as SDQLJOBM, How is CREDIBLE written in that code?

A) BQDCJCMF B) BQDCHAKD C) DSFEJCMF D) DSFEHAKD E) BQDCJCFM

**DIRECTIONS for the question:** In the following question a statement is followed by two courses of action numbered I and II. Assume everything in the statement to be true. Decide which of the suggested courses of action logically follow(s) for pursuing.

**Question No. : 55**

**Statement:** The Librarian finds some cases in which the pages from certain books issued from the library, are torn.

**Courses of Action:**

I. The Librarian should keep a record of books issued to each student, and if the pages are found torn, strict measures should be taken against the child who had been issued that book.

II. Some funds should be collected from the children collectively to renovate the library.

A) If only course of action I follows B) If neither course of action I nor II follows C) If only course of action II follows

D) If both courses of action I and II follow

**DIRECTIONS for the question:** In the following question a statement is followed by two courses of action numbered I and II. Assume everything in the statement to be true. Decide which of the suggested courses of action logically follow(s) for pursuing.

**Question No. : 56**

**Statement:** The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has decreased.

**Courses of Action:**



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- I. To help the indigenous sellers of fruits, the Government should impose high import duty on imported fruits, even if the local ones are of poor quality.  
II. The fruit vendors should stop selling imported fruits so that the demand for indigenous fruits would be increased.  
A) If only course of action I follows B) If neither course of action I nor II follow C) If only course of action II follows  
D) If both courses of action I and II follow

**DIRECTIONS for the question:** In the following question a statement is followed by two courses of action numbered I and II. Assume everything in the statement to be true. Decide which of the suggested courses of action logically follow(s) for pursuing.

**Question No. : 57**

**Statement:** Some serious blunders were detected in the Accounts Section of a factory.

**Courses of Action:**

- I. An efficient team of auditors should be appointed to check the Accounts.  
II. A show cause notice should be issued to all the employees involved in the irregularity.  
A) If only course of action I follows B) If neither course of action I nor II follow C) If only course of action II follows  
D) If both courses of action I and II follow

**DIRECTIONS for the question:** Read the following information to answer the question.

In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.

**Question No. : 58**

Who among the teachers was teaching maximum number of subjects?

- A) A B) C C) B D) D

**DIRECTIONS for the question:** Read the following information to answer the question.

In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.

**Question No. : 59**

Which of the following pairs was teaching both Geography and Hindi?

- A) A and B B) C and A C) B and C D) None of these

**DIRECTIONS for the question:** Read the following information to answer the question.

In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.

**Question No. : 60**

Which of the following subject was taught by more than two teachers ?

- A) History B) French C) Hindi D) Geography

**DIRECTIONS for the question:** Read the following information to answer the question.

In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.

**Question No. : 61**

Which of the following subjects are common to D, B and A?

- A) English only B) Hindi only C) Hindi and English D) English and Geography

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**DIRECTIONS for the question:** In the following question, certain statements are given followed by two conclusions numbered I and II. Consider the statement(s) to be true even if they seem to be at variance from commonly known facts. Decide which one of the conclusions logically follows from the statement(s).

**Question No. : 62**

**Statements:** Industrial cities are highly polluted. Pollution means diseases.

**Conclusions:** I. People who live in industrial cities become immune to diseases.

II. People living in cities which are not industrial are healthier than those who live in industrial cities.

Choose the correct option:

- A) If only conclusion I follows      B) If either conclusion I or II follows      C) If only conclusion II follows  
D) If neither conclusion I nor II follows

**DIRECTIONS for the question:** In the following question, certain statements are given followed by two conclusions numbered I and II. Consider the statement(s) to be true even if they seem to be at variance from commonly known facts. Decide which one of the conclusions logically follows from the statement(s).

**Question No. : 63**

**Statements:** My brother sings very well. My sister is a basketball player. I am very intelligent.

**Conclusions:**

I. We all are very talented.

II. We all are sportsmen.

Choose the correct option:

- A) If only conclusion I follows      B) If either conclusion I or II follows      C) If only conclusion II follows  
D) If neither conclusion I nor II follows

**DIRECTIONS for the question:** In the following question, a statement(s) is/are followed by two conclusions numbered I and II. Consider the statement(s) to be true even if they seem to be at variance from commonly known facts. Decide which one of the conclusions logically follows from the statement(s).

**Question No. : 64**

**Statements:** India's economy depends mainly on forests.

**Conclusions:**

I. Trees should be preserved in forests to improve economic conditions.

II. India wants only maintenance of forests to improve economic conditions.

Choose the correct option:

- A) If only conclusion I follows      B) If either conclusion I or II follows      C) If only conclusion II follows  
D) If neither conclusion I nor II follows

**DIRECTIONS for the question:** In the following question, certain statements are given followed by two conclusions numbered I and II. Consider the statement(s) to be true even if they seem to be at variance from commonly known facts. Decide which one of the conclusions logically follows from the statement(s).

**Question No. : 65**

**Statements:** The best way to escape from a problem is to solve it.

**Conclusions:**

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- I. Your life will be dull if you don't face problems.
- II. To escape from problems, you should always have some solutions with you.

Choose the correct option:

- A) If only conclusion I follows    B) If either conclusion I or II follows    C) If only conclusion II follows  
D) If neither conclusion I nor II follows

**DIRECTIONS for the question:** In the following question a given statement is followed by two assumptions I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

### Question No. : 66

- Statements** : A good book, even if costly, is sold.
- Assumption** : I. Some books are better than others.  
II. Most of the books are costly.

Choose the correct option:

- A) If only assumption I is implicit;  
D) If both I and II are implicit.    B) If only assumption II is implicit;    C) If neither I nor II is implicit; and

**DIRECTIONS for the question:** In the following question a given statement is followed by two assumptions I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

### Question No. : 67

- Statements** : The integrated steel plants in India no longer have to depend on imports for continuous casting refractories.
- Assumption** : I. Continuous casting refractories are needed by India.  
II. Continuous casting refractories are in demand.

Choose the correct option:

- A) If only assumption I is implicit;    B) If on assumption II is implicit;    C) If neither I nor II is implicit; and  
D) If both I and II are implicit.

**DIRECTIONS for the question:** In the following question a given statement is followed by two assumptions I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

### Question No. : 68

- Statements** : "If you are beautiful, we will catch your beauty. If you are not, we will make you beautiful," -- An advertisement of a photo studio.
- Assumption** : I. 'How to look beautiful', is a priority of most people.  
II. Nobody desires to be beautiful.

Choose the correct option:

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- A) If only assumption I is implicit; B) If only assumption II is implicit; C) If neither I nor II is implicit; and  
D) If both I and II are implicit.

**DIRECTIONS for the question:** In the following question a given statement is followed by two assumptions I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

**Question No. : 69**

**Statement:** Equality of income throughout a community is the essential condition for maximizing utility which the total available income could confer on the members of that community.

**Assumptions:**

- I. If extra income were taken from the rich and given to the poor, the total utility experienced by the community would increase.  
II. Equal pay for equal work. Choose the correct option:

- A) If only assumption I is implicit; B) If on assumption II is implicit; C) If neither I nor II is implicit; and  
D) If both I and II are implicit.

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 70**

During assembly the students are standing in a line. Aarvi is 21st in order from both the ends. How many students are there in the class?

- A) 44 B) 43 C) 40 D) 41

**DIRECTION for the question:** Mark the best option.

**Question No. : 71**

Navin walked 20 metres towards East, took a left turn and walked 20 metres. How far is he from his starting position?

- A)  $20\sqrt{2}$  metres B)  $40\sqrt{2}$  metres C)  $50\sqrt{2}$  metres D)  $30\sqrt{2}$  metres

**DIRECTION for the question:** Mark the best option.

**Question No. : 72**

If each of the digits at odd places in the number 54638 is decreased by '1' and each of the digits at even places is increased by '1', which of the following will be the sum of the digits of the new number?

- A) 26 B) 25 C) 29 D) 28

**DIRECTION for the question:**

*Read the information given below and answer the question that follows:*

**Question No. : 73**

The door of Aditya's house faces East. From the back side of his house, he walks straight 50 metres, then turns to the right and walks 50 metres again. Finally, he turns towards left and stops after walking 25 metres. Now, Aditya is in which direction from the starting point?

- A) South-East B) South-West C) North-East D) North-West

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 74**

In a class of 60 students, the number of boys and girls participating in the annual sports is in the ratio 3 : 2 respectively. The number of girls not participating in the sports is 5 more than the number of boys not participating in the sports. If the number of boys participating in the sports is 15, then how many girls are there in the class?

- A) 20 B) 30 C) 25 D) Data inadequate

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**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 75**

A man starts from a point and moves 3 km east then turns to south and goes 4 km. He turns to left and walks 5 km and then turn towards right and move 2 km He is in which direction from the starting point ?

A) North West B) South C) South East D) None of these

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 76**

In a year 28th February is Tuesday; if the leap year is excluded, then 28th March will be a

A) Sunday B) Tuesday C) Monday D) Saturday

**DIRECTION for the question:** Answer the following question as per the best of your judgement.

**Question No. : 77**

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) 38 years C) 10 years D) 64 years E) None of these

**DIRECTION for the question:** Answer the following question as per the best of your judgement.

**Question No. : 78**

Tenzing, a Sherpa, starts from camp A and proceeds east to camp B, 12 km away. From camp B, he proceeds to camp C, 5 km to the south. From there he proceeds 12 km to camp D along the shortest path towards camp A. How far is he from base camp A?

A) 4 km B) 1 km C) 6 km D) 5 km

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 79**

A man pointing to a photograph says, 'The lady in the photograph is my nephew's paternal grandmother and her son is my sister's husband.' How is the lady in the photograph related to his sister ?

A) Mother B) Cousin C) Mother-in-law D) Sister-in-law

**DIRECTION for the question:** Solve the following question and mark the most appropriate option.

**Question No. : 80**

There are 30 plants of Chiku, Guava, Sitafal and Mango in row. There is pair of mango plants after Chiku and Guava. These Mango plants are followed by one Chiku and one Sitafal plants and so on. If a row begins with a plant of Chiku and Guava, then which of the following will be in the last of the row?

A) Chiku B) Guava C) Mango D) Sitafal

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**DIRECTIONS for the question:** Mark the best option:

**Question No. : 81**

India and \_\_\_\_\_ have signed Logistics Exchange Memorandum of Agreement (LEMOA) that will enable both countries to use each other's bases for repair and replenishment of defence supplies.

A) UK B) Australia C) France D) United States

**DIRECTIONS for the question:** Mark the best option:



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### Question No. : 82

Who became the first Indian woman athlete to win the silver medal in Paralympics 2016 in shot-put F-50 event?

- A) Sakshi Malik B) Dipa Katmakar C) PV Sindhu D) Deepa Malik

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 83

The Press of the country can be a reliant and independent opinion builder in case it is \_\_\_\_\_?

- A) owned by government B) subject to censorship regulations C) subject to control by political parties  
D) free from interference by government and big business houses

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 84

Match the following:

a. Fertilisers	1. Constructive and destructive matter
b. Nuclear Bomb	2. Cooking Gas
c. LPG	3. Curse of chemical reactions
d. Carbon	4. Advanced process

- A) a-3, b-4, c-2, d-1 B) a-1, b-2, c-3, d-4 C) a-4, b-1, c-2, d-3 D) a-2, b-3, c-4, d-1

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 85

The 12th edition of the joint military training exercise between India and \_\_\_\_\_dubbed as "Yudh Abhyas 2016" has taken place in Chaubattia in Uttarakhand in September 2016.

- A) France B) United States C) Canada D) Australia

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 86

How much loan has been approved by the multilateral funding agency Asian Development Bank (ADB) for building India's first coastal industrial corridor between Visakhapatnam and Chennai?

- A) \$631 million B) \$577 million C) \$507 million D) \$467 million

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 87

Who is the author of the book 'Citizen and Society'?

- A) Pranab Mukherjee B) Mohd Hamid Ansari C) Sumitra Mahajan D) Manmohan Singh

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 88

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The first meeting of Goods & Services Tax (GST) Council has decided in September 2016 the threshold for exemption for businesses in Northeastern and hill states of India will be for annual turnover below\_\_\_\_\_.

- A) 5 lakh    B) Rs. 10 Lakh    C) Rs. 15 lakh    D) Rs. 20 Lakh

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 89

In September 2016, India and France has signed an Inter-Governmental Agreement for the purchase of \_\_\_\_\_ Rafale fighter jets at a cost of 7.87 billion Euros.

- A) 22 B) 28 C) 32 D) 36

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 90

The Central Board of Direct Taxes (CBDT), Govt. of India, has received total disclosure of \_\_\_\_\_ black money in the form of cash and other assets under the Income Disclosure Scheme, 2016 which ended on 30 September 2016.

- A) Rs. 35,150 crore    B) Rs. 47,125 crore    C) Rs. 65,250 crore    D) Rs. 55,350 crore

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 91

Who is the current Chairman of the 22nd Law Commission of India (LCI)?

- A) S. Sivakumar    B) Ritu Raj Awasthi    C) Ravi R Tripathi    D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 92

Yoshinori Ohsumi, of the Tokyo Institute of Technology, Japan has been awarded the Nobel Prize 2016 in the field of \_\_\_\_\_

- A) Chemistry    B) Physics    C) Economic sciences    D) Physiology or Medicine

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 93

Which one of the following states has created 21 new districts in its biggest administrative reform?

- A) Madhya Pradesh    B) Uttar Pradesh    C) Andhra Pradesh    D) Telangana

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 94

Which Indian shooter has won the 2016 Champion of Champions pistol Award of the International Shooting Sport Federation (ISSF) for pistol shooting in Italy?

- A) Vijay Kumar    B) Jitu Rai    C) Gagan Narang    D) Abhinav Bindra

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 95

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Where was the two-day eighth BRICS summit held in October 2016 in India?

- A) New Delhi B) Goa C) Hyderabad D) Bengalura

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 96

India has signed a defence deal worth Rs. 39,000 crore (Approx.) with to purchase five state of the art S-400 'Triumf air defence systems.

- A) Germany B) Russia C) Israel D) France

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 97

Which among the following countries is not the part of the BIMSTEC (Bay of Bengal Initiative on Multi Sectoral Technical and Economic Cooperation)?

- A) Thailand B) India C) Myanmar D) Vietnam

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 98

Which US author has won the 2016 Man Booker Prize?

- A) Paul Beatty B) Jon Day C) Abdulrazak Gurnah D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 99

Which of the following Indian entrepreneurs has been appointed as Chairman of GSM Association (GSMA) which represents the interests of nearly 800 mobile operators worldwide?

- A) Ratan Naval Tata B) Kumar Mangalam Birla C) Sunil Bharti Mittal D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 100

Which of the following sports federation has been recognized the Ministry of Youth Affairs and Sports as the National Sports Federation?

- A) Boxing Federation of India (BFI) B) Wrestling Federation of India (WFI) C) Kabaddi Federation of India (KFI)  
D) Judo Federation of India (JFI)

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 101

Which one of the following Indian organizations established in the year 1956, has celebrated the 60 anniversary of its establishment in the year 2016?

- A) General Insurance Corporation of India B) United India Insurance Company C) Life Insurance Corporation of India  
D) None of these

**DIRECTIONS for the question:** Mark the best option:

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### Question No. : 102

Bathukamma is a Famous Festival of:

A) Gujarat B) Assam C) Telangana D) Maharashtra

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 103

Who among the following India born has become the first Sikh to be appointed to the Canadian Senate, i.e., Upper House?

A) Harjeet Sajjan B) Sarabjit Singh Marwah C) Navdeep Bains D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 104

Where did the first 4-day International Agro-biodiversity Congress, take place in November 2016?

A) New Delhi B) Bhopal C) Lucknow D) Bhubaneswar

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 105

Indian Women's hockey team has won the 2016 Asian Champions Trophy held in Singapore by Defeating \_\_\_\_\_

A) Japan B) South Korea C) China D) Malaysia

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 106

Who has become the first Indian to be elected as the president of International Hockey Federation (FIH) in November 2016?

A) Shashank Manohar B) Narinder Batra C) KD Singh D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 107

Which Indian golfer has lifted the Asian Tour title by clinching the Resorts World Manila Masters in November 2016?

A) Arjun Atwal B) SSP Chawrasia C) Jeev Milkha Singh D) Anirban Lahiri

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 108

Who among the following has/have been honoured with European's parliament Sakharov Human Rights in October, 2016?

A) Nadia Murad and Zamia Haji B) Aung San Suu Kyi C) Malala Yousafzai D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 109

Which state in India has been chosen for India's first LIGO Laboratory and is the first outside in the U.S.?

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A) Odisha B) Madhya Pradesh C) Maharashtra D) Kerala

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 110

The President of India possesses the same Constitutional authority as the head of the states of which of the following country ?

A) British Monarch B) President of the USA C) President of Bangladesh D) President of Pakistan

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 111

FIFA the global football governing body declared 'Zabivaka' a wolf as the official mascot of the \_\_\_\_\_

A) UEFA Euro 2020 B) FIFA U-17 World Championships 2017 C) FIFA U-20 World Cup 2017 D) FIFA WC 2018

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 112

When Portuguese Politician and Diplomat has been formally appointed in October, 2016 as the secretary general designate of the United Nations?

A) Antonio Guterres B) Juan Manuel Santos C) Viktor Orband D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 113

Which among the following countries decided to quit commonwealth nations groups in October, 2016?

A) Botswana B) Maldives C) Fiji D) Nigeria

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 114

Which of the following soccer stars has signed a new lifetime deal with 'Nike' in November, 2016?

A) Lionel Messi B) Chrsitiano Ronaldo C) Neymar Junior D) Leus Suzarres

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 115

Plants wilt due to excess of

A) Transpiration B) Photosynthesis C) Absorption D) None of these

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 116

The 28th and 29th Southeast Asian Nations (ASEAN) Summit was held in September, 2016.

A) Vietnam B) Cambodia C) Myanmar D) Lao PDR

**DIRECTIONS for the question:** Mark the best option:



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### Question No. : 117

King Bhumibol Adulyadej, who dies this year was the world's longest reigning monarch belonging to

A) Vietnam B) Cambodia C) Myanmar D) Thailand

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 118

Which Indian sportsperson has been appointed as member of the IOC's athlete Committee in October, 2016?

A) Abhinnav Bindra B) Marv Kom C) Sania Mirza D) Saina Nehwal

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 119

The 2016 Group of Twenty (G20) meet was held in \_\_\_\_\_, China in September, 2016 to discuss efforts to reform global economic governance?

A) Guangzhou B) Hangzhou C) Chengdu D) Shenzhen

**DIRECTIONS for the question:** Mark the best option:

### Question No. : 120

Eminent economist, consultant and Banker Dr. Urjit Patel had assumed charge in September, 2016 as the \_\_\_\_\_ governor of the RBI.

A) 22nd B) 24th C) 23rd D) 25th

## Section : Verbal

### Question No. : 121

**DIRECTIONS for the question:** Read the passage and answer the question that follows.

According to TV reports, the Tatas have cut down their commercial production by as much as 40 per cent. It has been said that Ashok Leyland too is looking for customers — it has over two months production lying idle. Unitech, one of India's biggest builders, has defaulted on the loans taken from the Greater Noida Authority. The firm blames the farmers' agitation but there is little doubt that slack in demand is an equally strong reason. There is no doubt that international events have affected Indian industry. Risk aversion techniques, modern computers and communication technologies, were all combined by financial market whizkids to extend more and more unsafe loans to people who would never have received a loan earlier. Once banks realized that they were holding "assets" that were far from deserving that name, they started unloading, leading to a vicious circle: banks wanted money in cash but there was no money in the market to meet those demands, which in turn led to a greater worry and further demand for more money. Several banks have gone bankrupt, leading to the meltdown we have been witnessing in the past few weeks.

Keynes said that in a situation like the present, where demand is slack, the government should induce expenditure. "Spend," he said, but the people, particularly those with surplus money, will actually try to save — leading to escalation of the vicious circle. In a country such as India, with people nervous about spending money, the Centre should take courage in its hands and spend

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on infrastructure. That will lead to increasing budget deficits, and a denial of the Washington Consensus. Washington Consensus was alright when demand was in excess but is inappropriate when demand is slack. However, the public-private partnership, which the Washington Consensus commended, still remains valid.

Government rules are not the best for infrastructure development. The Government should enforce laws, establish security and regulate. The rest of the economy, including even primary education and healthcare, is better handled by private enterprise than by the state. Suppose, for example, the government gives developers long-term loans (say, 30 years) at very low rates of interest (say, 0.5 per cent a year) but only for capital expenditure on schools, hospitals, civic infrastructure, roads, rail and air traffic. The developer has to generate on his own the revenue needed for running the business. Then, a large amount of demand will be created which, in turn, will increase further demand for both material goods and services. That way, a virtuous cycle will be set up.

Unfortunately, there is a downside to this optimistic picture — farmers' resistance to surrender land. We are currently ruled by the 1894 law on land acquisition and, as Singur has shown, that is no longer acceptable. In the present Parliament, a new law on land acquisition has been tabled, highlighting the following main issues : The acquirer should buy minimum 70 per cent land at market rates when the government will acquire the remaining land needed; future prospects should be factored into the price offered; if not used in five years, land must be returned to the government; all persons, including those who did not own land, must be rehabilitated; land disputes authority will clear cases within six months.

These laws are definitely an improvement on the existing situation and, yet, have their own defects. For example, the proposed Act stipulates that 80 per cent of the capital gains should be handed over to the original landowners or their heirs. After some time, that will be virtually impossible to implement. Similarly, the rule that all persons including those who did not own land should be rehabilitated can become a mistake. Remember, the list of persons who have claimed compensation in the Bhopal disaster have included many who were not by any means affected by it. Apart from undeserving cases, any number of middlemen and do-gooders can crop up making it impractical to do anything meaningful.

I have advocated earlier a different version of land acquisition, I had suggested (and still suggest) that landowners should be given commercially saleable land, the rent from which, is expected to produce an income that is two-three times what the farmers are earning now. The rent is guaranteed for the initial ten years and is also indexed to the price of grain. Then, the farmer is guaranteed a substantial increase in income. I know farmers like it, but administrators and industrialists are skeptical; they fear that farmers will need cash. Some may, but it should be possible to get most of them to accept substantially increased income — which is also guaranteed — in preference to money. In any case, those who need cash can always sell their entitlements.

Instead, economists are relying more or less solely on monetary measures. The Reserve Bank of India has reduced CRR by 250 basis points and the repo rate by 100 basis points. Those measures will no doubt inject money into the market but evidence so far indicates that they are not enough. On behalf of the government, Mr. P. Chidambaram has announced that it will try both conventional and unconventional methods but has not explained what "unconventional" methods mean. What the government has done so far is to provide more money to bolster the share market, to raise the Sensex and Nifty. It may be worthwhile for the government to leave the stock market to reach its own level. After all, India's stock market is barely one or two per cent of the country's assets. Instead, the government should announce that it will not bother anymore on Fiscal deficit.

India can absorb two million houses or more — provided the prices are right. Suppose the government gets builders to develop housing estates for relatively poor people by giving them soft loans. Suppose the government also gives them loans for constructing buildings for schools and hospitals. Further, let's assume the government moves away from large cities and gets all such infrastructure developed in small towns. Let, further, the government provides soft loans to builders for constructing buildings for new industries. All these will force the fiscal deficit to shoot up. At the same time, it will create jobs and generate incomes better than the stock market will.

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Even as the stock market is collapsing, we are witnessing agitations in Tamil Nadu, Maharashtra, Bihar, as also in Kashmir. None of these would have erupted had the Centre nipped the agitations in the bud. Seeking collaboration from one and all, the Centre has steadily weakened itself; it is now so unsure of itself that it takes two steps backward whenever it takes one forward. Let us hope that the Centre will handle the economic situation better than it is doing the political ones. It is hoped that the government will not be tempted to take on the job of developing infrastructure on its own shoulders but let private enterprise do the job. Let us hope also that the government will not make rules rigid, but keep them flexible enough for honest contractors to survive and prosper. However, price is the key. It should be below enough to induce more and more people to buy houses and household goods.

The fact that international events have affected the Indian economy and led to a slack in demand is borne out by which of the following fact(s)?

- A) Unitech defaulting on loans it has taken from Greater Noida Authority  
B) Severe slump in demand for the products of both the Tatas and Ashok Leyland    C) Both (1) and (2)    D) None of these

### Question No. : 122

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Unfortunately, there is a downside to this optimistic picture — farmers' resistance to surrender land. We are currently ruled by the 1894 law on land acquisition and, as Singur has shown, that is no longer acceptable. In the present Parliament, a new law on land acquisition has been tabled, highlighting the following main issues : The acquirer should buy minimum 70 per cent land at market rates when the government will acquire the remaining land needed; future prospects should be factored into the price offered; if not used in five years, land must be returned to the government; all persons, including those who did not own land, must be rehabilitated; land disputes authority will clear cases within six months.

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Instead, economists are relying more or less solely on monetary measures. The Reserve Bank of India has reduced CRR by 250 basis points and the repo rate by 100 basis points. Those measures will no doubt inject money into the market but evidence so far indicates that they are not enough. On behalf of the government, Mr. P. Chidambaram has announced that it will try both conventional and unconventional methods but has not explained what "unconventional" methods mean. What the government has done so far is to provide more money to bolster the share market, to raise the Sensex and Nifty. It may be worthwhile for the government to leave the stock market to reach its own level. After all, India's stock market is barely one or two per cent of the country's assets. Instead, the government should announce that it will not bother anymore on Fiscal deficit.

India can absorb two million houses or more — provided the prices are right. Suppose the government gets builders to develop housing estates for relatively poor people by giving them soft loans. Suppose the government also gives them loans for constructing buildings for schools and hospitals. Further, let's assume the government moves away from large cities and gets all such infrastructure developed in small towns. Let, further, the government provides soft loans to builders for constructing buildings for new industries. All these will force the fiscal deficit to shoot up. At the same time, it will create jobs and generate incomes better than the stock market will.

Even as the stock market is collapsing, we are witnessing agitations in Tamil Nadu, Maharashtra, Bihar, as also in Kashmir. None of these would have erupted had the Centre nipped the agitations in the bud. Seeking collaboration from one and all, the Centre has steadily weakened itself; it is now so unsure of itself that it takes two steps backward whenever it takes one forward. Let us hope that the Centre will handle the economic situation better than it is doing the political ones. It is hoped that the government will not be tempted to take on the job of developing infrastructure on its own shoulders but let private enterprise do the job. Let us hope also that the government will not make rules rigid, but keep them flexible enough for honest contractors to survive and prosper. However, price is the key. It should be below enough to induce more and more people to buy houses and household goods.

Many banks in India have gone bankrupt in the recent past because

- A) RBI is not making any efforts to support them
- B) banks had gone overboard in lending money to people, against so-called 'assets'
- C) farmers' agitations in many parts of the country have effectively stopped inflow of money into the banks
- D) banks did not adopt the Keynesian methods and policies

### Question No. : 123

DIRECTIONS for the question: Read the passage and answer the question that follow

According to TV reports, the Tatas have cut down their commercial production by as much as 40 per cent. It has been said that Ashok Leyland too is looking for customers — it has over two months production lying idle. Unitech, one of India's biggest builders, has defaulted on the loans taken from the Greater Noida Authority. The firm blames the farmers' agitation but there is little doubt that slack in demand is an equally strong reason. There is no doubt that international events have affected Indian industry. Risk aversion techniques, modern computers and communication technologies, were all combined by financial market

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whizkids to extend more and more unsafe loans to people who would never have received a loan earlier. Once banks realized that they were holding "assets" that were far from deserving that name, they started unloading, leading to a vicious circle: banks wanted money in cash but there was no money in the market to meet those demands, which in turn led to a greater worry and further demand for more money. Several banks have gone bankrupt, leading to the meltdown we have been witnessing in the past few weeks.

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A 'virtuous' cycle will be created in the economy if

- A) banks would continue to lend money generously to people so that they could spend freely on personal purchases
- B) the government rehabilitates the agitating farmers
- C) the government allows private sector participation in infrastructure development
- D) everyone in the society is encouraged to save money in the banks

### Question No. : 124

DIRECTIONS for the question: Read the passage and answer the question that follows.

According to TV reports, the Tatas have cut down their commercial production by as much as 40 per cent. It has been said that Ashok Leyland too is looking for customers — it has over two months production lying idle. Unitech, one of India's biggest builders, has defaulted on the loans taken from the Greater Noida Authority. The firm blames the farmers' agitation but there is little doubt that slack in demand is an equally strong reason. There is no doubt that international events have affected Indian industry. Risk aversion techniques, modern computers and communication technologies, were all combined by financial market whizkids to extend more and more unsafe loans to people who would never have received a loan earlier. Once banks realized that they were holding "assets" that were far from deserving that name, they started unloading, leading to a vicious circle: banks wanted money in cash but there was no money in the market to meet those demands, which in turn led to a greater worry and further demand for more money. Several banks have gone bankrupt, leading to the meltdown we have been witnessing in the past few weeks. Keynes said that in a situation like the present, where demand is slack, the government should induce expenditure. "Spend," he said, but the people, particularly those with surplus money, will actually try to save — leading to escalation of the vicious circle. In a country such as India, with people nervous about spending money, the Centre should take courage in its hands and spend on infrastructure. That will lead to increasing budget deficits, and a denial of the Washington Consensus. Washington Consensus was alright when demand was in excess but is inappropriate when demand is slack. However, the public-private partnership, which the Washington Consensus commended, still remains valid. Government rules are not the best for infrastructure development. The Government should enforce laws, establish security and regulate. The rest of the economy, including even primary education and healthcare, is better handled by private enterprise than by the state. Suppose, for example, the government gives developers long-term loans (say, 30 years) at very low rates of interest (say, 0.5 per cent a year) but only for capital expenditure on schools, hospitals, civic infrastructure, roads, rail and air traffic. The developer has to generate on his own the revenue needed for running the business. Then, a large amount of demand will be created which, in turn, will increase further demand for both material goods and services. That way, a virtuous cycle will be set up. Unfortunately, there is a downside to this optimistic picture — farmers' resistance to surrender land. We are currently ruled by the 1894 law on land acquisition and, as Singur has shown, that is no longer acceptable. In the present Parliament, a new law on land acquisition has been tabled, highlighting the following main issues : The acquirer should buy minimum 70 per cent land at market rates when the government will acquire the remaining land needed; future prospects should be factored into the price offered; if not used in five years, land must be returned to the government; all persons, including those who did not own land, must be rehabilitated; land disputes authority will clear cases within six months. These laws are definitely an improvement on the existing situation and, yet, have their own defects. For example, the proposed Act stipulates that 80 per cent of the capital gains should be handed over to the original landowners or their heirs. After some

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I have advocated earlier a different version of land acquisition, I had suggested (and still suggest) that landowners should be given commercially saleable land, the rent from which, is expected to produce an income that is two-three times what the farmers are earning now. The rent is guaranteed for the initial ten years and is also indexed to the price of grain. Then, the farmer is guaranteed a substantial increase in income. I know farmers like it, but administrators and industrialists are skeptical; they fear that farmers will need cash. Some may, but it should be possible to get most of them to accept substantially increased income — which is also guaranteed — in preference to money. In any case, those who need cash can always sell their entitlements.

Instead, economists are relying more or less solely on monetary measures. The Reserve Bank of India has reduced CRR by 250 basis points and the repo rate by 100 basis points. Those measures will no doubt inject money into the market but evidence so far indicates that they are not enough. On behalf of the government, Mr. P. Chidambaram has announced that it will try both conventional and unconventional methods but has not explained what "unconventional" methods mean. What the government has done so far is to provide more money to bolster the share market, to raise the Sensex and Nifty. It may be worthwhile for the government to leave the stock market to reach its own level. After all, India's stock market is barely one or two per cent of the country's assets. Instead, the government should announce that it will not bother anymore on Fiscal deficit.

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The 1894 law on land acquisition needs to be re-examined in the present context. This becomes evident from the fact that

- A) infrastructure cannot be developed on agricultural land    B) the Singur farmers resisted in surrendering their land  
C) the government has no commercially saleable land to give the farmers in exchange of their agricultural land    D) All of these

### Question No. : 125

DIRECTIONS for the question: Read the passage and answer the question that follows.

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According to the author, the economic situation of the country would be better if

A) the government attempted to ensure political consensus and collaboration from one and all



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- B) the government encourages private sector to take on responsibility of developing infrastructure
- C) the government manages both political and economic situations with uniform policies
- D) the finance minister takes timely measures to bolster the stock market

### Question No. : 126

DIRECTIONS for the question: Read the passage and answer the question that follows.

According to TV reports, the Tatas have cut down their commercial production by as much as 40 per cent. It has been said that Ashok Leyland too is looking for customers — it has over two months production lying idle. Unitech, one of India's biggest builders, has defaulted on the loans taken from the Greater Noida Authority. The firm blames the farmers' agitation but there is little doubt that slack in demand is an equally strong reason. There is no doubt that international events have affected Indian industry. Risk aversion techniques, modern computers and communication technologies, were all combined by financial market whizkids to extend more and more unsafe loans to people who would never have received a loan earlier. Once banks realized that they were holding "assets" that were far from deserving that name, they started unloading, leading to a vicious circle: banks wanted money in cash but there was no money in the market to meet those demands, which in turn led to a greater worry and further demand for more money. Several banks have gone bankrupt, leading to the meltdown we have been witnessing in the past few weeks. Keynes said that in a situation like the present, where demand is slack, the government should induce expenditure. "Spend," he said, but the people, particularly those with surplus money, will actually try to save — leading to escalation of the vicious circle. In a country such as India, with people nervous about spending money, the Centre should take courage in its hands and spend on infrastructure. That will lead to increasing budget deficits, and a denial of the Washington Consensus. Washington Consensus was alright when demand was in excess but is inappropriate when demand is slack. However, the public-private partnership, which the Washington Consensus commended, still remains valid.

Government rules are not the best for infrastructure development. The Government should enforce laws, establish security and regulate. The rest of the economy, including even primary education and healthcare, is better handled by private enterprise than by the state. Suppose, for example, the government gives developers long-term loans (say, 30 years) at very low rates of interest (say, 0.5 per cent a year) but only for capital expenditure on schools, hospitals, civic infrastructure, roads, rail and air traffic. The developer has to generate on his own the revenue needed for running the business. Then, a large amount of demand will be created which, in turn, will increase further demand for both material goods and services. That way, a virtuous cycle will be set up.

Unfortunately, there is a downside to this optimistic picture — farmers' resistance to surrender land. We are currently ruled by the 1894 law on land acquisition and, as Singur has shown, that is no longer acceptable. In the present Parliament, a new law on land acquisition has been tabled, highlighting the following main issues : The acquirer should buy minimum 70 per cent land at market rates when the government will acquire the remaining land needed; future prospects should be factored into the price offered; if not used in five years, land must be returned to the government; all persons, including those who did not own land, must be rehabilitated; land disputes authority will clear cases within six months.

These laws are definitely an improvement on the existing situation and, yet, have their own defects. For example, the proposed Act stipulates that 80 per cent of the capital gains should be handed over to the original landowners or their heirs. After some time, that will be virtually impossible to implement. Similarly, the rule that all persons including those who did not own land should be rehabilitated can become a mistake. Remember, the list of persons who have claimed compensation in the Bhopal disaster have included many who were not by any means affected by it. Apart from undeserving cases, any number of middlemen and do-gooders can crop up making it impractical to do anything meaningful.

I have advocated earlier a different version of land acquisition, I had suggested (and still suggest) that landowners should be given commercially saleable land, the rent from which, is expected to produce an income that is two-three times what the farmers are earning now. The rent is guaranteed for the initial ten years and is also indexed to the price of grain. Then, the farmer is guaranteed a substantial increase in income. I know farmers like it, but administrators and industrialists are skeptical; they fear that farmers will need cash. Some may, but it should be possible to get most of them to accept substantially increased income — which is also guaranteed — in preference to money. In any case, those who need cash can always sell their entitlements.

Instead, economists are relying more or less solely on monetary measures. The Reserve Bank of India has reduced CRR by 250 basis points and the repo rate by 100 basis points. Those measures will no doubt inject money into the market but evidence so

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far indicates that they are not enough. On behalf of the government, Mr. P. Chidambaram has announced that it will try both conventional and unconventional methods but has not explained what "unconventional" methods mean. What the government has done so far is to provide more money to bolster the share market, to raise the Sensex and Nifty. It may be worthwhile for the government to leave the stock market to reach its own level. After all, India's stock market is barely one or two per cent of the country's assets. Instead, the government should announce that it will not bother anymore on Fiscal deficit.

India can absorb two million houses or more — provided the prices are right. Suppose the government gets builders to develop housing estates for relatively poor people by giving them soft loans. Suppose the government also gives them loans for constructing buildings for schools and hospitals. Further, let's assume the government moves away from large cities and gets all such infrastructure developed in small towns. Let, further, the government provides soft loans to builders for constructing buildings for new industries. All these will force the fiscal deficit to shoot up. At the same time, it will create jobs and generate incomes better than the stock market will.

Even as the stock market is collapsing, we are witnessing agitations in Tamil Nadu, Maharashtra, Bihar, as also in Kashmir. None of these would have erupted had the Centre nipped the agitations in the bud. Seeking collaboration from one and all, the Centre has steadily weakened itself; it is now so unsure of itself that it takes two steps backward whenever it takes one forward. Let us hope that the Centre will handle the economic situation better than it is doing the political ones. It is hoped that the government will not be tempted to take on the job of developing infrastructure on its own shoulders but let private enterprise do the job. Let us hope also that the government will not make rules rigid, but keep them flexible enough for honest contractors to survive and prosper. However, price is the key. It should be below enough to induce more and more people to buy houses and household goods.

In today's context, public-private partnership, one of the recommendations of the Washington Consensus, assumes critical importance in the area of

- A) improving the stock markets    B) settling land disputes    C) developing the infrastructure    D) setting up of more banks

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**Question No. : 127 DIRECTIONS for the question:** Read the passage and answer the question that follows.

If proof were needed that the organized sector of the Indian economy is globalised, look no further than the reaction of firms to the economic slowdown. What began as a knee-jerk reaction of Jet Airways, which issued marching orders to 800 employees and then retracted following an adverse reaction, has now morphed into a strategic plan by companies to keep their heads above the rising waters. This strategy is predicted on the need to cut costs and protect profit margins as far as possible rather than look to increasing revenue in what is turning out to be a slowing market.

Auto majors such as Tata Motors, Ashok Leyland and Mahindra & Mahindra have begun to cut back production and reduce man -hours at their plants across India in a bid to prevent inventory pile-up and tailor output to falling demand. It will not be long before auto component vendors follow suit, followed by firms across the product spectrum. Organized industry is learning to cope with the downside of a business cycle that first manifested itself last year in the wake of rising raw material and energy prices, and in the lagged effects of high interest rates on consumer demand.

In the last quarter of 2007 -08 industry and manufacturing growth rates both slipped to around 5 per cent against 8.6 per cent and 9.6 per cent respectively in the previous quarter, which performance itself represented a decline from the high of 10 and 12 per cent in 2006-07. Growth had been falling, therefore, all of 2007-08 with the decline accelerating since January this year. Fiscal 2007-08 closed with a real GDP growth of 9 per cent mainly due to a double-digit growth in services such as real estate, transport, hotel services and construction. With high albeit falling interest rates and, worse, a risk aversion among lenders impacting these sectors as much as they had manufacturing earlier, the overall growth momentum may slip even more than officially estimated.

Against this backdrop, the best bet for policymakers and producers would be to turn the downturn into an opportunity for fresh strategising. Manufacturing firms have begun the task of cutting costs in right earnest. The real estate sector is supposedly asking for relief and so will the shipping and transport sectors. The Government has to exercise discretion the way it did with the airline industry so as to encourage internal overhauling. The Government will inevitably have to boost confidence and private investments at some future date through counter-cyclical spending. That future should start right away.

Which of the following points is implied in this passage?

- A) There is proof that India's organized sector may be affecting the global economy
- B) The economic slowdown is a result of knee-jerk reactions of companies such as Jet Airways
- C) Organized sector of the Indian economy is definitely globalised
- D) None of these

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From which of the following factors does the slowdown in business become evident?

- A) Raw material and energy prices started rising last year
- B) In the Jan - March 2008 quarter both the industry and manufacturing growth rates dropped to about 5%
- C) In the fiscal year 2007 - 2008 consumer demand started to lag due to the high interest rates

**Question No. : 129 DIRECTIONS for the question:** Read the passage and answer the question that follows.

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Given that the government will inevitably have to play a proactive role in boosting confidence and private investments in future;

- A) Private companies should start sacking their employees
- B) auto companies such as Tata Motors, Ashok Leyland and Mahindra & Mahindra should cooperate with the government
- C) the government should seek aid from World Bank
- D) organized industry should be encouraged to increase revenue

**Question No. : 130 DIRECTIONS for the question:** Read the passage and answer the question that follows.

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Auto majors such as Tata Motors, Ashok Leyland and Mahindra & Mahindra have begun to cut back production and reduce man -hours at their plants across India in a bid to prevent inventory pile-up and tailor output to falling demand. It will not be long before auto component vendors follow suit, followed by firms across the product spectrum. Organized industry is learning

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to cope with the downside of a business cycle that first manifested itself last year in the wake of rising raw material and energy prices, and in the lagged effects of high interest rates on consumer demand. In the last quarter of 2007 -08 industry and manufacturing growth rates both slipped to around 5 per cent against 8.6 per cent and 9.6 per cent respectively in the previous quarter, which performance itself represented a decline from the high of 10 and 12 per cent in 2006-07. Growth had been falling, therefore, all of 2007-08 with the decline accelerating since January this year. Fiscal 2007-08 closed with a real GDP growth of 9 per cent mainly due to a double-digit growth in services such as real estate, transport, hotel services and construction. With high albeit falling interest rates and, worse, a risk aversion among lenders impacting these sectors as much as they had manufacturing earlier, the overall growth momentum may slip even more than officially estimated. Against this backdrop, the best bet for policymakers and producers would be to turn the downturn into an opportunity for fresh strategising. Manufacturing firms have begun the task of cutting costs in right earnest. The real estate sector is supposedly asking for relief and so will the shipping and transport sectors. The Government has to exercise discretion the way it did with the airline industry so as to encourage internal overhauling. The Government will inevitably have to boost confidence and private investments at some future date through counter-cyclical spending. That future should start right away.

Which of the following is not implied from this passage?

- A) The economic slowdown should be perceived as an opportunity for strategising by policy makers and producers
- B) Growth rates in industry and manufacturing had been falling throughout the year 2007 - 08
- C) Jet Airways had a clear strategy behind sacking of 800 of its employees
- D) Real estate and shipping and transport sectors are looking to the government for relief measures

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Which of the following captions would be the most apt for this passage?

- A) Government's role in boosting the economy
- B) Globalisation of Indian economy
- C) Cost-cutting is the cure for economic ills
- D) Indian industry's impact on the global economy

**Question No. : 132**

**DIRECTIONS for the question:** Read the passage and answer the question that follows.

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Why do the vital organs of the body slow down on aging? Why do older people experience sleep disorders? A new study holds the molecular machinery of the "master clock" in the brain responsible for such malfunctions during old age. The study conducted by researchers at the University of Virginia and reported in the journal 'Proceedings' of the National Academy of Sciences, compares the working of the vital organs to a wall full of clocks with a large dominant clock controlling the synchronization of the peripheral clocks. The big clock continues to keep time, but as it ages, its connecting signal to the "smaller docks weakens. Some of the smaller clocks eventually become desynchronized and some stop running. This weakening of the signal, rather than a problem with the central timekeeper itself, apparently is the cause of alterations in the biological timing system in aging mammals — possibly including humans, according to the researchers.

This may explain why older people experience sleep disorders as the signal from the master clock in the brain has weakened, even as it keeps on ticking. This weakened output causes some of the peripheral clocks in other organs to eventually stop oscillating or to fall out of proper sync, causing sleep disruption and malaise, the report says. Lack of sleep can affect more than a person's level of alertness. In the long term, it can disrupt the body's metabolism; affect eating cycles, lead to declining cognitive abilities and possibly, a shortened lifespan. Sleep disorders are also associated with Alzheimer's disease.

Gene D. Block, professor of biology and one of the study's lead researchers, was quoted in the report as saying, "Our new finding demonstrates that the molecular machinery of the master clock continues to function normally. Taken together with our earlier studies, this suggests that there may be an age-related failure of the conversion of the clock's molecular rhythm into the electrical or numeral signals that the brain uses for communication. These weakened central signals may fail to keep some peripheral clocks appropriately synchronized or, in some cases, even rhythmic." The scientists studied tissues from the brain and other organs of older mice and measured the activity of a gene that is a part of the biological clock. They found that the central dock in the brain, the suprachiasmatic nucleus, maintained proper periodicity and synchronization. Clocks in some peripheral organs, such as the liver and kidney of older animals, were either improperly synchronized or had lost rhythm entirely. "This new knowledge could eventually lead to new therapies for age-related desynchronization," Block said. "Arrhythmic or improperly synchronized tissues of old animals could possibly be stimulated by a treatment to oscillate normally."

Which of these factors is held responsible for the slowing down of the vital organs in old age as laid down in the passage?

- A) Weakening of the signals from the master clock in the brain and a breakdown in communication with peripheral clocks.
- B) Molecular breakdown of machinery of the master clock and the peripheral clocks of the brain.

C) Master clock in the brain D) Sleep disorders

### Question No. : 133

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Why do the vital organs of the body slow down on aging? Why do older people experience sleep disorders? A new study holds the molecular machinery of the "master clock" in the brain responsible for such malfunctions during old age. The study conducted by researchers at the University of Virginia and reported in the journal 'Proceedings' of the National Academy of Sciences, compares the working of the vital organs to a wall full of clocks with a large dominant clock controlling the synchronization of the peripheral clocks. The big clock continues to keep time, but as it ages, its connecting signal to the "smaller docks weakens. Some of the smaller clocks eventually become desynchronized and some stop running. This weakening of the signal, rather than a problem with the central timekeeper itself, apparently is the cause of alterations in the biological timing system in aging mammals — possibly including humans, according to the researchers.

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Which of the following sentences is **incorrect**, according to the passage?

- A) The connecting signals of the big clock fail as it ages
- B) The brain uses numeral signals, which are converted from the clock's molecular rhythm
- C) Alterations in the biological timing system are restricted to lower mammals only
- D) None of these

**Question No. : 134 DIRECTIONS for the question:** Read the passage and answer the question that follows.

Why do the vital organs of the body slow down on aging? Why do older people experience sleep disorders? A new study holds the molecular machinery of the "master clock" in the brain responsible for such malfunctions during old age. The study conducted by researchers at the University of Virginia and reported in the journal 'Proceedings' of the National Academy of Sciences, compares the working of the vital organs to a wall full of clocks with a large dominant clock controlling the synchronization of the peripheral clocks. The big clock continues to keep time, but as it ages, its connecting signal to the "smaller clocks weakens. Some of the smaller clocks eventually become desynchronized and some stop running. This weakening of the signal, rather than a problem with the central timekeeper itself, apparently is the cause of alterations in the biological timing system in aging mammals — possibly including humans, according to the researchers.

This may explain why older people experience sleep disorders as the signal from the master clock in the brain has weakened, even as it keeps on ticking. This weakened output causes some of the peripheral clocks in other organs to eventually stop oscillating or to fall out of proper sync, causing sleep disruption and malaise, the report says. Lack of sleep can affect more than a person's level of alertness. In the long term, it can disrupt the body's metabolism; affect eating cycles, lead to declining cognitive abilities and possibly, a shortened lifespan. Sleep disorders are also associated with Alzheimer's disease.

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What was the breakthrough achieved, as a result of the scientist's effort?

- A) The discovery of the fact that the clocks in some peripheral organs were either improperly synchronized or had lost their rhythm

completely

- B) The observation that the brain uses numeral signals for communication
- C) The knowledge that the oscillation is necessary to maintain a person's level of alertness
- D) None of these

**Question No. : 135 DIRECTIONS for the question:** Read the passage and answer the question that follows

Why do the vital organs of the body slow down on aging? Why do older people experience sleep disorders? A new study holds the molecular machinery of the "master clock" in the brain responsible for such malfunctions during old age. The study conducted by researchers at the University of Virginia and reported in the journal 'Proceedings' of the National Academy of Sciences, compares the working of the vital organs to a wall full of clocks with a large dominant clock controlling the synchronization of the peripheral clocks. The big clock continues to keep time, but as it ages, its connecting signal to the "smaller clocks weakens. Some of the smaller clocks eventually become desynchronized and some stop running. This weakening of the signal, rather than a problem with the central timekeeper itself, apparently is the cause of alterations in the biological timing system in aging mammals — possibly including humans, according to the researchers.

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Which of the following sentences is true, in the context of the passage?

- A) The brain of a guinea pig was used for the tissue experimentation
- B) The big clock is directly synchronized to smaller clocks through tissues
- C) Declining cognitive abilities may be traced to sleeplessness
- D) None of these

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Which of the following sentences is **incorrect**, according to the passage?

- A) There is a similarity in the functioning of the brain and the vital organs of the human body with that of a wall full of clocks and the

big clock synchronizing them

- B) The study of tissues from the brain and other organs of mice helped scientists discover that even though the suprachiasmatic nucleus maintained time properly, the clocks in the peripheral organs were either out of sync or had lost rhythm entirely.
- C) The molecular machinery of the brain is responsible for a number of malfunctions occurring in a person at older ages.
- D) None of these



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**Question No. : 137 DIRECTIONS for the question:** *Read the passage and answer the question that follows.*

All men by nature, desire to know. An indication of this is the delight we take in our senses: for even apart from their usefulness they are loved for themselves; and above all others, the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer seeing (one might say) to everything else. The reason is that this, most of all the senses, makes us know and brings to light many differences between things. By nature, animals are born with the faculty of sensation, and from sensation, memory is produced in some of them, though not in others. And therefore, the former are more intelligent and apt at learning than those which cannot remember; those which are incapable of hearing sounds are intelligent though they cannot be taught, e.g., the bee, and any other race of animals that may be like it; and those which besides memory, have this sense of hearing can be taught. The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasonings. Now from memory, experience is produced in men; for the several memories of the same thing produce finally the capacity for a single experience. And experience seems pretty much like science and art, but really, science and art come to men through experience; for 'experience made art', as Polus says, 'but inexperience luck.' Now art arises, when from many notions gained by experience, one universal judgement about a class of objects is produced. For to have a judgement that when Callias was ill of this disease that did him good, and similarly, in the case of Socrates and in many, individual cases, is a matter of experience; but to judge that it has done good to all persons of a certain constitution, marked off in one class, when they were ill of this disease, e.g., to phlegmatic or bilious people when burning with fevers — this is a matter of art.

With a view to action, experience seems in no respect inferior to art, and men of experience succeed even better than those who have theory without experience. (The reason is that experience is knowledge of individuals, art of universals, and actions and productions are all concerned with the individual; for the physician does not cure man, except in an incidental way, but Callias or Socrates or some other called by some such individual name, who happens to be a man. If, then, a man has the theory without the experience, and recognizes the universal but does not know the individual included in this, he will often fail to cure; for it is the individual that is to be cured.) But yet we think that knowledge and understanding belong to art rather than to experience, and we suppose artists to be wiser than men of experience (which implies that wisdom depends in all cases rather on knowledge); and this because the former know the cause, but the latter do not. For men of experience know that the thing is so, but do not know why, while the others know the 'why' and the cause. Hence we think also that the masterworks in each craft are more honourable and know in a truer sense and are wiser than the manual workers, because they know the causes of the things that are done (we think the manual workers are like certain lifeless things which act indeed, but act without knowing what they do, as fire burns, but while the lifeless things perform each of their functions by a natural tendency, the labourers perform them through habit); thus we view them as being wiser not in virtue of being able to act, but of having the theory for themselves and knowing the causes. And in general, it is a sign of the man who knows and of the man who does not know, that the former can teach, and therefore, we think art more truly knowledge than experience is; for artists can teach, and men of mere experience cannot.

Again, we do not regard any of the senses as Wisdom; yet surely these give the most authoritative knowledge of particulars. But they do not tell us the 'why' of anything — e.g., why fire is hot; they only say that it is hot. At first, he who invented any art, whatsoever, that went beyond the common perceptions of man was naturally admired by men, not only because there was something useful in the inventions, but because he was thought wiser and superior to the rest. But as more arts were invented, and some were directed to the necessities of life, others to recreation, the inventors of the latter were naturally always regarded as wiser than the inventors of the former, because their branches of knowledge did not aim at utility.

Hence, when all such inventions were already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered and first in the places where men first began to have leisure. This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure. We have; said in the Ethics what the difference is between art and science and the other kindred faculties; but the point of our present discussion is this, that all men suppose what is called Wisdom to deal with the first causes and the principles of things; so that, as has been said before, the man of experience is thought to be wiser than the possessors of any sense-perception whatsoever, the artist wiser than the men of experience, the master-worker than the mechanic and the theoretical kinds of knowledge to be more of the nature of Wisdom than the productive. Clearly then, wisdom is knowledge about certain principles and causes.

What is the relationship between sensation and memory?

- A) All animals have sensation but some animals do not have memory
- B) Human beings are intelligent as they can reason, whereas animals do not have the capacity of reasoning
- C) Human beings have sensation and memory both

## Actual MAT 01

D) When sensation is remembered, it becomes a memory experience and this leads to connected experience, which in turn gives rise to reasoning

**Question No. : 138 DIRECTIONS for the question:** Read the passage and answer the question that follows.

All men by nature, desire to know. An indication of this is the delight we take in our senses: for even apart from their usefulness they are loved for themselves; and above all others, the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer seeing (one might say) to everything else. The reason is that this, most of all the senses, makes us know and brings to light many differences between things. By nature, animals are born with the faculty of sensation, and from sensation, memory is produced in some of them, though not in others. And therefore, the former are more intelligent and apt at learning than those which cannot remember; those which are incapable of hearing sounds are intelligent though they cannot be taught, e.g., the bee, and any other race of animals that may be like it; and those which besides memory, have this sense of hearing can be taught. The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasonings. Now from memory, experience is produced in men; for the several memories of the same thing produce finally the capacity for a single experience. And experience seems pretty much like science and art, but really, science and art come to men through experience; for 'experience made art', as Polus says, 'but inexperience luck.' Now art arises, when from many notions gained by experience, one universal judgement about a class of objects is produced. For to have a judgement that when Callias was ill of this disease that did him good, and similarly, in the case of Socrates and in many, individual cases, is a matter of experience; but to judge that it has done good to all persons of a certain constitution, marked off in one class, when they were ill of this disease, e.g., to phlegmatic or bilious people when burning with fevers — this is a matter of art.

With a view to action, experience seems in no respect inferior to art, and men of experience succeed even better than those who have theory without experience. (The reason is that experience is knowledge of individuals, art of universals, and actions and productions are all concerned with the individual; for the physician does not cure man, except in an incidental way, but Callias or Socrates or some other called by some such individual name, who happens to be a man. If, then, a man has the theory without the experience, and recognizes the universal but does not know the individual included in this, he will often fail to cure; for it is the individual that is to be cured.) But yet we think that knowledge and understanding belong to art rather than to experience, and we suppose artists to be wiser than men of experience (which implies that wisdom depends in all cases rather on knowledge); and this because the former know the cause, but the latter do not. For men of experience know that the thing is so, but do not know why, while the others know the 'why' and the cause. Hence we think also that the masterworks in each craft are more honourable and know in a truer sense and are wiser than the manual workers, because they know the causes of the things that are done (we think the manual workers are like certain lifeless things which act indeed, but act without knowing what they do, as fire burns, but while the lifeless things perform each of their functions by a natural tendency, the labourers perform them through habit); thus we view them as being wiser not in virtue of being able to act, but of having the theory for themselves and knowing the causes. And in general, it is a sign of the man who knows and of the man who does not know, that the former can teach, and therefore, we think art more truly knowledge than experience is; for artists can teach, and men of mere experience cannot.

Again, we do not regard any of the senses as Wisdom; yet surely these give the most authoritative knowledge of particulars. But they do not tell us the 'why' of anything — e.g., why fire is hot; they only say that it is hot. At first, he who invented any art, whatsoever, that went beyond the common perceptions of man was naturally admired by men, not only because there was something useful in the inventions, but because he was thought wiser and superior to the rest. But as more arts were invented, and some were directed to the necessities of life, others to recreation, the inventors of the latter were naturally always regarded as wiser than the inventors of the former, because their branches of knowledge did not aim at utility.

Hence, when all such inventions were already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered and first in the places where men first began to have leisure. This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure. We have; said in the Ethics what the difference is between art and science and the other kindred faculties; but the point of our present discussion is this, that all men suppose what is called Wisdom to deal with the first causes and the principles of things; so that, as has been said before, the man of experience is thought to be wiser than the possessors of any sense-perception whatsoever, the artist wiser than the men of experience, the master-worker than the mechanic and the theoretical kinds of knowledge to be more of the nature of Wisdom than the productive. Clearly then, wisdom is knowledge about certain principles and causes.

What is the difference between art and experience?

- A) Art explains the cause of things together with its effects, whereas experience gives us just the effect of things, not the cause
- B) Art does not give the cause and effect of things, whereas experience gives the cause and effect of things

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- C) Experience and art give rise to one another and they are complementary and supplementary to each other  
D) Both experience and art are views of a contradictory time and space and this is where the difference between the two lies

**Question No. : 139 DIRECTIONS for the question:** Read the passage and answer the question that follows.

All men by nature, desire to know. An indication of this is the delight we take in our senses: for even apart from their usefulness they are loved for themselves; and above all others, the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer seeing (one might say) to everything else. The reason is that this, most of all the senses, makes us know and brings to light many differences between things. By nature, animals are born with the faculty of sensation, and from sensation, memory is produced in some of them, though not in others. And therefore, the former are more intelligent and apt at learning than those which cannot remember; those which are incapable of hearing sounds are intelligent though they cannot be taught, e.g., the bee, and any other race of animals that may be like it; and those which besides memory, have this sense of hearing can be taught. The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasonings. Now from memory, experience is produced in men; for the several memories of the same thing produce finally the capacity for a single experience. And experience seems pretty much like science and art, but really, science and art come to men through experience; for 'experience made art', as Polus says, 'but inexperience luck.' Now art arises, when from many notions gained by experience, one universal judgement about a class of objects is produced. For to have a judgement that when Callias was ill of this disease that did him good, and similarly, in the case of Socrates and in many, individual cases, is a matter of experience; but to judge that it has done good to all persons of a certain constitution, marked off in one class, when they were ill of this disease, e.g., to phlegmatic or bilious people when burning with fevers — this is a matter of art.

With a view to action, experience seems in no respect inferior to art, and men of experience succeed even better than those who have theory without experience. (The reason is that experience is knowledge of individuals, art of universals, and actions and productions are all concerned with the individual; for the physician does not cure man, except in an incidental way, but Callias or Socrates or some other called by some such individual name, who happens to be a man. If, then, a man has the theory without the experience, and recognizes the universal but does not know the individual included in this, he will often fail to cure; for it is the individual that is to be cured.) But yet we think that knowledge and understanding belong to art rather than to experience, and we suppose artists to be wiser than men of experience (which implies that wisdom depends in all cases rather on knowledge); and this because the former know the cause, but the latter do not. For men of experience know that the thing is so, but do not know why, while the others know the 'why' and the cause. Hence we think also that the masterworks in each craft are more honourable and know in a truer sense and are wiser than the manual workers, because they know the causes of the things that are done (we think the manual workers are like certain lifeless things which act indeed, but act without knowing what they do, as fire burns, but while the lifeless things perform each of their functions by a natural tendency, the labourers perform them through habit); thus we view them as being wiser not in virtue of being able to act, but of having the theory for themselves and knowing the causes. And in general, it is a sign of the man who knows and of the man who does not know, that the former can teach, and therefore, we think art more truly knowledge than experience is; for artists can teach, and men of mere experience cannot.

Again, we do not regard any of the senses as Wisdom; yet surely these give the most authoritative knowledge of particulars. But they do not tell us the 'why' of anything — e.g., why fire is hot; they only say that it is hot. At first, he who invented any art, whatsoever, that went beyond the common perceptions of man was naturally admired by men, not only because there was something useful in the inventions, but because he was thought wiser and superior to the rest. But as more arts were invented, and some were directed to the necessities of life, others to recreation, the inventors of the latter were naturally always regarded as wiser than the inventors of the former, because their branches of knowledge did not aim at utility.

Hence, when all such inventions were already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered and first in the places where men first began to have leisure. This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure. We have; said in the Ethics what the difference is between art and science and the other kindred faculties; but the point of our present discussion is this, that all men suppose what is called Wisdom to deal with the first causes and the principles of things; so that, as has been said before, the man of experience is thought to be wiser than the possessors of any sense-perception whatsoever, the artist wiser than the men of experience, the master-worker than the mechanic and the theoretical kinds of knowledge to be more of the nature of Wisdom than the productive. Clearly then, wisdom is knowledge about certain principles and causes.

Why, according to the author, were the mathematical arts founded in Egypt?

- A) Because they were men of experience and had wisdom and knowledge about certain principles and causes

## Actual MAT 01

- B) Because the sciences which do not cater to necessities or pleasures develop only after the previous two have been invented and only then, men have time for themselves. So was the case in Egypt where the priestly caste had ample leisure time
- C) Because the inventors of luxuries were considered more important than the inventors of necessities and in Egypt, the kingly and priestly class had developed great standards in luxurious tastes and attitudes
- D) Because Egyptians were considered to be connoisseurs of art and crafts and had a superior civilization as opposed to the other ancient civilizations

**Question No. : 140 DIRECTIONS for the question:** Read the passage and answer the question that follows.

All men by nature, desire to know. An indication of this is the delight we take in our senses: for even apart from their usefulness they are loved for themselves; and above all others, the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer seeing (one might say) to everything else. The reason is that this, most of all the senses, makes us know and brings to light many differences between things. By nature, animals are born with the faculty of sensation, and from sensation, memory is produced in some of them, though not in others. And therefore, the former are more intelligent and apt at learning than those which cannot remember; those which are incapable of hearing sounds are intelligent though they cannot be taught, e.g., the bee, and any other race of animals that may be like it; and those which besides memory, have this sense of hearing can be taught. The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasonings. Now from memory, experience is produced in men; for the several memories of the same thing produce finally the capacity for a single experience. And experience seems pretty much like science and art, but really, science and art come to men through experience; for 'experience made art', as Polus says, 'but inexperience luck.' Now art arises, when from many notions gained by experience, one universal judgement about a class of objects is produced. For to have a judgement that when Callias was ill of this disease that did him good, and similarly, in the case of Socrates and in many, individual cases, is a matter of experience; but to judge that it has done good to all persons of a certain constitution, marked off in one class, when they were ill of this disease, e.g., to phlegmatic or bilious people when burning with fevers — this is a matter of art.

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Hence, when all such inventions were already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered and first in the places where men first began to have leisure. This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure. We have; said in the Ethics what the difference is between art and science and the other kindred faculties; but the point of our present discussion is this, that all men suppose what is called Wisdom to deal with the first causes and the principles of things; so that, as has been said before, the man of experience is thought to be wiser than the possessors of any sense-perception whatsoever, the artist wiser than the men of experience, the master-worker than the mechanic and the theoretical kinds of knowledge to be more of the nature of Wisdom than the productive. Clearly then, wisdom is knowledge about certain principles and causes.

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Which of the following can be considered to be the central idea of the passage?

- A) "Experience made art, but inexperience luck" B) Art is superior to experience C) What actually is "Wisdom"  
D) Knowledge is wisdom

**DIRECTIONS for the question:** Fill in the blanks using the appropriate options.

### Question No. : 141

The law prohibits a person from felling a sandalwood tree even if it grows on one's own land, without prior permission from the government. As poor people cannot deal with the government, this legal provision leads to a rip-roaring business for \_\_\_\_\_ who care neither for the \_\_\_\_\_ nor for the trees.

- A) middlemen, rich B) touts, rich C) the government, poor D) touts, poor

**DIRECTIONS for the question:** In the following sentences there are two blank spaces. Below each four pairs of words have been denoted by numbers (A), (B), (C) and (D). Find out which pair of words can be filled up in the blanks in the sentence in the same sequence to make the sentence meaningfully complete.

### Question No. : 142

The best punctuation is that of which the reader is least conscious; for when punctuation, or lack of it, \_\_\_\_\_ itself, it is usually because it \_\_\_\_\_.

- A) obtrudes, offends  
B) conceals, recedes C) enjoins, fails D) effaces, counts

**DIRECTIONS for the question:** Fill in the blanks using the appropriate options.

### Question No. : 143

The argument that the need for a looser fiscal policy to \_\_\_\_\_ demand outweighs the need to \_\_\_\_\_ budget deficits is persuasive.

- A) assess, minimize B) stimulate, control C) outstrip, eliminate D) restrain, conceal

**DIRECTIONS for the question:** Fill in the blanks using the appropriate options.

### Question No. : 144

This simplified \_\_\_\_\_ to the decision-making process is a must read for anyone \_\_\_\_\_ important real estate, personal, or professional decisions.

- A) primer, maximizing  
B) introduction, under C) tract, enacting D) guide, facing

**DIRECTIONS for the question:** Identify the best way of writing the sentence against each question in the context of the correct usage of standard written English.

### Question No. : 145

When one reads the Hindi literature of the twentieth century, you find a striking contrast between the writings of Munshi Premchand and later day writers of popular Hindi fiction.

- A) When one reads the Hindi literature of the twentieth century, you find a striking contrast between the writings of Munshi Premchand and later day writers of popular Hindi fiction  
B) When one reads the Hindi literature of the twentieth century, one finds a striking contrast between the writings of Munshi Premchand and later day writers of popular Hindi fiction  
C) When you read the Hindi literature of the twentieth century, one finds a striking contrast between the writings of Munshi Premchand and later day writers of popular Hindi fiction  
D) If one reads the Hindi literature of the twentieth century, you find a striking contrast between the writings of Munshi Premchand and later day writers of popular Hindi fiction

**DIRECTIONS for the question:** Identify the best way of writing the sentence against each question in the context of the correct usage of standard written English.

### Question No. : 146

## Actual MAT 01

No officer had ought to be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty.

- A) No officer had ought to be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty
- B) No officer should be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty
- C) No officer had ought to be put into a situation in which he has to choose between his love for his family and the responsibilities accompanying his duty
- D) No officer ought to be put into a situation in which he has to choose between his love for his family and the responsibilities accompanying his duty

**DIRECTIONS for the question:** Identify the best way of writing the underlined sentence in the context of the correct usage of standard written English.

### Question No. : 147

Entertainment being recognised as an important factor in improving mental and physical health and thereby reducing human misery and poverty.

- A) Entertainment being recognised as an important factor in improving mental and physical health and thereby reducing human misery and poverty
- B) Recognition of it being an important factor in improving mental and physical health entertainment reduces human misery and poverty
- C) Recognising entertainment as an important factor in improving mental and physical health and thereby reducing human misery and poverty
- D) Entertainment is recognised as an important factor in improving mental and physical health and thereby reduces human misery and poverty

**DIRECTIONS for the question:** Identify the best way of writing the sentence against each question in the context of the correct usage of standard written English.

### Question No. : 148

Ever since the sting operation, there has been much opposition from they who maintain that it was an unauthorised act

- A) Ever since the sting operation, there has been much opposition from they who maintain that it was an unauthorised act
- B) Ever since the sting operation, there has been much opposition from those who maintain that it was an unauthorised act
- C) Ever since the sting operation, there has been much opposition from they who maintain that it had been an unauthorised act
- D) Ever since the sting operation, there has been much opposition from those maintaining that it was an unauthorised act

**DIRECTIONS for the question:** Each of these questions has a text portion followed by four alternative summaries. The best captures the essence of the text.

### Question No. : 149

Some decisions will be fairly obvious "no brainers". Your bank account is low, but you have a two-week vacation coming up and you want to get away to someplace warm to relax with your family. Will you accept your in-laws' offer of free use of their Florida beachfront condo? Sure. You like your employer and feel ready to move forward in your career. Will you step in for your boss for three weeks while she attends a professional development course? Of course.

- A) Some decisions are obvious under certain circumstances. You may, for example, readily accept a relative's offer of free holiday accommodation or step in for your boss when she is away
- B) Easy decisions are called "no-brainers" because they do not require any cerebral activity Examples such as accepting free holiday accommodation abound in our lives
- C) Some decisions are no-brainers. You need not think when making them. Examples are condo offers from in-laws and job offers from bosses when your bank account is low or your boss is away
- D) Accepting an offer from in-laws when you are short on funds and want a holiday is a no-brainer. Another no-brainer is taking the boss's job when she is away

**DIRECTIONS for the question:** Each of these questions has a text portion followed by four alternative summaries that best captures the essence of the text.

### Question No. : 150

## Actual MAT 01

Physically, inertia is a feeling that you just can't move; mentally, it is a sluggish mind. Even if you try to be sensitive, if your mind is sluggish, you just don't feel anything intensely. You may even see a tragedy enacted in front of your eyes and not be able to respond meaningfully. You may see one person exploiting another, one group persecuting another, and not be able to get angry. Your energy is frozen. You are not deliberately refusing to act; you just don't have the capacity.

- A) Inertia makes your body and mind sluggish. They become insensitive to tragedies, exploitation, and persecution because it freezes your energy and de-capacitates it
- B) Inertia is of two types — physical and mental. Physical inertia restricts bodily movements. Mental inertia prevents mental response to events enacted in front of your eyes
- C) When you have inertia, you don't act although you see one person exploiting another or one group persecuting another. You don't get angry because you are incapable
- D) Physical inertia stops your body from moving; mental inertia freezes your energy and stops your mind from responding meaningfully to events, even tragedies, in front of you

**DIRECTIONS for the question:** Each of these questions has a text portion followed by four alternative summaries. The best captures the essence of the text.

### Question No. : 151

Try before you buy. We use this memorable saying to urge you to experience the consequences of an alternative before you choose it, whenever this is feasible. If you are considering buying a van after having always owned sedans, rent one for a week or borrow a friend's. By experiencing the consequences first-hand, they become more meaningful. In addition, you are likely to identify consequences you had

not even thought of before. Maybe you will discover that it is difficult to park the van in your small parking space at work, but that, on the other hand, your elderly father has a much easier time getting in and out of it.

- A) If you are planning to buy a van after being used to sedans, borrow a van or rent it and try it before deciding to buy it. Then you realise that parking a van is difficult while it is easier for your elderly father to get in and out of it
- B) Always try before you buy anything. You are bound to discover many consequences. One of the consequences of going in for a van is that it is more difficult to park than sedans at the office car park
- C) Before choosing an alternative, experience its consequences, if feasible. If, for example, you want to change from a sedan to a van, try one before buying it. You will discover aspects you may never have thought of.
- D) We urge you to try products such as vans before buying them. Then you can experience consequences you have not thought of such as parking problems. But your father may find vans more comfortable than cars.

**DIRECTIONS for the question:** Each of these questions has a text portion followed by four alternative summaries. The best captures the essence of the text.

### Question No. : 152

It is important for shipping companies to be clear about the objectives for maintenance and materials management — as to whether the primary focus is on service level improvement or cost minimization. Often, when certain systems are set in place, the cost minimization objective and associated procedures become more important than the flexibility required for service level improvement. The problem really arises since cost minimization tends to focus on out-of-pocket costs which are visible, while the opportunity costs, often greater in value, are lost sight of.

- A) Shipping companies have to either minimize costs or maximize service quality. If they focus on cost minimization, they will reduce quality. They should focus on service level improvement, or else opportunity costs will be lost sight of
- B) Any cost minimization program in shipping is bound to lower the quality of service. Therefore, shipping companies must be clear about the primary focus of their maintenance and materials management before embarking on cost minimization
- C) Shipping companies should determine the primary focus of their maintenance and materials management. Focus on cost minimization may reduce visible costs, but ignore greater invisible costs and impair service quality
- D) Shipping companies should focus on quality level improvement rather than cost cutting. Cost cutting will lead to untold opportunity costs. Companies should have systems in place to make the service level flexible

**DIRECTIONS for the question:** Select the pair of words, which exhibits the same relationship between each other as the given capitalized pair of words.

### Question No. : 153

SIMMER : BOIL ::

- A) glide : drift
- B) drizzle:downpour
- C) gambol : play
- D) stagnate : flow

## Actual MAT 01

**DIRECTIONS for questions:** The question consists of a pair of words bearing a certain relationship. From amongst the alternatives, pick up the pair that best illustrates a similar relationship.

**Question No. : 154**

SEETHE : ANGER ::

- A) Chortle : Distress    B) Snarl : Confusion    C) Fidget : Uneasiness    D) Waddle : Embarrassment

**DIRECTIONS for the question:** Select the pair of words, which exhibits the same relationship between each other as the given capitalized pair of words.

**Question No. : 155**

KEY : IGNITION ::

- A) helmet : motorcycle    B) boot : saddle    C) switch : light    D) pad : helicopter

**DIRECTIONS for questions:** Select the pair of words, which exhibits the same relationship between each other as the given capitalized pair of words.

**Question No. : 156**

TALLY : VOTES ::

- A) Census : Population    B) Government : Laws    C) Taxation : Revenue    D) Team : Athletes

**DIRECTION for the question:** Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

**Question No. : 157**

- A. The precision with which the crucial operation was executed has unequivocally demonstrated ISRO's capability to take up the more complex deep space missions as distinct from numerous near-earth missions in the past.
- B. The achievement has put India in the exclusive club of space-faring nations that have ventured beyond the sphere of the earth's gravitational influence.
- C. That ISRO brought this off in its first attempt is all the more commendable.
- D.
- E. The successful critical manoeuvre on November 8 that put Chandrayaan-I in an orbit around the moon marked the completion of the most important phase of the Indian lunar mission.  
The rest of the mission involves only standard orbit manoeuvres, the likes of which the Indian Space Research Organization (ISRO) is quite used to, and the performance of the on-board scientific instruments during the mission life of two years.

- A) BCADE    B) DEABC    C) CDABE    D) EDCBA

**DIRECTION for the question:** Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

**Question No. : 158**

- A. To the joy of tens of millions of cricket fans, it established itself as the only team in this era to consistently challenge- and not infrequently master - Australia both at home and away.
- B. In fact, since the turn of the millennium India has transformed itself in to an all-round cricketing power capable of winning on varying conditions anywhere.
- C. Over the last decade, Australia and India have set up Test cricket's most absorbing rivalry.
- D. Every champion needs a counterpoint: legacies, defined referentially, drawn from the dynamics between word-beater and contender.
- E. India, thanks to its natural style of calm, aggressive cricket, its distinctive ability to play at the level of the opposition, and the confluence of some of the finest cricketers in the contemporary game, fulfilled this role of contender.



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A) EDCAB B) DCABE C) CDEBA D) CDEAB

**DIRECTION for the question:** Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

**Question No. : 159**

- A. A nation has gone against its historical record.
- B. Risen above its worst prejudices in one, emotional, incandescent moment.
- C. Well, at least partly, and for a while. Americans have voted in larger numbers than they have in decades, perhaps ever.
- D. Millions of younger voters have been fired by the youthful Senator they have chosen to send to the White House.
- E. The African-American president-elect did far better with white male voters than fellow-Democrat Johan Kerry did four years ago.

A) ABCDE B) CDABE C) DECBA D) BCEDA

**DIRECTION for the question:** The sentence given in the question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

**Question No. : 160**

- A. Few men have commanded greater respect from comrade and opponent alike; nobody has won more Tests for India.
- B. For all the weight of his achievement- greater than any other Indian bowler, and among the finest in the world- Kumble tended to be under-rated.
- C. This was partly because he had to share the stage with Shane Warne and Muttiah Muralitharan, whose big spin wizardry and world-beating success struck a chord with the lay fan.
- D. Kumble's rigour and nuance demanded a more discerning taste.
- E. Anil Kumble's retirement from Test Cricket brings to an end a sporting career of high distinction.

A) BCDEA B) DCABE C) AEBCD D) EABCD

## Section : Quant

**DIRECTION for the question:** Mark the best option.

**Question No. : 161**

In a mathematics exam, a student scored 30% in the first paper out of a total of 180. How much should he score in the second paper (out of 150) if he is to get at least 50% marks overall?

80%

A) 75% B) C) 74% D) 84%

**DIRECTION for the question:** Solve the following question and mark the best option.

**Question No. : 162**

If 15 men or 24 women or 36 boys can do a piece of work in 12 days, working 8 hours a day, how many men must be associated with 12 women and 6 boys to do another piece of work  $2\frac{1}{4}$  times as great in 30 days working 6 hours a day?

A) 4 B) 8 C) 6 D) 10

**DIRECTION for the question:** Mark the best option.

**Question No. : 163**

## Actual MAT 01

Two cogged wheels of which one has 16 cogs and the other 27, work into each other. If the latter turns 80 times in three-quarters of a minute, how often does the other turn in 8 seconds?

A) 18 B) 30 C) 24 D) 36

**DIRECTIONS:** Solve the following question and mark the best possible option

**Question No. : 164**

A milkman buys milk contained in 10 vessels of equal size. If he sells his milk at Rs. 5 a litre, he loses Rs. 200; if he sells it at Rs. 6 a litre, he would gain Rs. 150 on the whole. Find the number of litres contained in each vessel.

A) 20 litres B) 30 litres C) 25 litres D) 35 litres

**DIRECTION for the question:**

Mark the best option.

**Question No. : 165**

A man buys apples at a certain price per dozen and sells them at eight times per hundred. What is his gain or loss per cent?

A) 4% loss B)  $8\frac{1}{4}\%$  loss C) 4% gain D)  $6\frac{1}{4}\%$  gain

**DIRECTION for the question:** Solve the following question and mark the best option.

**Question No. : 166**

16 January 1997 was a Thursday. What day of the week was 4 January 2000?

A) Tuesday B) Wednesday C) Thursday D) Friday

**DIRECTION for the question:** Mark the best option.

**Question No. : 167**

Out of a group of swans,  $\frac{7}{2}$  times the square root of the number are playing on the shore of a pond. The remaining two are inside the pond. What is the total number of swans?

A) 10 B) 14 C) 12 D) 16

**DIRECTION for the question:** Mark the best option.

**Question No. : 168**

A wooden box of dimensions 8 m × 7 m × 6m is to carry rectangular boxes of dimension: 8 cm × 7 cm × 6 cm. The maximum number of boxes that can be carried in the wooden box is

A) 98,00,000 B) 10,00,000 C) 75,00,000 D) 12,00,000

**DIRECTION for the question:** Mark the best option.

**Question No. : 169**

The horizontal distance between two towers is 60 m. The angular elevation of the top of the taller tower as seen from the top of the shorter one is 30°. If the height of the taller tower is 150 m, the height (approx) of the shorter one is:

A) 116 m B) 216 m C) 200 m D) 125 m

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 170**

An aeroplane travels distances of 2500 km, 1200 km and 500 km at speeds of 500 km/hr, 400 km/hr and 250 km/hr respectively. The average speed is

A) 420 km/hr B) 405 km/hr C) 410 km/hr D) 575 km/hr

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**DIRECTION for the question:** Mark the best option.

**Question No. : 171**

The mean daily profit made by a shopkeeper in a month of 30 days was Rs. 350. If the mean profit for the first fifteen days was Rs. 275, then the mean profit for the last 15 days would be

- A) Rs. 200   B) Rs. 350   C) Rs. 275   D) Rs. 425

**DIRECTION for the question:** Solve the following question and mark the best option.

**Question No. : 172**

There were 35 students in a hostel. If the number of students increases by 7, the expenses of the mess increase by Rs. 42 per day while the average expenditure per head diminishes by Re 1. Find the original expenditure of the mess.

- A) Rs. 480   B) Rs. 520   C) Rs. 420   D) Rs. 460

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 173**

The ratio between the number of passengers travelling by I and II class between the two railway stations is 1 : 50, whereas the ratio of I and II class fares between the same stations is 3 : 1. If on a particular day Rs. 1,325 were collected from the passengers travelling between these stations, then what was the amount collected from the II class passengers?

- A) Rs. 750   B) Rs. 1,000   C) Rs. 850   D) Rs. 1,250

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 174**

A boat travels upstream from B to A and downstream from A to B in 3 hours. If the speed of the boat in still water is 9 km/hour and the speed of the current is 3 km/hour, the distance between A and B is

- A) 4 km   B) 8 km   C) 6 km   D) 12 km

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 175**

A man while returning from his factory, travels  $\frac{2}{3}$ rd of the distance by bus,  $\frac{3}{4}$ th of the rest by car and the remaining by foot. If he travels 2 km on foot, find the distance covered by him.

- A) 24 km   B) 22 km   C) 28 km   D) 26 km

**DIRECTION for the question:** Solve the following question and mark the best option.

**Question No. : 176**

The fuel indicator in a car shows  $\frac{1}{5}$ th of the fuel tank as full. When 22 more liters of fuel are poured in to the tank, the indicator rests at the  $\frac{3}{4}$ th of the full mark. Find the capacity of the tank.

- A) 25 litres   B) 35 litres   C) 30 litres   D) 40 litres

**DIRECTION for the question:** Mark the best option. **Question No. : 177**

A pump can be operated both for filling a tank and for emptying it. The capacity of the tank is 2400 m<sup>3</sup>. The emptying capacity of the pump is 10m<sup>3</sup> per minute higher than its filling capacity. Consequently, the pump needs 8 minutes less to empty the tank than to fill it. Find the filling capacity of the pump.

- A) 45 m<sup>3</sup>/min   B) 40 m<sup>3</sup>/min   C) 50 m<sup>3</sup>/min   D) 55 m<sup>3</sup>/min

## Actual MAT 01

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 178**

A sum of money is accumulating at compound interest at a certain rate of interest. If simple interest instead of compound were reckoned, the interest for the first two years would be diminished by Rs. 20 and that for the first three years, by Rs 61. Find the sum.

A) Rs 7,000 B) Rs 8,000 C) Rs 7,500 D) Rs 6,500

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 179**

A man covers a certain distance on a toy train. If the train moved 4 km/h faster, it would take 30 minutes less. If it moved 2 km/h slower, it would have taken 20 minutes more. Find the distance.

A) 60 km B) 70 km C) 65 km D) 75 km

**DIRECTION for the question:** Mark the best option.

**Question No. : 180**

A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/h find the length of the platform.

A) 225 m B) 235 m C) 230 m D) 240 m

**DIRECTIONS:** Solve the following question and mark the best possible option

**Question No. : 181**

Two trains 130 and 110 metres long are going in the same direction. The faster train takes one minute to pass the other completely. If they are moving in opposite directions, they pass each other completely in 3 seconds. Find the speed of the faster train.

A) 38 m/sec B) 46 m/sec C) 42 m/sec D) 50 m/sec

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 182**

A motor boat can travel at 10 km/h in still water. It travelled 91 km downstream in a river and then returned, taking altogether 20 hours. Find the rate of flow of the river.

A) 6 km/hr B) 5 km/hr C) 8 km/hr D) 3 km/hr

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 183**

A, B and C are three participants in a kilometer race. If A can give B a start of 40 metres and B can give C a start of 25 metres, Find how many metres of start can A give to C?

A) 60 m B) 64 m C) 62 m D) 66 m

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 184**

A beats B by 100 m in a race of 1200 m and B beats C by 200 m in a race of 1600 m. Approximately by how many metres can A beat C in a race of 9600 m?

A) 1900 m B) 2300 m C) 1600 m D) 2000 m

**DIRECTION for the question:** Mark the best option.

**Question No. : 185**

The average age of all the student of a class is 18 years. The average age of boys of the class is 20 years and that of the girls is 15 years. If the number of girls in the class is 20, then find the number of boys in the class.

## Actual MAT 01

A) 15 B) 45 C) 30 D) 50

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 186**

The total tractor population in a state is 2,94,000, out of which 1,50,000 are made by Mahindra & Mahindra. Out of every 1,000 Mahindra tractors, 98 are red in colour, but only 5.3% of the total tractor population is red. Find the percentage of non-Mahindra tractors that are red.

A) 0.5025% B) 0.5130% C) 0.6125% D) 0.6140%

**DIRECTION for the question:** Mark the best option.

**Question No. : 187**

7% of the total quantity of wheat is lost in grinding when a country has to import 12 million tonnes, but when only  $5\frac{1}{5}\%$  is lost, it can import 3 million tonnes. Find the quantity of wheat grown in the country.

A) 500 million tonnes B) 400 million tonnes C) 600 million tonnes D) 700 million tonnes

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 188**

A man who can swim 48 m/min in still water swims 200 m against the current and 200 m with the current. If the difference between those 2 times is 10 minutes, find the speed of the current.

A) 30 m/min B) 29 m/min C) 31 m/min D) 32 m/min

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 189**

A and B run a 5 km race on a round course of 400 m. If their speed be in the ratio 5 : 4, how often does the winner pass the other at the starting point of circular track?

A) 4 times B) 3 times C) 5 times D) 2 times

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 190**

Mira's expenditure and saving are in the ratio 3:2. Her income increases by 10%. Her expenditure also increases by 12%. By how much % do her saving increase?

A) 7% B) 9% C) 10% D) 13%

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 191**

A bottle contains  $\frac{3}{4}$  of milk and the rest water. How much of the mixture must be taken away and replaced by equal quantity of water so that the mixture has half milk and half water?

A) 25% B) 33.33% C) 45% D) 50%

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 192**

Two vessels contain spirit of 0.5 and 0.75 concentrations. If two litres from the first vessel and three litres from the second vessel are mixed, then what will be the ratio of the spirit and the water in the resultant solution?

## Actual MAT 01

A) 13: 7   B) 15: 17   C) 7: 17   D) 17: 15

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 193**

A mixture of 45 liters of spirit and water contains 20% of water in it. How much water must be added to make the water 25% in the new mixture?

- A) 5 liters  
B) 3 liters   C) 4 liters   D) 6 liters

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 194**

A candidate is selected for interview for 3 posts. For the first post there are 5 candidates, for the second there are 8 and for the third there are 7. What are the chances for his getting at least one post?

- A)  $\frac{1}{5}$    B)  $\frac{3}{5}$    C)  $\frac{2}{5}$    D)  $\frac{4}{5}$

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 195**

Two small circular parks of diameters 16 m, 12 m are to be replaced by a bigger circular park. What would be the radius of this new park, if the new park occupies the same space as the two small parks?

- A) 10   B) 20   C) 15   D) 25

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 196**

The length of a rectangular field is double its width, inside the field there is a square-shaped pond 8 m long. If the area of the pond is  $\frac{1}{8}$  of the field, what is the length of the field?

- A) 32m   B) 16m   C) 64m   D) 20m

**DIRECTIONS for the question:** Solve the following question and mark the best possible option.

**Question No. : 197**

A garden is 24 m long and 14 m wide. There is a path 1 m wide outside the garden along its sides. If the path is to be constructed with square marble tiles 20 cm  $\times$  20 cm, find the number of tiles required to cover the path.

- A) 1800   B) 2000   C) 200   D) 2150

**DIRECTION for the question:** Solve the following question and mark the best possible option.

**Question No. : 198**

From the top of a cliff 25 m high, the angle of elevation of a tower is found to be equal to the angle of depression of the foot of the tower. Find the height of the tower.

- A) 40m   B) 50m   C) 48m   D) 52m

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**DIRECTION for the question:** Answer the following question as per the best of your judgement.

**Question No. : 199**

A window on one side of a road is 12 m above ground. A ladder is placed on the road to reach the window. If the ladder is turned on the other side of the road, keeping its feet on the same point, it can reach a window which is at a height of 9 m from the ground. Supposing the length of the ladder to be 15 m, what is the width of the road?

A) 9 m   B) 21 m   C) 12 m   D) None of these

**DIRECTION for the question:** Solve the following question and mark the best option

**Question No. : 200**

A bath tub can be filled by a cold water pipe in 20 minutes and by a hot water pipe in 30 minutes. A person leaves the bathroom after turning on both pipes simultaneously and returns at the moment when the bath tub should be full. Finding however, that the waste pipe has been open, he now closes it. In 3 minutes more the bath tub is full. In what time would the waste pipe empty it?

A) 38 min   B) 45 min   C) 42 min   D) 48 min

**QNo:- 1 ,Correct Answer:- C**

**Explanation:-**

Average of manager =  $\frac{550}{5} = 110$ , Average of laborers =  $\frac{32700}{5} = 6540$ ,

Therefore ratio =  $\frac{6540}{110} = 59 : 1$ .

Option C

**QNo:- 2 ,Correct Answer:- B**

**Explanation:-**

Average no of clerks =  $6310 / 5 = 1262$

Average no of total employees =  $42310 / 5 = 8462$

Thus, required % =  $(1262 / 8462) \times 100 = 15\%$  (approx)

Option B

**QNo:- 3 ,Correct Answer:- D**

**Explanation:-**

By visually checking, we see that in 1997 each of the section has shown the decrease in the number.

Option D

**QNo:- 4 ,Correct Answer:- C**

**Explanation:-**

Average no of executives, officers and managers in 1998 =  $660 / 3 = 220$

Average no of executives, officers and managers in 1995 =  $675 / 3 = 225$

Therefore % decrease =  $5 / 225 = 2.22\%$

Option C

**QNo:- 5 ,Correct Answer:- D**

**Explanation:-** We know that 100% corresponds to 360 degrees

Similarly 59% corresponds to  $360/100 \times 59 = 212.4$  degrees

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**QNo:- 6 ,Correct Answer:- A**

**Explanation:-**

$$\text{Ratio} = \frac{\text{military expenditure}}{\text{veterans expenditure}} = \frac{59}{16}$$

**QNo:- 7 ,Correct Answer:- C**

**Explanation:-**

$$\text{India expenditure} = \frac{\text{interest on debit}}{100} \times \text{total expenditure} = \frac{9}{100} \times 120 = 10.8 \text{ billion}$$

**QNo:- 8 ,Correct Answer:- D**

**Explanation:-**

$$\frac{16}{100} \times \text{Total expenditure} = 9,$$

$$\Rightarrow \text{Total expenditure} = \frac{9}{16} \times 100 = 56.25$$

**QNo:- 9 ,Correct Answer:- A**

**Explanation:-**

$$\text{Production in Indonesia by scientific method} = \frac{73}{100} \times \frac{10}{100} \times 50 = 3.65 \text{ lakh tonnes}$$

$$\text{Production in Indonesia by conventional method} = \frac{27}{100} \times \frac{10}{100} \times 50 = 1.35 \text{ lakh tonnes}$$

$$\text{Difference} = 3.65 - 1.35 = 2.3 \text{ lakh tonnes.}$$

**QNo:- 10 ,Correct Answer:- B**

**Explanation:-**

$$\text{Production for Srilanka} = \frac{60}{100} \times \frac{13}{100} \times 50 = 3.9 \text{ tonnes.}$$

Similarly Production for Indonesia = 3.65 tonnes.

Similarly Production for Pakistan = 3 tonnes.

Similarly Production for Bangladesh = .8 tonnes.

Similarly Production for China = 7.7 tonnes.

Similarly Production for Japan = 7.8 tonnes.

Similarly Production for India = 2.88 tonnes.

$$\text{Average} = \frac{\text{total}}{\text{no. of items}} = \frac{29.7}{7} = 4.24 \text{ lakh tonnes.}$$

**QNo:- 11 ,Correct Answer:- C**

$$\text{Production by Pakistan by conventional method} = \frac{34}{100} \times \frac{9}{100} \times 50 = 1.53$$

$$\text{Production by Japan by scientific method} = \frac{78}{100} \times \frac{20}{100} \times 50 = 7.8$$

$$\text{Hence the required ratio} = \frac{1.53}{7.8} = \frac{51}{260}$$

**Explanation:-**

**QNo:- 12 ,Correct Answer:- C**



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### Explanation:-

Production by Sri Lanka by conventional method =  $\frac{40}{100} \times \frac{13}{100} \times 50 = 2.6$

Production by India by scientific method =  $\frac{32}{100} \times \frac{18}{100} \times 50 = 2.88$ , Ratio =  $\frac{2.6}{2.88} = 0.9$

**QNo:- 13 ,Correct Answer:- B**

### Explanation:-

We know that all mosquitoes and ants are insects but no mosquitoes are ants

Therefore, it is best described by 2nd option.

**QNo:- 14 ,Correct Answer:- A**

### Explanation:-

As we know that all boys are male whereas some males are cousins.

Therefore, it is best described by option 1.

**QNo:- 15 ,Correct Answer:- A**

### Explanation:-

As we know that all sprinters and marathon runners are athletes whereas some sprinters are marathon runners

So it is best described by option 1.

**QNo:- 16 ,Correct Answer:- C**

### Explanation:-

Some parrots are pets, but all pets are not parrots. Similarly, some parrots are males but not all males are parrots. Also some male parrots can be pets. So the three sets must intersect.

**QNo:- 17 ,Correct Answer:- C**

### Explanation:-

Here, Middle income economies in services = 250

Total population in middle income economies =  $40 + 170 + 250 + 190 = 650$

Therefore, required percentage =  $\frac{250}{650} \times 100 = 38\%$ .

**QNo:- 18 ,Correct Answer:- D**

### Explanation:-

Rich (high) economies workforce working in industry = 90

Poor (low) economies workforce working in services = 320

Therefore, required ratio =  $\frac{90}{320} = \frac{9}{32}$ .

**QNo:- 19 ,Correct Answer:- B**

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### Explanation:-

The total work force in Services is 800 and 320 of those come from poor economies. So over 50% of this work force does not come from poor economies. Thus statement I is true.

Since poor economies account for  $\frac{1}{3}$  of the total Unemployed, statement II is true.

The total Industry work force is 470 and 90 of those come from high income economies. This accounts for  $\frac{90}{470} \approx 19\%$  of the Industry work force.

So statement III is false.

Middle income economies account for  $\frac{250}{800} \approx 31\%$  of the total Services work force. So statement IV is true.

**QNo:- 20 ,Correct Answer:- C**

### Explanation:-

Working population in low income economies(i.e. population earning less than \$695 p.a) =

$$40+210+320+840 = 1410$$

$$\text{Total working population} = (40+40+40) + (90+170+210) + (230+250+320) + (20+190+840) = 2440$$

$$\text{Therefore, required percentage} = \frac{1410}{2440} \times 100 = 57.78\%$$

**QNo:- 21 ,Correct Answer:- A**

### Explanation:-

Column A = 10%

$$\text{Column B} = 5 + 5 - \frac{25}{100} = 9.75$$

So quantity in column A is greater

**QNo:- 22 ,Correct Answer:- A**

### Explanation:-

In column A increase is of 20% and in column B increase is of 10%.

**QNo:- 23 ,Correct Answer:- A**

### Explanation:-

Circumference of circle is  $2\pi r$ .

$$\text{So value is } 2 \times 3.14 \times 1 = 6.28$$

$$\text{Perimeter of square is } 1.5 \times 4 = 6$$

**QNo:- 24 ,Correct Answer:- D**

### Explanation:-

$$\frac{1}{3} \cdot \frac{1}{2} x = 16.67\% \text{ of } x.$$

This is clear that quantity of column A is greater, but only if  $x > 0$ . As such no condition is given, either  $x > 0$  or  $x < 0$ , thus can't be determined.

**QNo:- 25 ,Correct Answer:- A**

### Explanation:-

$$\text{Area of square with side } 1.8 = 1.8 \times 1.8 = 3.24$$

$$\begin{aligned} \text{Area of circle with radius } 1 &= \pi r^2 = 3.14 \times 1 \times 1 \\ &= 3.14 \end{aligned}$$

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**QNo:- 26 ,Correct Answer:- B**

**Explanation:-**

5 different books can be arranged in  $5!$  ways or 120 ways. No. of minutes in 2 hours is also 120.

**QNo:- 27 ,Correct Answer:- C**

**Explanation:-**

Area of rectangular strip is  $157 \times 2 = 314$

Area of circle with radius 10

$$= \pi \times 10 \times 10 = \frac{2200}{7} = 314.28$$

**QNo:- 28 ,Correct Answer:- A**

**Explanation:-**

The amount passing through A to B is 1200, while from B to C and B to E is  $(550 + 250 = 800)$ . So no. of units demanded in B is 400.

**QNo:- 29 ,Correct Answer:- C**

**Explanation:-**

Units passing through C to D and E are  $(800 + 300 = 1100)$  and units needed at C is 225. So total requirement at C is 1325. Units passing from B to C is 250. So the value of M is  $(1325 - 250 = 1075)$

**QNo:- 30 ,Correct Answer:- C**

**Explanation:-**

Total demand at E is 2000.

Demand at E is 80 % of A.

So 80 % of A = 2000; A = 2500.

**QNo:- 31 ,Correct Answer:- B**

**Explanation:-**

Value of all India demand for industry sector for the year 1999-2000 = 50 % of 146.5 = 73.25 Value of all India demand for industry sector for the year 2004-05 = 40% of 283.9 = 113.6 So growth is 55%

**QNo:- 32 ,Correct Answer:- A**

**Explanation:-**

The growth in total demand is  $\frac{283.9 - 146.54}{146.54}$

= 93.73 %

The share of fertilizers in 1999-2000 is 11.72.

So if the growth remains same for the fertilizers the value of fertilizers will be 11.72

$$\times \frac{93.7}{100} = 10.981$$

So,  $11.72 + 10.98 = 22.7$

**QNo:- 33 ,Correct Answer:- B**

**Explanation:-**

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$$\begin{aligned}\text{Growth in Southern Demand} &= \frac{88.31 - 39.9}{39.9} \times 100 \\ &= 121.32\%\end{aligned}$$

**QNo:- 34 ,Correct Answer:- C**

**Explanation:-**

Industry sector demand for all India is =  $283.9 \times .4 = 113.6$

Industry sector demand for the southern part  $88.31 \times .4 = 35.34$

Industry sector demand from north, east and west =  $113.6 - 35.324 = 78.236$

**QNo:- 35 ,Correct Answer:- D**

**Explanation:-**

Let the two numbers be  $a$  and  $b$  respectively.

I. This Statement gives

$$a - b = \frac{1}{3} \times a$$

$$\Rightarrow \frac{2a}{3} = b$$

$$\Rightarrow 2a = 3b$$

$$\Rightarrow a = 1.5b$$

Here, we cannot find the value of either  $a$  or  $b$ . Hence, insufficient.

II. Here,  $a + b = 30$

This statement alone is not sufficient to answer the question.

Now, combining both statements, we get

$a = 18$  and  $b = 12$

So, smaller no. is 12

Therefore, data in both statement I and II are necessary to answer the question

**QNo:- 36 ,Correct Answer:- D**

**Explanation:-**

No exact information can be derived from st. 1 and st. 2 individually. But by joining both

the statements we can say that  $\frac{H+M+E}{3} = \frac{M+E}{2}$ ;

$M + E = 120$  On solving we get  $H$  as 60.

Therefore, data in both the statement I and II is necessary to answer the question.

**QNo:- 37 ,Correct Answer:- A**

**Explanation:-**

St. 1 shows the ages before 20 years and 10 years of father and son respectively and ratio is 2:1. So present ratios will be the same.

St. 2 tells about their sum of ages, so we can't say anything about the ratio of their ages.

Let the present ages of father and son are  $f$  and  $s$  respectively

I. Here, we have

$$\frac{f-20}{s-10} = \frac{2}{1}$$

$$\Rightarrow f = 2s$$

$$\Rightarrow f : s = 2 : 1$$

II. Here,  $f + s = 50$

On the basis of above information, we can't say anything about the ratio of their ages.

Therefore, statement II alone is not sufficient to answer.

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**QNo:- 38 ,Correct Answer:- C**

**Explanation:-**

From st. 1 no conclusion can be drawn as no actual value is given.

From st. 2 we know the difference of boys and girls is 15.

$13x - 10x = 15$ ;  $3x = 15$  So  $x = 5$ . No. of boys are  $13 \times 5 = 65$ .

**QNo:- 39 ,Correct Answer:- B**

**Explanation:-**

S.P.=100

From st. 1, 20 % profit if SP is 90.

So CP is 75 and profit is 25.

From st. 2, profit is  $\frac{1}{3}$ rd of CP.

$CP + \frac{1}{3} CP = 100$ ;  $\frac{4}{3} CP = 100$ ;  $CP = 75$ .

Profit =25.

So from both the statements we get the answer.

**QNo:- 40 ,Correct Answer:- B**

**Explanation:-**

To cross the signal post . Train has to cover its own length

From statement 1 , we came to know about the length of the train , So speed of train -  $90/6 = 15$  m/sec.

From statement 2 , we know that train crosses platform + it's own length in 18 seconds , train covers its own length in 6 seconds , Therefore it covers platform only in 12 seconds , 180 m in 12 seconds that means 15 m/sec is the speed of train.

**QNo:- 41 ,Correct Answer:- A**

**Explanation:-**

Option A is correct as it is clearly stated in the last line of the passage...This is because water resources.....

**QNo:- 42 ,Correct Answer:- A**

**Explanation:-**

Option 1. This inference is definitely true as it is properly stated at the starting of the paragraph.

**QNo:- 43 ,Correct Answer:- D**

**Explanation:-**

~~Option 4. Refer to the line, "the demand for water is visibly more than the supply of available and sustainable water"~~  
inference is definitely false.

**QNo:- 44 ,Correct Answer:- D**

**Explanation:-**

~~Option 4. Given the fact that the passage is berating India for not doing enough for integrating water resources - there is definitely more scope for channeling our resources.~~

~~or we can say that the above inference is contradicting~~

**QNo:- 45 ,Correct Answer:- C**

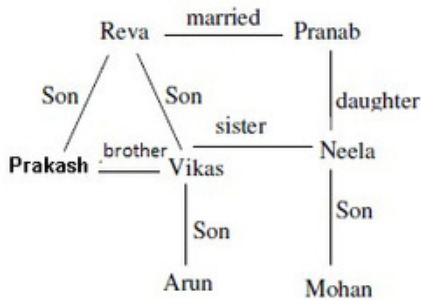
## Actual MAT 01

### Explanation:-

Option 3. There is no time frame mentioned about India's efforts on the water front. Hence data inadequate.

**QNo:- 46 ,Correct Answer:- B**

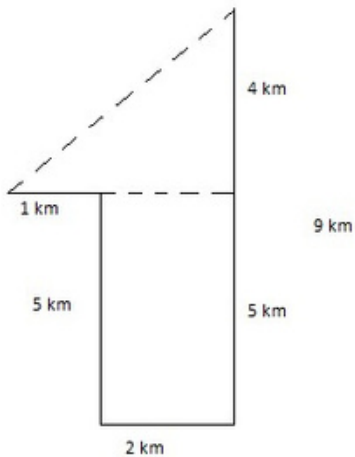
### Explanation:-



From the above diagram we can conclude that Prakash, Vikas and Neela are siblings. So wife of Vikas will be the sister-in-law of Neela. So option B.

**QNo:- 47 ,Correct Answer:- D**

**Explanation:-** According to the information, we can draw the following diagram



So, by pyth. triplet answer will be 5 km. Hence Option D

**QNo:- 48 ,Correct Answer:- A**

### Explanation:-

X - - U - S - - P - N - - K

The series is -3, -2, -3, -2, -3, -2

Therefore the next alphabet will be  $(K - 2) = I$

**QNo:- 49 ,Correct Answer:- C**

### Explanation:-

The first alphabet of each term is 4 places ahead of the first letter of the preceeding term and similar is the case for the second and third alphabet of the term.

## Actual MAT 01

Now,  $(N + 4) = R$ ,  $(L + 4) = P$ ,  $(A + 4) = E$ .

Therefore the next term will be RPE.

**QNo:- 50 ,Correct Answer:- D**

**Explanation:-**

The difference between the numbers is multiple of 6 The difference between the first two numbers is =6 For the next two is 12 and so on... Therefore after 46 the next number is obtained by adding 48 to it = 94

**Or**

$4, 4 \times 2 + 2 = 10, 10 \times 2 + 2 = 22, 22 \times 2 + 2 = 46, 46 \times 2 + 2 = 94.$

So option D.

**QNo:- 51 ,Correct Answer:- D**

**Explanation:-**

The difference between the numbers is 6, 8, 10....So, the next numbers will be  $(33 + 12) = 45$ .

So option D.

**QNo:- 52 ,Correct Answer:- B**

**Explanation:-**

The alphabets in series are alternate and each number is consecutive. Therefore the answer is K-6

**QNo:- 53 ,Correct Answer:- B**

**Explanation:-**

P E A K = 3 5 1 2

D I N E = 6 8 9 5

HENCE E = 5

Therefore by symmetry ;

K = 2 , I = 8, N = 9, D = 6

Hence K I N D = 2 8 9 6

Hence option B.

**QNo:- 54 ,Correct Answer:- A**

**Explanation:-**

T E R M                      I N A L

S D Q L                      J O B M

(1 Alphabet Before)    (1 Alphabet Next

)

Therefore applying the same pattern

C R E D                      I B L E

B Q D C                      J C M F

Hence answer is BQDCJCMF. (option A)

## Actual MAT 01

**QNo:- 55 ,Correct Answer:- A**

**Explanation:-**

Course of action I is feasible. Finding out students responsible for the damage is important - not only for charging but also for disallowing them to use the library if the action repeats.

Course of action II is not relevant because it does not arise out of the cause specified in the statement.

**QNo:- 56 ,Correct Answer:- B**

**Explanation:- Option B.**

The ideas suggested in both I and II represent unfair means to cut competition. The correct way would be to devise such that the indigenous producers could produce better quality fruits and make them available in the market at prices lower than those of the imported ones.

Hence, neither I nor II follows.

**QNo:- 57 ,Correct Answer:- D**

**Explanation:-**

Clearly, the situation demands that the faults in Accounts be properly worked out and the persons involved be interned.

Hence **both actions** are required.

**QNo:- 58 ,Correct Answer:- C**

**Explanation:-**

	Hindi	English	Geography	Math	History	French
A	✓	✓		✓		
B	✓	✓	✓		✓	✓
C		✓	✓			
D	✓			✓		
E					✓	✓

Very Clearly from the table we can see that

A teaches – Hindi, English, Math

B teaches – Hindi, English, Geography, History, French

C teaches – English, Geography

D teaches – Math, Hindi

E teaches – History, French

Hence teacher B is teaching maximum number of subjects.

**QNo:- 59 ,Correct Answer:- D**

**Explanation:-**

	Hindi	English	Geography	Math	History	French
A	✓	✓		✓		
B	✓	✓	✓		✓	✓
C		✓	✓			
D	✓			✓		
E					✓	✓

Very Clearly from the table we can see that



## Actual MAT 01

A teaches – Hindi, English, Math

B teaches – Hindi, English, Geography, History, French

C teaches – English, Geography

D teaches – Math, Hindi

E teaches – History, French

Only B teaches Geography and Hindi. Hence, option (D).

**QNo:- 60 ,Correct Answer:- C**

**Explanation:-**

	Hindi	English	Geography	Math	History	French
A	✓	✓		✓		
B	✓	✓	✓		✓	✓
C		✓	✓			
D	✓			✓		
E					✓	✓

Very Clearly from the table we can see that

A teaches – Hindi, English, Math

B teaches – Hindi, English, Geography, History, French

C teaches – English, Geography

D teaches – Math, Hindi

E teaches – History, French

More than 2 teachers teach Hindi.(option C).

**QNo:- 61 ,Correct Answer:- B**

**Explanation:-**

	Hindi	English	Geography	Math	History	French
A	✓	✓		✓		
B	✓	✓	✓		✓	✓
C		✓	✓			
D	✓			✓		
E					✓	✓

Very Clearly from the table we can see that

A teaches – Hindi, English, Math

B teaches – Hindi, English, Geography, History, French

C teaches – English, Geography

D teaches – Math, Hindi

E teaches – History, French

D, B and A teach Hindi.(option B).

**QNo:- 62 ,Correct Answer:- D**

**Explanation:-**

**Option D.**

If industrial cities are polluted then people who live there cannot be immune to diseases as pollution means diseases.

As the statement deals with people living in industrial cities, we cannot comment over people living in cities which are not industrial. Moreover, pollution is not the only factor on which health is dependent, hence conclusion II cannot follow either.

## Actual MAT 01

**QNo:- 63 ,Correct Answer:- D**

**Explanation:-**

Talent means a special natural ability or aptitude. not all players are good/have a natural aptitude.

Just being a player, esp since it's not mentioned if she's a good player or not, wouldn't make the sister talented Therefore, we cannot come to the conclusion I and as only the sister is a basketball player, we cannot conclude that we all are sportsman. Hence neither conclusion follows.

**QNo:- 64 ,Correct Answer:- A**

**Explanation:-** If India's economy is dependent on forests then forests need to be preserved which means the trees should be preserved. Hence conclusion I follows. Only keeping the maintenance of forests does not improve the economic conditions of the country. Hence conclusion II is invalid.

**QNo:- 65 ,Correct Answer:- D**

**Explanation:-**

The statement says that the best way to escape from a problem is to solve it.

From this we cannot conclude that life is dull if you don't face problems.

Neither can we conclude that to escape or avoid problems you should have some solutions with you always.

**QNo:- 66 ,Correct Answer:- A**

**Explanation:-**

"A good book , even if costly, is sold" means that there are books which are cheaper and books which are not that good. Hence assumption I is implicit. But most of the books are costly is not implicit.

**QNo:- 67 ,Correct Answer:- D**

**Explanation:-**

Both I & II are implicit.

As the statement says "The integrated steel plants in India no longer have to depend on imports for continuous casting

~~The statement mentions the self-sufficiency of India in continuous casting refractories. This means that they are needed in the country. So, I is implicit. Since continuous casting refractories are needed in integrated steel plants, it means they are in demand. So, II is implicit.~~

**QNo:- 68 ,Correct Answer:- A**

**Explanation:-**

The advertisement assumes that people are concerned about their beauty. Hence, assumption I follows.

**QNo:- 69 ,Correct Answer:- A**

**Explanation:-** The total utility can be maximised by equality of income throughout the community, i.e., by giving extra income from the rich to the poor. So, I is implicit. Also, II pertains to economic right and is not concerned with equality of income throughout the community. So, it is not implicit.

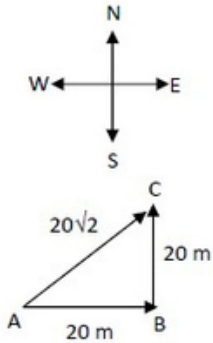
**QNo:- 70 ,Correct Answer:- D**

**Explanation:-** As Aarvi's position is 21st from both the ends  
so total number of students in class =  $20 + 20 + 1 = 41$

## Actual MAT 01

**QNo:- 71 ,Correct Answer:- A**

**Explanation:-**



AC is the required distance covered

**QNo:- 72 ,Correct Answer:- B**

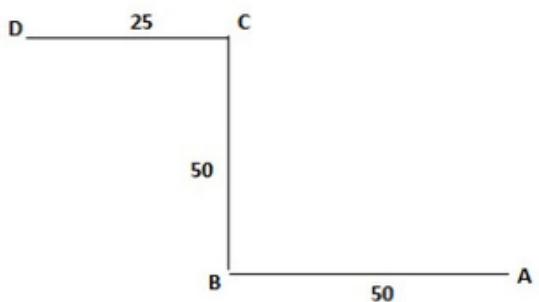
**Explanation:-**

$$\begin{array}{ccccc} 5 & 4 & 6 & 3 & 8 \\ -1 & +1 & -1 & +1 & -1 \\ 4 & + & 5 & + & 5 & + & 4 & + & 7 = 25 \end{array}$$

**QNo:- 73 ,Correct Answer:- D**

**Explanation:-**

The door faces East and Aditya walked 50 m straight from the back side of his house i.e towards West. Then he took a right turn(turned north) and walked 50 m towards North. Finally he took a left turn(turned west) and walked 25 m towards West.



Now his final position is 75 m due West and 50 m due North i.e **North-West**.

**QNo:- 74 ,Correct Answer:- B**

**Explanation:-**

No. of boys participating in annual is 15.

So no. of girls will be 10 (as the ratio of boys and girls is 3:2).

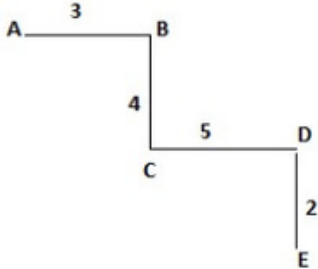
Number of students not participating in the sports meet is 35(60-25).

## Actual MAT 01

From here we can conclude no of boys will be 15 and no. of girls will be 20 as no. of girls is 5 more.  
Total no. of girls is  $20 + 10 = 30$ .  
Option B

**QNo:- 75 ,Correct Answer:- C**

**Explanation:-**



from figure south east is the answer

**QNo:- 76 ,Correct Answer:- B**

**Explanation:-**

Simple counting of days.

28th Feb = Tuesday

. Since in next 28 days, there will be no odd day so

28th March will again be Tuesday.

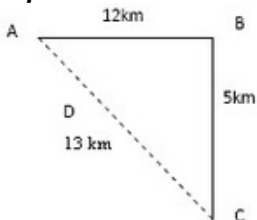
**QNo:- 77 ,Correct Answer:- B**

**Explanation:-**

By hit and trial we can determine that the present age is 26. Next year it will be 27 which is the cube of 3. One year ago it was 25, which is square of 5. Next cube is 64, so he has to wait for  $(64 - 26) = 38$  years. Hence option B is the answer.

**QNo:- 78 ,Correct Answer:- B**

**Explanation:-**



Shortest distance between camp C and camp A is,

$$\sqrt{5^2 + 12^2} = \sqrt{25 + 144} = \sqrt{169} = 13$$

The distance between camp D and camp A is  $(13 - 12) = 1$ km

**QNo:- 79 ,Correct Answer:- C**

**Explanation:-**

## Actual MAT 01

*The lady is my nephew's paternal grandmother. And her son is my sister's husband. So lady is my sister's mother in law.*

**QNo:- 80 ,Correct Answer:- D**

**Explanation:-**

*The pattern of the plants will be,*

C G M M C S

**QNo:- 81 ,Correct Answer:- D**

*So according to the patten, the 30th i.e. the last plant will be Sitafal*

**Explanation:-**

**QNo:- 82 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 83 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 84 ,Correct Answer:- C**

**Explanation:-**

**QNo:- 85 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 86 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 87 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 88 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 89 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 90 ,Correct Answer:- C**

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**Explanation:-**

**QNo:- 91 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 92 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 93 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 94 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 95 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 96 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 97 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 98 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 99 ,Correct Answer:- C**

**Explanation:-**

**QNo:- 100 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 101 ,Correct Answer:- C**

**Explanation:-**

**QNo:- 102 ,Correct Answer:- C**

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**Explanation:-**

**QNo:- 103 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 104 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 105 ,Correct Answer:- C**

**Explanation:-**

**QNo:- 106 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 107 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 108 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 109 ,Correct Answer:- C**

**Explanation:-**

**QNo:- 110 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 111 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 112 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 113 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 114 ,Correct Answer:- B**

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**Explanation:-**

**QNo:- 115 ,Correct Answer:- A**

**Explanation:-**

**QNo:- 116 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 117 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 118 ,Correct Answer:- D**

**Explanation:-**

**QNo:- 119 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 120 ,Correct Answer:- B**

**Explanation:-**

**QNo:- 121 ,Correct Answer:- C**

**Explanation:-**

*The first three lines of the passage show clearly state the choice(c)"Acc to T.V reports..... greater Noida Authority".*

**QNo:- 122 ,Correct Answer:- B**

**Explanation:-**

*Refer to the lines, "once banks realized that they are holding assets...further demand for more money."*

**QNo:- 123 ,Correct Answer:- C**

**Explanation:-**

*It is stated in the passage, "Government rules are not the best for infrastructure...that way a virtuous cycle will be set up."*

**QNo:- 124 ,Correct Answer:- D**

**Explanation:-**

*Refer to line "We are currently ruled by the 1894 law on land acquisition and.as Singur has shown as,that is no longer acceptable".*

**QNo:- 125 ,Correct Answer:- B**



## Actual MAT 01

**Explanation:-**

As the passage reads, "It is hoped that the govt will not be tempted to take on the job of developing infrastructure on its own shoulders but let private enterprise do the job."

**QNo:- 126 ,Correct Answer:- C**

**Explanation:-**

Clearly stated in the line "However, the private- public partnership.....private enterprise then by state".

**QNo:- 127 ,Correct Answer:- C**

**Explanation:-**

The last line of the 1st para, specifies and proves it through various examples... "This strategy is predicted on the need to cut costs.....to be a slowing market"

**QNo:- 128 ,Correct Answer:- D**

**Explanation:-**

The line "Organised Industry is ..... learning to cope up with the downside of a business cycle.....on consumer demands" clearly indicates the same.

**QNo:- 129 ,Correct Answer:- D**

**Explanation:-**

It is evident from the last line, "That future should start right away." ...

**QNo:- 130 ,Correct Answer:- C**

**Explanation:-**

It is stated in the 1st para "What began as a knee-jerk reaction of Jet Airways, which issued marching orders to 800 employees...", it is clear that it was not a strategy but a reaction to the economic slowdown.

**QNo:- 131 ,Correct Answer:- A**

**Explanation:-**

option a) is the most appropriate as of the available choices.. Globalisation of Indian Economy is not being talked about. So, choice b) is rejected. Choice c) talks about cost cutting which is just one of the issues highlighted hence cannot be the appropriate title of the passage.

Similarly, choice d) is rejected because the passage does not talk about Indian industries impact on the Global economy.

**QNo:- 132 ,Correct Answer:- A**

**Explanation:-**

Choice a) is stated in the lines, "taken together with our earlier studies, this suggests that there may be an age-related failure of the conversion of the clock's molecular rhythm into the electrical or numeral signals that the brain uses for communication. These weakened central signals may fail to keep some peripheral clocks appropriately synchronised or, in some cases, even rhythmic."

**QNo:- 133 ,Correct Answer:- C**

**Explanation:-**

As mentioned in the passage, "this weakening of the signal, rather than a problem with the central timekeeper itself, apparently is the cause of alterations in the biological timing system in aging mammals- possibly including humans, according to the researchers".

## Actual MAT 01

**QNo:- 134 ,Correct Answer:- A**

**Explanation:-**

Refer to lines "The scientists studied tissues from the brain and other organs of older mice and measured the activity of a gene that is a part of the biological clock. They found that the central clock in the brain, the suprachiasmatic nucleus, maintained proper periodicity and synchronisation. Clocks in some peripheral organs, such as liver and kidney of older animals, were either improperly synchronised or had lost rhythm entirely".

**QNo:- 135 ,Correct Answer:- C**

**Explanation:-**

It is mentioned in the lines, "lack of sleep can affect more than a person's level of alertness. In the long term, it can disrupt the body's metabolism, affect eating cycles, lead to declining cognitive abilities, and possibly, a shortened lifespan."

**QNo:- 136 ,Correct Answer:- C**

**Explanation:-**

The passage suggests that it is the weakening of signals from the master clock to the peripheral clocks that result in malfunctioning.

**QNo:- 137 ,Correct Answer:- D**

**Explanation:-**

Refer to the lines "by nature, animals are born with the faculty of sensation, and from sensation, memory is produced in some of them, though not in others. And therefore, the former are more intelligent and apt at learning than those which cannot remember, those which are incapable of hearing sounds are intelligent though they cannot be taught. E.g. the bee, and any other race of animals that may be like it: and those which besides memory, have this sense of hearing can be taught. The animals other than man live by appearances and memories, and have but little of connected experience; but the human race lives also by art and reasoning

**QNo:- 138 ,Correct Answer:- A**

**Explanation:-**

Option a) is stated in the passage "But yet we think that knowledge and understanding belong to art rather than to experience and we suppose artists to be wiser than men of experience (which implies that wisdom depends in all cases rather than knowledge) and this because the former know the cause, but the latter do not."

**QNo:- 139 ,Correct Answer:- B**

**Explanation:-**

It is mentioned in the passage "When all such inventions were already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered and first in the places where men first began to have leisure. That is why the mathematical arts were founded in Egypt: for there the priestly caste was allowed to be at leisure.

**QNo:- 140 ,Correct Answer:- C**

**Explanation:-**

Refer to line, "And in general, it is a sign of the man who knows and of the man who does not know, that the former can teach, and therefore, we think art more truly knowledge than experience is; for artists can teach, and men of mere experience cannot."

**QNo:- 141 ,Correct Answer:- D**

**Explanation:-**

Since the sentence has a negative tone, the word should be "touts" who do not care for the poor.

**QNo:- 142 ,Correct Answer:- A**

## Actual MAT 01

### **Explanation:-**

The words "least conscious" are a dead giveaway. Obviously, you become conscious of proper punctuation only if it obtrudes, hinders your flow or shows up prominently. Obtrudes is to thrust (something) forward or upon a person, especially without warrant or invitation. Conceal is to hide. Recede is going backwards. Efface is to remove.

**QNo:- 143 ,Correct Answer:- B**

### **Explanation:-**

Some knowledge of economics helps here. By looser fiscal policy implies higher government spending – which obviously would lead to a higher deficit. Govt. spending is supposed to boost the economy.

**QNo:- 144 ,Correct Answer:- D**

### **Explanation:-**

The key here is the second blank. Option a) is ruled out because you cannot maximize decisions, even under a decision is grammatically incorrect, so option b) is out. Out of option c) and d), option d) is better, since a guide would be a more appropriate must-read. The word guide means a book, pamphlet etc giving information, instructions or advice.

**QNo:- 145 ,Correct Answer:- B**

### **Explanation:-**

'One' would be complemented by 'one' in the objective case. We find this only in option 2.

**QNo:- 146 ,Correct Answer:- D**

### **Explanation:-**

'Had ought' is incorrect usage in options A and C.  
Option B changes the tone of the information from imperative to obligatory.  
Only **option D** is grammatically and idiomatically correct.

**QNo:- 147 ,Correct Answer:- D**

### **Explanation:-**

**Option D** is grammatically correct.

Option A is grammatically incorrect. The expression too is erroneous- the use of 'being' conveys a sense of cause and effect but further on the usage- 'thereby reducing human misery and poverty' makes no sense at all.  
In option B the use of 'It' is incorrect.  
Option C, it seems to leave the information midway – 'Recognising entertainment ..... and thereby reducing .....', the author needs to give more information to make a coherent reading.

**QNo:- 148 ,Correct Answer:- B**

### **Explanation:-**

'from those who maintain' is the correct usage. Option a) and c) are eliminated because of the use of they instead of those. Option d) incorrectly uses 'maintaining'.

**QNo:- 149 ,Correct Answer:- C**

### **Explanation:-**

## Actual MAT 01

The passage talks about certain decisions being so obvious and explicit that one doesn't have to think twice before reinforcing this through an example. All options except (c) focus attention on the example and mislead the information.

**QNo:- 150 ,Correct Answer:- D**

**Explanation:-**

The passage defines inertia and its effects which is aptly done in option d).  
Options a) gives incorrect information-They become insensitive to tragedies. Refer lines in para "you just don't feel a feeling something intensely is not the same as not feeling anything at all so use of word insensitive is incorrect.  
Option B is less appropriate than D in comparison.  
Similarly option c) takes example as summary. You don't act although you see one person exploiting another or one another is just an example of inertia stopping your mind from responding meaningfully to events.

**QNo:- 151 ,Correct Answer:- C**

**Explanation:-**

The passage is basically about trying before buying so that you can experience the consequences of the change before you actually buy something. To prove his point the author gives the example of a sedan Vs a van. Options a),b) and d) are misleading as they shift the focus to buying a van. Option c) rightly captures the idea.

**QNo:- 152 ,Correct Answer:- C**

**Explanation:-**

Option a) and b) distort information saying that shipping companies cannot bring about cost minimization without lowering the service quality. Whereas option d) says that companies should focus more on quality. The passage talks about shipping companies keeping their objectives for maintenance and material management clear.

**QNo:- 153 ,Correct Answer:- B**

**Explanation:-**

Analogy of degree- lower to higher. Simmer is a lower intensity word than boil. Similarly drizzle and downpour are similar meaning words but with varying intensity. Glide is to move smoothly and continuously along, as if without effort or resistance, as a flying bird, a boat, or a skater. Drift is a driving movement or force; impulse; impetus; pressure.

**QNo:- 154 ,Correct Answer:- C**

**Explanation:-**

Analogy of degree-Higher to lower.  
Seethe is a more intense form of anger.  
Similarly, **fidget** is the intense form of **uneasiness**.

**QNo:- 155 ,Correct Answer:- C**

**Explanation:-**

Key turns on the ignition just as switch turns on the light. Saddle is a <sup>seat</sup> for a rider on the back of a horse or other animal.

**QNo:- 156 ,Correct Answer:- A**

**Explanation:-**

## Actual MAT 01

Tally is count of votes and census is count of population.

**QNo:- 157 ,Correct Answer:- B**

**Explanation:-** D is the only generic stt and only option B correctly places D at beginning Hence option B

D opens the sequence by introducing the completion of the last phase of the mission, Chandrayan.

E follows closely talking about the rest of the mission.

A praises the precision with which the mission was completed and

B talks about the achievement adding to India's pride.

**QNo:- 158 ,Correct Answer:- C**

**Explanation:-**

The paragraph talks about India and Australia.

Sentence C is an introductory sentence introducing this idea.

The next sentence which tells us something about the champion is mentioned in sentence D.

The word "contender" in sentence D is the clue word for the next sentence. The next sentence is E which is further elaborated in B.

Sentence A is the concluding statement.

Hence the final arrangement is **CDEBA**

**QNo:- 159 ,Correct Answer:- A**

**Explanation:-** Here Sentences A and B are clearly related as "its" in B refers to "a nation" in A.

The paragraph talks about elections and Sentence E will have to be after Sentence D as the youthful Senator became the African – American president.

The answer choice which has AB and D before E is **option A** only, which is the correct answer.

**QNo:- 160 ,Correct Answer:- D**

**Explanation:-**

The paragraph talks about Kumble, his achievements and his retirement.

The sentence E is clearly the opening sentence here.

Now the sentences B and C are related as C gives the reason why Kumble was under-rated.

D further continues with the point in C.

Hence **EABCD** is the correct order.

**QNo:- 161 ,Correct Answer:- C**

**Explanation:-** Marks scored in 1st paper = 30% of 180 = 54

Total aggregate marks scored in both the papers = 50% of 330 = 165

Marks needed in 2nd paper = 165 - 54 = 111

Required percentage =  $111/150 \times 100 = 74\%$

**QNo:- 162 ,Correct Answer:- B**

**Explanation:-**

Given,  $15M = 24W = 36B$

$\Rightarrow 12W = 15M/2$  and  $6B = 15M/6$

Let the number of men required = x

Solving

$xM + 12W + 6B = xM + 15M/2 + 15M/6 = (x + 10) M$

Applying chain rule,

## Actual MAT 01

$(15M \times 12 \times 8) \times 9/4 = (x + 10) M \times 30 \times 6$   
Solving,  $x = 8$

**QNo:- 163 ,Correct Answer:- C**

**Explanation:-**

	dogs time turns		
A	27	45	80
B	16	8	?

Less Cogs => more turns and less time => less turns

Number of turns required =  $80 \times \frac{27}{16} \times \frac{8}{45} = 24$  times

**QNo:- 164 ,Correct Answer:- D**

**Explanation:-**

Suppose each vessel contains  $x$  liters of milk.  
Therefore, total milk present is  $10x$ .

Now,  $60x - 50x = (200 + 150)$   
 $\Rightarrow 10x = 350$ ,  
 $\Rightarrow x = 35$

**QNo:- 165 ,Correct Answer:- A**

**Explanation:-**

Let the price be Rs 1 per apple.  
Therefore, 100 apples will be bought for 100 rupees i.e. Rs. 12 per dozen.  
S.P of 100 apples is  $12 \times 8 = 96$ .

100 apples are bought at Rs. 100 and sold at Rs. 96, resulting in a loss of 4 %.

**QNo:- 166 ,Correct Answer:- A**

**Explanation:-**

We have 16th Jan 1997 – Thursday  
16th Jan 1998 – Friday

16th Jan 1999 – Saturday

16th Jan 2000 – Sunday, so 4<sup>th</sup> Jan 2000 - Tuesday.  
Hence, option A is correct.

**QNo:- 167 ,Correct Answer:- D**

**Explanation:-**

Let total number of swans be  $x$ . Then,  
According to given statement,

$$\frac{7}{2}\sqrt{x} + 2 = x$$

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On solving the equation we get,  $x = 16$  and  $1/4$ (rejecting)

Alternately, we could put the values from the options given.

**QNo:- 168 ,Correct Answer:- B**

**Explanation:-**

The maximum number of boxes that can be carried in the wooden box is

$$\frac{800 \times 700 \times 600}{8 \times 7 \times 6} = 1,000,000$$

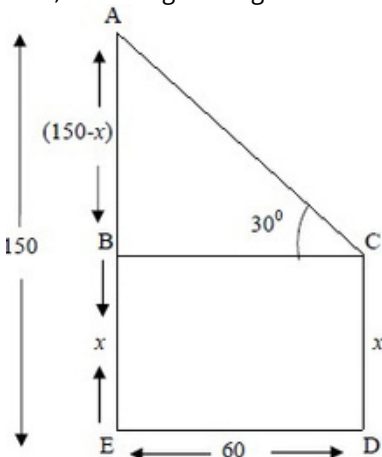
Option B

**QNo:- 169 ,Correct Answer:- A**

**Explanation:-**

Let the height of the smaller tower be  $x$  metres.

Now, according to the given conditions,



$$\tan 30 = \frac{150-x}{60} \Rightarrow \frac{1}{\sqrt{3}} = \frac{150-x}{60}$$

Solving we get  $x = 116$

**QNo:- 170 ,Correct Answer:- A**

**Explanation:-**

Total distance =  $2500 + 1200 + 500 = 4200$  km

Total time taken =  $\frac{2500}{500} + \frac{1200}{400} + \frac{500}{250} = 10$

Avg speed =  $\frac{\text{Total distance}}{\text{Total time taken}} = \frac{4200}{10} = 420$  km/hr

Option A

**QNo:- 171 ,Correct Answer:- D**

**Explanation:-**

Let the mean profit for last 15 days be  $M$

Sum of profit for all 30 days =  $350 \times 30 = 10500$

Sum of profit for first 15 days =  $15 \times 275 = 4125$

## Actual MAT 01

Sum of profit for last 15 days = 15M

$$\Rightarrow 15M + 4125 = 10500$$

Solving,  $M = 425$

**QNo:- 172 ,Correct Answer:- C**

**Explanation:-**

Let  $d$  be the average daily expenditure

Original expenditure =  $35 \times d$

New expenditure =  $35 \times d + 42$

New Average expenditure =  $\frac{35 \times d + 42}{42} = d - 1$ , Solving we get  $d = 12$ ,

Original expenditure =  $35 \times 12 = 420$

**QNo:- 173 ,Correct Answer:- D**

**Explanation:-**

Ratio of the amounts collected in the two classes is  $1 \times 3 : 50 \times 1$

$$\Rightarrow 3 : 50$$

Therefore, amount collected by II class is,

$$\frac{50}{53} \times 1325 = 1250$$

**QNo:- 174 ,Correct Answer:- D**

**Explanation:-**

Let the distance between A and B is  $D$  km.

We know that, If the speed of a boat in still water is  $u$  km/hr and the speed of the stream is  $v$  km/hr, then:

Speed downstream =  $(u + v)$  km/hr =  $(9 + 3)$ km

Speed upstream =  $(u - v)$  km/hr =  $(9 - 3)$ km

Now, applying the standard formula,  $\text{time} = \frac{\text{distance}}{\text{speed}}$

$$\frac{D}{9+3} + \frac{D}{9-3} = 3$$

$$\Rightarrow D = 12\text{km}$$

Option D

**QNo:- 175 ,Correct Answer:- A**

**Explanation:-**

Let total distance be  $D$  km. So

$$\frac{2}{3}D + \left(\frac{1}{3} \times \frac{3}{4}\right)D + 2 = D$$

On solving the equation, we get  $D = 24$  km

**QNo:- 176 ,Correct Answer:- D**

**Explanation:-**

Let the total capacity =  $x$  liters.



## Actual MAT 01

Given,  $x/5 + 22 = 3x/4$

Solving,  $x = 40$

Hence, the capacity of the tank is 40 litres

**QNo:- 177 ,Correct Answer:- C**

**Explanation:-**

let the filling capacity of the pump is (x) m<sup>3</sup> per minute

then the emptying capacity of the pump is (x + 10)m<sup>3</sup> per minute

$$\frac{2400}{x} - \frac{2400}{x+10} = 8, \text{ Solving this we get } x$$

$$= 50 \text{ m}^3 / \text{min}$$

$$\text{Or by options } \frac{2400}{50} - \frac{2400}{60} = 48 - 40 = 8 \text{ minutes}$$

**QNo:- 178 ,Correct Answer:- B**

**Explanation:-**

Let D<sub>2</sub> and D<sub>3</sub> be the difference between Simple and compound interest for two years and three years respectively, R be the rate percent per annum and P be the principal.

Here, D<sub>2</sub> = Rs. 20

D<sub>3</sub> = Rs. 61

$$\text{Hence, applying the formula, } \frac{D_2}{\left(\frac{R}{100}\right)^2} = P, \frac{D_3}{\left(\frac{R}{100}\right)^2 \left(\frac{R}{100} + 3\right)} = P;$$

$$\text{We have, } \frac{20}{\left(\frac{R}{100}\right)^2} = \frac{61}{\left(\frac{R}{100}\right)^2 \left(\frac{R}{100} + 3\right)} \Rightarrow R = 5\%$$

$$\text{Now, } P = \frac{20}{\left(\frac{5}{100}\right)^2} = 20 \times 400 = \text{Rs. } 8000$$

**QNo:- 179 ,Correct Answer:- A**

**Explanation:-**

Let distance be 'D' km and usual rate be 's' km/hr then

$$\frac{D}{s} - \frac{D}{s+4} = \frac{30}{60} \Rightarrow 8D = s(s+4) \dots \dots \dots (1) \text{ and}$$

$$\frac{D}{s-2} - \frac{D}{s} = \frac{20}{60} \Rightarrow 6D = s(s-2) \dots \dots \dots (2)$$

Dividing both we get

$$\frac{8D}{6D} = \frac{s(s+4)}{s(s-2)} \Rightarrow s = 20 \text{ km/hr}$$

So, D = 60km

**QNo:- 180 ,Correct Answer:- D**

**Explanation:-**

The speed of train in m/s is  $54 \times 5/18 = 15 \text{ m/s}$ .

The train crosses the man in 20 seconds, therefore length of train is  $(15 \times 20) = 300 \text{ m}$ .

Now, let the length of platform be P.

$$\frac{300 + P}{36} = 15$$

$$\Rightarrow 300 + P = 540$$

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$$\Rightarrow P = 240$$

**QNo:- 181 ,Correct Answer:- C**

**Explanation:-**

Total Distance to be travelled by both the trains =  $130 + 110 = 240\text{m}$

Let 'F' and 'S' be the speeds of fast and slow trains in m/sec.

In the same direction ,

$$240 = 60(F - S),$$

$$F - S = 4 \text{ m/sec} \dots\dots(1)$$

In the opposite direction,

$$240 = 3(F + S)$$

$$F + S = 80 \text{ m/sec} \dots\dots(2)$$

Solving the two equations, we get  $F = 42 \text{ m/sec}$ .

**QNo:- 182 ,Correct Answer:- D**

**Explanation:-**

Given speed of the boat in still water is  $10 \text{ km/h}$ ,

Let  $S$  be the speed of flow of river, then

$$\frac{91}{10 + S} + \frac{91}{10 - S} = 20$$

On solving we get  $S = 3$

Alternatively, taking the help of the options, and considering option D

$$\frac{91}{13} + \frac{91}{7} = 20$$

Therefore, speed of river is  $3 \text{ km/h}$ .

**QNo:- 183 ,Correct Answer:- B**

**Explanation:-** A can give B a start of  $40 \text{ m}$ .

$$\Rightarrow A = 1000 \text{ m then } B = 960 \text{ m.}$$

Also B gives a start of  $25 \text{ m}$  to C

$$\Rightarrow B = 1000 \text{ m then } C = 975 \text{ m}$$

$$\text{So, } B : C = 40 : 39 \Rightarrow A : B : C = 1000 : 960 : 936$$

Hence A can give a start of  $64 \text{ m}$  to C.

**QNo:- 184 ,Correct Answer:- A**

**Explanation:-** Ratio of speeds of  $A : B = 12 : 11$

Ratio of speeds of  $B : C = 8 : 7$

Therefore, ratio of speeds of  $A : B : C = 96 : 88 : 77$

So, in  $9600 \text{ m}$  race A will beat C by  $1900 \text{ m}$

**QNo:- 185 ,Correct Answer:- C**

**Explanation:-** Let the number of boys =  $B$

$$\text{Given, } (20 * B + 15 * 20) / (B + 20) = 18$$

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Solving,  $20B + 300 = 18B + 360$   
 $\Rightarrow B = 30$

**QNo:- 186 ,Correct Answer:- C**

**Explanation:-**

Total tractor population = 2,94,000  
Mahindra & Mahindra = 1,50,000  
So, Non Mahindra tractors = 1,44,000  
Since out of every 1000 Mahindra tractors, 98 are red, out of 1,50,000 Mahindra tractors 14,700 are red.  
5.3% of 2,94,000 = 15,582 are red tractors in all.  
So non Mahindra tractors which are red  
= 15,582 – 14,700 = 882  
Hence percentage of non Mahindra tractors that are red =  $\frac{882}{144000} \times 100 = 0.6125\%$

**QNo:- 187 ,Correct Answer:- A**

**Explanation:-**

Difference in % of wheat lost =  $7 - \frac{26}{5} = \frac{9}{5} \%$   
Difference in import =  $12 - 3 = 9$  million  
As  $\frac{9}{5} \%$  of total qty of wheat = 9 million  
 $\Rightarrow \frac{9}{500} x = 9 \Rightarrow x = 500$  million

**QNo:- 188 ,Correct Answer:- D**

**Explanation:-**

Let the speed of stream be  $x$ ,

$$\frac{200}{48-x} - \frac{200}{48+x} = 10,$$

$$\Rightarrow (x+72)(x-32) = 0$$

$$\Rightarrow x = -72 \text{ or } 32$$

Thus speed of stream is 32 m/minute.

**QNo:- 189 ,Correct Answer:- D**

**Explanation:-**

Total rounds to be completed is  $5000/400 = 12.5$  rounds.

Ratio of speeds of A and B is 5 : 4, therefore there will be  $(5 - 4) = 1$  meeting point and it will be on the starting point only. A and B will meet when A would complete 5 rounds and B would complete 4 rounds.

When A would complete 10 rounds B would complete 8 rounds and they would have met two times. By the time they would meet for the next time, the race would already be finished. Hence, they would meet 2 times only.

**QNo:- 190 ,Correct Answer:- A**

**Explanation:-**

Let the total income is Rs 5 so that expenditure is Rs 3 and saving is Rs 2.

New income is Rs 5.5 and new expenditure is Rs 3.36.

New saving is  $5.5 - 3.36 = \text{Rs } 2.14$

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So the savings increased by Rs 0.14

$$\text{Required percentage} = \frac{0.14}{2} \times 100 = 7\%$$

**QNo:- 191 ,Correct Answer:- B**

**Explanation:-**

Let the total quantity of mixture =  $4x$  litres

Milk =  $\frac{3}{4} \times 4x = 3x$  litres and Water =  $4x - 3x = x$  liters

Let the quantity removed and replaced with water =  $4y$  litres

Milk removed =  $3y$  liters and water =  $y$  liters and replaced with  $4y$  litres water

So,  $(3x - 3y)/(x - y + 4y) = 1/1$

$$\Rightarrow 3x - 3y = x + 3y$$

$$\Rightarrow 2x = 6y$$

$$\Rightarrow y/x = 1/3$$

Hence, required percentage =  $4y/4x \times 100 = 33.33\%$

**QNo:- 192 ,Correct Answer:- A**

**Explanation:-**

Let the two vessels be  $V1$  and  $V2$

Ratio of spirit to water in vessel  $V1 = 1 : 1$

Ratio of spirit to water in vessel  $V1 = 3 : 1$

When 2 liters from vessel 1 and 3 liters from vessel 2 are drawn,

Quantities drawn from these vessels

$$\text{Quantity of Spirit from vessel } V1 = \frac{1}{2} \times 2 = 1$$

$$\text{Quantity of Water from vessel } V1 = \frac{1}{2} \times 2 = 1$$

$$\text{Quantity of Spirit from vessel } V2 = \frac{3}{4} \times 3 = \frac{9}{4}$$

$$\text{Quantity of water from vessel } V2 = \frac{1}{4} \times 3 = \frac{3}{4}$$

$$\text{New ratio of spirit and water in the resultant solution} = 1 + \frac{9}{4} : 1 + \frac{3}{4} = 13 : 7$$

**QNo:- 193 ,Correct Answer:- B**

**Explanation:-** Quantity of Water in the mixture = 20% of 45 = 9 liters

Quantity of spirit =  $45 - 9 = 36$  litres

Let the quantity of water added =  $w$  liters

Solving,  $9 + w = 25\% \text{ of } (45 + w)$

$$\Rightarrow 36 + 4w = 45 + w$$

$$\Rightarrow w = 3 \text{ liters}$$

**QNo:- 194 ,Correct Answer:- C**

**Explanation:-**

## Actual MAT 01

For the 1<sup>st</sup> post chances of being not selected is =  $\frac{4}{5}$

For the 2<sup>nd</sup> post chances of being not selected is =  $\frac{7}{8}$

For the 3<sup>rd</sup> post chances of being not selected is =  $\frac{6}{7}$

Being not selected at all =  $\frac{4}{5} \times \frac{7}{8} \times \frac{6}{7} = \frac{3}{5}$

Being selected at least in one post =  $1 - \frac{3}{5} = \frac{2}{5}$

So, answer is option C

**QNo:- 195 ,Correct Answer:- A**

**Explanation:-**

Sum of areas of smaller parks = Area of the new bigger park

Let the radius of new park be R.

$$64\pi + 36\pi = \pi R^2;$$

$$R^2 = 100$$

$$R = 10$$

Option A

**QNo:- 196 ,Correct Answer:- A**

**Explanation:-**

let the breadth be x,

Area of Pond = 64

Area of field =  $64 \times 8 = 512$

Area of field  $\Rightarrow x \cdot 2x = 512$

$$\Rightarrow 2x^2 = 512 \Rightarrow x^2 = 256 \Rightarrow x = 16$$

Length =  $2 \times 16 = 32$ . So 1<sup>st</sup> option is answer.

**QNo:- 197 ,Correct Answer:- B**

**Explanation:-**

Area of field =  $16 \times 26 = 416 \text{ m}^2$

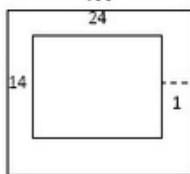
Area of inner field =  $24 \times 14 = 336 \text{ m}^2$

Remaining area =  $416 - 336 = 80 \text{ m}^2$

Area in cm =  $80 \times 100 \times 100 = 800,000 \text{ cm}^2$

Area of each tile =  $20 \times 20 = 400$

$$\text{No. of tiles} = \frac{800000}{400} = 2000$$

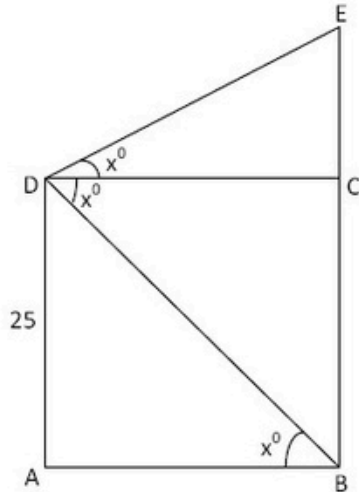


Option B

**QNo:- 198 ,Correct Answer:- B**

**Explanation:-**

## Actual MAT 01



In  $\triangle ABD$ ,  $\frac{25}{AB} = \tan x$  ..... (1) Also in  $\triangle CDE$   $\frac{EC}{DC} = \frac{EC}{AB} = \tan x$  .....(2)

Equating (1) and (2) we get  $\frac{25}{AB} = \frac{EC}{AB} \Rightarrow EC = 25$ . Hence height of tower =  $BC + CE = 25 + 25 = 50\text{m}$

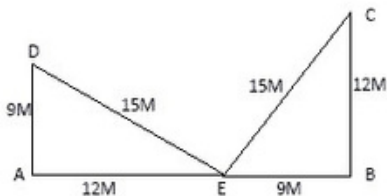
**QNo:- 199 ,Correct Answer:- B**

**Explanation:-**

In  $\triangle AED$  and in  $\triangle EBC$

$$AE = \sqrt{DE^2 - AD^2} = 12, EB = \sqrt{EC^2 - BC^2} = 9$$

$$\text{Total width} = 12 + 9 = 21$$



**QNo:- 200 ,Correct Answer:- D**

**Explanation:-**

Let the volume of bath tub = 60 units (LCM 20, 30)

Rate of flow of cold water pipe =  $60/20 = 3$  units/min

Rate of flow of hot water pipe =  $60/30 = 2$  units/min

Without waste pipe, bath tub should be fill in time =  $60/(3 + 2) = 12$  mins

Let the time taken by waste pipe to empty the bath tube =  $t$  mins

Volume wated in 12 mins =  $12 \times 60/t$

Also, that volume filled by both the pipes in 3 more mins =  $(3 + 2) \times 3 = 15$  units

Solving,  $12 \times 60/t = 15$

$\Rightarrow t = 48$  mins