Section I – Language Skills

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

At 26,000 feet (7,900 m), over Red Lake, Ontario, the aircraft's cockpit warning system sounded, indicating a fuel pressure problem on the aircraft's left side. Assuming a fuel pump had failed, the pilots turned it off, since gravity would still feed fuel to the aircraft's two engines. The aircraft's computer indicated that there was still sufficient fuel for the flight, but, as the pilots subsequently realized, the calculation was based on incorrect settings. A few moments later, a second fuel pressure alarm sounded, prompting the pilots to divert to Winnipeg. Within seconds, the left engine failed and they began preparing for a single-engine landing. As they communicated their intentions to controllers in Winnipeg and tried to restart the left engine, the cockpit warning system sounded again, this time with a long "bong" that no one present could recall having heard before. This was the "all engines out" sound, an event that had never been simulated during training. Seconds later, most of the instrument panels in the cockpit went blank as the right-side engine also stopped and the 767 lost all power.

In line with their planned diversion to Winnipeg, the pilots were already descending through 28,000 feet (8,500 m) when the second engine shut down. They immediately searched their emergency checklist for the section on flying the aircraft with both engines out, only to find that no such section existed. Captain Pearson, however, was an experienced glider pilot, which gave him familiarity with some flying techniques almost never used by commercial pilots. In order to have the maximum range and therefore the largest choice of possible landing sites, he needed to fly the 767 at the "best glide ratio speed". Making his best guess as to this speed for the 767, he flew the aircraft at 220 knots (410 km/h; 250 mph). First Officer Maurice Quintal began making calculations to see if they could reach Winnipeg. The aircraft had lost 5,000 feet (1,500 m) in 10 nautical miles (19 km; 12 mi), giving a glide ratio of approximately 12:1. The controllers and Quintal both calculated that Flight 143 would not make it to Winnipeg.

At this point, Quintal proposed landing at the former RCAF Station Gimli, a closed air force base where he had once served as a Canadian Air Force pilot. Unknown to him, however, part of the facility had been converted to a race track complex, now known as Gimli Motor sports Park. It included a road race course, a go kart track, and a drag strip. Furthermore, a CASC amateur sports car race was underway that day and the area around the decommissioned runway was full of cars and campers. Part of the decommissioned runway itself was being used to stage the race. As the runway drew nearer, it became apparent that the aircraft was too high and fast, raising the danger of running off the runway before the aircraft could be stopped. The pilots briefly considered executing a 360 degree turn to reduce speed and altitude, but came to the conclusion they did not have enough altitude for the manoeuvre. Pearson decided to execute a sideslip to increase drag and lose altitude. This manoeuvre is commonly used with gliders and light aircraft to descend more quickly without gaining forward speed. As soon as the wheels touched the runway, Pearson "stood on the brakes", blowing out two of the aircraft's tires. The unlocked nose wheel collapsed and was forced back into its well, causing the aircraft's nose to scrape along the ground. The plane also slammed into the guard rail now separating the strip, which helped slow it down.

1. According to the passage, what started the whole trouble with the aircraft, eventually resulting in a crash landing?

a) The failure of both engines of the aircraft due to no fuel was what started all the trouble.

b) The pump failed on the right side, thus causing the right side engine to shut down.

c) The failure of left side due to fuel pressure problem, which resulted in the shutting down of left engine.

d) The Boeing 767 lost all its controls, which led to them not being able to give commands accurately.

2. With regard to the intended landing at Winnipeg, which of the following is true?

a) It was a bird hit that made visibility so poor that the 767 could not attempt reaching and landing at Winnipeg.

b) Trouble started when in the middle of a smooth flight, all the instrumental panels in the cockpit warning system gave the "all engines out" sound.

c) The first officer and the controllers, both estimated that they would not be able to reach Winnipeg.

d) A 360 degrees manoeuvre is commonly used by all types of aircrafts to display manoeuvrability to other aircrafts.

3. What, according to the last part of the passage, was the main concern of the pilots when the aircraft was near the final intended landing area?

a) The pilots had wrongly taken a 360 degrees turn to reduce speed, which had put them off track.

b) The pilots did not know how to execute a sideslip, which was essential at this point to increase drag as soon as they would hit the land.

c) The aircraft too high and moving too fast, that there was a real risk that it would not stop on the runway, but would go off it.

d) The plane must not slam in to the guard rail, as there were buildings and commercial complexes as soon as the rail ended.

4. According to the passage, what was Captain Pearson's advantage over the other pilot in the time of distress?

a) He knew how to stand on the brakes to get the plane into control.

b) He knew how to slow down the speed of the plane, to ensure a safe landing.

c) He knew how to execute a drag and sideslip to control forward speed.

d) He knew how to maintain the glide ratio speed as he was an experienced glider, something most commercial pilots did not have the skill for.

Directions for questions 5 to 8: The sentences labeled A, B, C, D form a coherent paragraph when arranged properly. Choose the best sequence form the options.

5.

A. Body mistakes that protein in the food act as a dangerous invader and fights it by producing antibodies to neutralize the allergen.

B. Food intolerance is an abnormal reaction by the body's digestive system to an ingredient in the food that may irritate the digestive system causing a reaction.

C. Food allergy is an abnormal reaction of the body's immune system to a protein molecule in a particular food ingredient.

D. It could also happen if the person is unable to digest a particular food completely or there is a deficiency of an enzyme in the body, which causes a reaction.

a) CABD   b) BADC   c) DACB   d) ABDC

6.

A. As we age, our lens begins to harden and the inability of the lens to focus on an object sets in by 40 years of age thus, making it difficult to view objects at close range.

B. Several internal and external factors affect how well we can see and these include the size of the object the light conditions and age, the health of our lens and pupils.

C. Thus, older individuals require stronger light to see objects with the same clarity as younger persons because not following good everyday eye care habits worsens matters.

D. With age, the opacity of the lens increases, the pupils reduce in size and color vision gets altered, i.e. blue colors may appear faded or washed out, and there may be glare disability.

a) DACB   b) BADC   c) CBAD   d) ABDC

7.

A. Excess intake of sugar can cause serious health complications, besides obesity and diabetes.

B. Years of eating sugar and refined foods actually exhaust our pancreas' ability to produce insulin, putting us at a greater risk for diabetes, obesity and liver disorders.

C. Sugar addiction is a common problem but unfortunately, most don't recognize it.

D. Attention deficit, skin troubles, impaired immunity, heart ailments, nutritional deficiencies and hormonal imbalance are other health problems suffered by people who eat excess sugar.

a) ADBC   b) BDAC   c) DBAC   d) CADB

8.

A. Quite the contrary; it was considered fashionable and in vogue by many.

B. Although true, this is a rather simplistic explanation for instance, forty years ago, cigarette smoking rarely produced feelings of guilt.

C. Yet today, that same smoker is likely to be filled with guilt, indicating that the moral code has still not noticed a change.

D. Most dictionaries define guilt as the negative feeling of self-condemnation, resulting from a violation of one's moral code.

a) ABDC   b) CDBA   c) DBAC   d) BDAC

Directions for questions 9 to 12: Choose the word that best completes the sentence.

9. With his sub-four minute mile Bannister broke a psychological barrier, and inspired thousands of others to attempt to overcome seemingly _____ hurdles.

a) insurmountable   b) inane   c) trivial   d) traumatic

10. All good comic writers use humour   to _____, not to side-step the problems of human behaviour.

a) amuse   b) juxtapose   c) confront   d) solve

11. The game of chess is an example of a _____ information system: the pieces sit inertly on the board until the players move them according to known rules.

a) interactive   b) passive   c) cybernetic   d) disruptive

12. After an initially warm reception by most reviewers and continued _____ by conservative thinkers, Bloom's work came under heavy fire.

a) criticism   b) endorsement   c) denigration   d) counterattack

Directions for questions 13 and 14: Choose the option closest in meaning to the underlined word.

13. For some people, procrastination can be persistent and tremendously disruptive to everyday life.

a) troublesome   b) inappropriate   c) complacent   d) agnostic

14. Iodized salt is a salt which has been fortified with the essential traces of mineral iodine.

a) enfeebled   b) strengthened   c) protracted   d) permeated

Directions for questions 15 to 17: Complete the paragraph with the most suitable word from the options.

The new systematic nomenclature was so ___(15)____ that many chemists preferred to ___(16)____

the older trivial names that were at least shorter. At least, that is the ostensible reason. Actually,

tradition seems to carry more weight than ___(17)____ with some scientists.

15. a) succinct   b) cumbersome   c) irrational   d) manageable

16. a) revert to   b) adopt   c) suspend   d) espouse

17. a) chronology   b) longevity   c) system   d) synergy.

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

The term mythology can refer to either the study of myths, or to a body of myths. For example, comparative mythology is the study of connections between myths from different cultures, whereas Greek mythology is the body of myths from ancient Greece. In the study of folklore, a myth is a sacred narrative explaining how the world and humankind came to be in their present form. Many scholars in other fields use the term "myth" in somewhat different ways. In a very broad sense, the word can refer to any traditional story. The main characters in myths are usually gods, supernatural heroes, and men. As sacred stories, myths are often endorsed by rulers and priests and closely linked to religion. In the society in which it is told, a myth is usually regarded as a true account of the remote past. In fact, many societies have two categories of traditional narrative, "true stories" or myths, and "false stories" or fables. Myths generally take place in a primordial age, when the world had not yet achieved its current form, and explain how the world gained its current form and how customs, institutions and taboos were established.

Closely related to myth are legend and folktale. Myths, legends, and folktales are different types of traditional stories. Unlike myths, folktales can take place at any time and any place, and they are not considered true or sacred by the societies that tell them. Like myths, legends are stories that are traditionally considered true, but are set in a more recent time, when the world was much as it is today. Legends generally feature humans as their main characters, whereas myths generally focus on superhuman characters. The distinction between myth, legend, and folktale is meant simply as a useful tool for grouping traditional stories. In many cultures, it is hard to draw a sharp line between myths and legends. Instead of dividing their traditional stories into myths, legends, and folktales, some cultures divide them into two categories, one that roughly corresponds to folktales, and one that combines myths and legends. Even myths and folktales are not completely distinct. A story may be considered true (and therefore a myth) in one society, but considered fictional (and therefore a folktale) in another society. In fact, when a myth loses its status as part of a religious system, it often takes on traits more typical of folktales, with its formerly divine characters reinterpreted as human heroes, giants, or fairies.

Myth, legend, saga, fable, folktale, or marchens are only a few of the categories of traditional stories. Other categories include anecdotes and some kinds of jokes. Traditional stories, in turn, are only one category within folklore, which also includes items such as gestures, costumes, and music. Mircea Eliade argued that one of the foremost functions of myth is to establish models for behaviour and that myth may also provide a religious experience. By telling or re-enacting myths, members of traditional societies detach themselves from the present and return to the mythical age, thereby bringing themselves closer to the divine.

18. According to the passage, which of the following statements about 'myths' is NOT true?

a) The central characters in myths are usually gods and mythical creatures.

b) Myths are a type of traditional stories

c) Myth is usually considered a true account of the past

d) Myths are generally located in the current world setting

19. The central theme of the passage can be best described as which of the following?

a) Ancient Folklore

b) The Saga of Different Stories

c) The Myth about Mythology

d) Legends and their Legacy

20. Which of the following is NOT a category in traditional stories?

a) Fables   b) Folklore   c) Marchens   d) None of the above

21. What subject is the passage likely to be based on?

a) Black magic and sorcery

b) Culture and humanities

c) Psychology and the human mind

d) Art, media and entertainment

Directions for questions 22 to 26: Read each sentence to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer.

22.
a) The language used should be as ready and as efficient

b) a conductor from the mind of the writer

c) to the mind of the reader

d) as is the electric spark which passes from battery to battery.

23.
a) The higher your skills in speaking and writing,

b) the greater are your chances of success

c) in many aspects of your life,

d) from friendships to business dealings.

24.
a) Professional writers realize that they cannot hope to

b) affect their readers remotely as they wish

c) without care and practice

d) in the proper use of words.

25.
a) The atmosphere has

b) no definite upper limit

c) but gradually thins unless

d) it becomes imperceptible

26.
a) In December 1941

b) Japan did an unprovoked attack

c) on the United States

d) at Pearl Harbor.

Directions for questions 27 and 28: Choose the option which is the antonym of the underlined word.

27. Social activity is measured based on a questionnaire and cognitive function is assessed using a battery of 19 tests for <u>various</u> types of memory.

a) many   b) few   c) numerous   d) humongous

28. The onset of guilt is more often related to the <u>transgression</u> of one's powerful sense of right and wrong.

a) judgement   b) ambivalence   c) acrimony   d) obedience

Directions for questions 29 to 32: Answer the questions based on the brief statements or passages.

29. Only those who keep their diet in check, are able to sustain a healthy body weight.

Which of the following statements must be true based on the statement given above?

a) If a person does not a keep a check on his/ her diet they tend to turn fat.

b) To maintain a healthy body weight one should keep a routine check on their diet.

c) No other person can have a healthy body except those who keep a check on their diet.

d) A person who is fat must not be keeping a check on his/her diet.

30. One of the ways to keep our body fit and active is the Sun Salutation (Surya namaskaar). It is a set of 12 yoga poses that helps one to stay in shape, reduce fat and overall help in better movement of joints and limbs. Clearly, all those who wish to be fit and active, must practice the Sun Salutation.

The argument above depends upon which of the following assumptions?

a) There is no other way to stay fit and active, other than performing the Sun Salutation.

b) Sun Salutation helps in keeping a body fit and active.

c) If a person wishes to be fit and active, Sun Salutation is one of the ways to keep a body fit and active.

d) No individual is found to be as fit and active as they are after practicing the Sun Salutation.

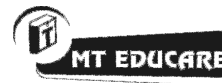**31.** All ballet dancers, except Paulina, have dainty feet.

From which of the following can the statement above be most properly inferred?

a) Paulina is a brilliant dancer, specializing in ballet.

b) Except for Paulina, if someone has dainty feet then he or she is a ballet dancer.

c) If a person is a dancer and does have dainty feet then it cannot be Paulina.

d) Aside from the dancer Paulina, if someone is a ballet dancer then he or she has dainty feet.

32. Investing in the stock market is one of the good ways to invest one's surplus funds and savings. Suman and her husband managed to triple their investments in a short span of time after investing in the stock market.

The argument above depends upon which of the following assumptions?

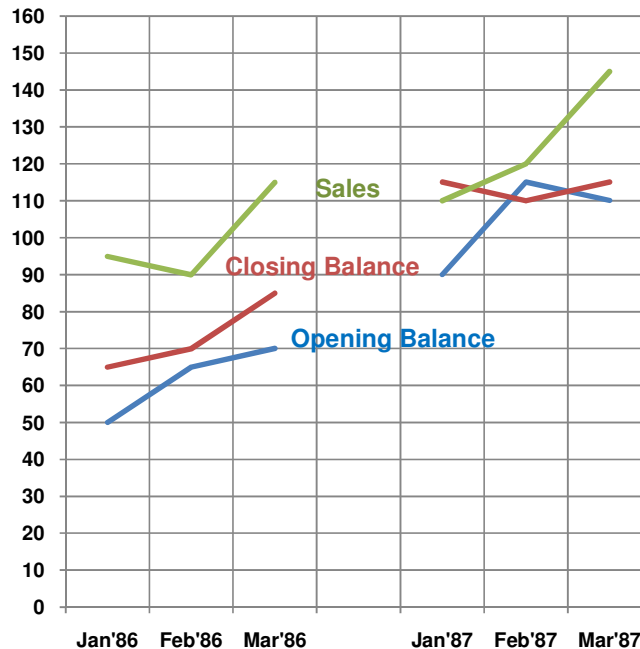a) Investing in the stock market is necessary to increase the value of one's funds and savings.

b) There is no other good way to invest other than in the stock market.

c) Suman and her husband had their huge funds and savings tripled in a short span of time.

d) The performance and returns of Suman and her husband's investments is representative of that of other investments made by everyone in the stock market.

Direction for Questions 33 to 37: Answer the following questions independently.

33. What is the number of zeroes in $1^{1!} \times 2^{2!} \times 3^{3!} \times \ldots \times 10^{10!}$?

a) 120   b) 5! + 2 × 10!   c) 5! × 10!   d) 5! + 10!

34. The volume of a rectangular block of stone is 10368 dm^3. Its dimensions are in the ratio of 3 : 2 : 1. If its entire surface is polished at 2 paise per dm^2, then the total cost will be

a) Rs. 31.50   b) Rs. 17.28   c) Rs. 63   d) Rs. 63.36

35. Sparkle left her house at 8 a.m. to reach a certain place by car. After travelling a certain distance, she took rest for 30 mins. In this span of time her car got stolen, due to which she came back to her house walking all the way. She reached home at 2 p.m. If the speed of her car is 50 km per hour and her walking speed is 2 km per hour, then how much distance did she cover by car?

a) $\dfrac{275}{26}$ kms   b) $\dfrac{265}{26}$ kms   c) $\dfrac{275}{27}$ kms   d) $\dfrac{285}{26}$ kms

36. Find the number of ways one can arrange the letters of the word 'IMPLICATION' such that vowels always come together.

a) 120800   b) 100900   c) 101800   d) 100800

37. Arvind spent 25% of his money on buying books, 15% of the remaining money on food and remaining Rs.750 on maintenance of the house. Find the ratio of money spent on food to the total money that Arvind had initially.

a) $\dfrac{12315}{125624}$ b) $\dfrac{12585}{115697}$ c) $\dfrac{13235}{117647}$ d) $\dfrac{12145}{117213}$

Directions for questions 38 to 40: The graph given below denotes the performance of an industrial unit in the first quarter of two successive years. Study the graph carefully and answer the questions given below.

Note: Sales = Opening balance + Production – Closing balance

38. What is the difference between the average monthly sales in the first quarter of 1986 and the corresponding period of 1987?

a) 30   b) 25   c) 20   d) 15

39. By how much per-centage have sales increased from March 1986 to March 1987?

a) 20   b) 22   c) 24   d) 26

40. If the factory produces 75 units in April 87 and the closing balance at the end of April 87 is 40 units, what was the sale during the month?

a) 140   b) 150   c) 160   d) 170

Directions for Questions 41 and 42: Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements is sufficient to answer the question. Read both the statements and give answer as

a) If the data in statement I alone is sufficient to answer the questions, while the data in statement II alone is not sufficient to answer the question.

b) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.

c) If the data in both statements together are sufficient to answer the question.

d) If the data given in both statements I and II together are not sufficient to answer the question.

41. What is the original number?

I. Sum of two digits of a number is 10. The ratio between the two digits is 1 : 4.

II. Product of two digits of a number is 16. Quotient of the two digits is 4.

42. In what time does a sum of money become four times on simple interest?

I. Rs. 4000 amounts to Rs. 4800 in two years on SI.

II. The difference between compound interest and simple interest at the end of two years is Rs. 40.

Direction for Questions 43 to 47: Answer the following questions independently.

43. Average age of 9 members of the family is 40 years. The age of smallest member in the family is 6 years, find the average age of the family at the birth of smallest member.

a) 37.00 years   b) 36.50 years   c) 37.75 years   d) 38.25 years

44. In a sports tournament, 35% of the students participated in races, 40% of the students participated in throw ball and 5% of the students participated in both. If one student is selected at random, then find the probability that he has participated in one of the competitions.

a) $\dfrac{8}{10}$ b) $\dfrac{7}{15}$ c) $\dfrac{7}{10}$ d) $\dfrac{7}{9}$

45. State true or false: If $\dfrac{w}{x} = \dfrac{y}{z}$ and $\dfrac{p}{q} = \dfrac{r}{s}$ then $w + \dfrac{wr}{y} + \dfrac{y}{p} = x + \dfrac{xr}{z} + \dfrac{z}{p}$, given that w, x, y, z, p, q, r, s are all positive integers

a) Always true   b) Always false
c) Depends on relative values of w and z only   d) Depends on relative values of y and z

46. 24 men working 8 h a day can finish a work in 10 days. Working at a rate of 10 h a day, the Number of men required to finish the work in 6 days is?
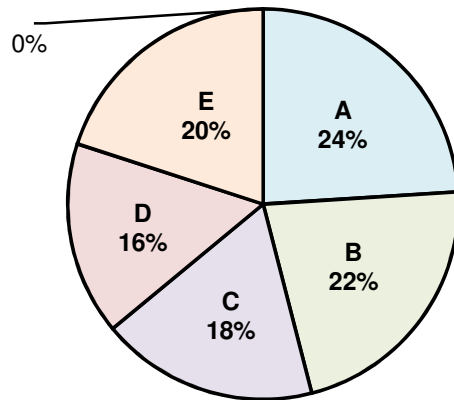
a) 30   b) 32   c) 34   d) 36

47. If the number of factors of 320 × N is 14, what is the value of N?

a) 1   b) 2   c) 5   d) 6

Directions for questions 48 to 51: Answer the question on the basis of the information given below.

The following Pie Chart shows the expenditure of each of the companies A, B, C, D and E in year 2005.

Total Expenditure = 9600 million

The following table shows the expenditure of each of the companies in its three items (Item I, Item II and Items III) and corresponding profit % in year 2005.

Name of the Company	Ratio of Expenditure	Corresponding Profit %		
	Item I : II : III	Item I	Item II	Item III
A	4 : 3 : 5	42%	48%	36%
B	3 : 4 : 4	44%	33%	27.5%
C	4 : 3 : 2	45%	36%	40.5%
D	5 : 7 : 4	48%	32%	40%
E	2 : 1 : 2	45%	35%	40%

48. Which company has the minimum profit in Item III?

a) A   b) B   c) C   d) D

49. Which company has the minimum overall profit percentage?

a) A   b) B   c) C   d) D

50. What is the income of company 'E'?

a) 2707.2 million   b) 705.6 million   c) 1770.2 million   d) 2770.2 million

51. Which company has the maximum overall profit in all the three items together?

a) E   b) B   c) C   d) A

Directions for questions 52 to 55: Answer the following questions independently.

52. What is the remainder when $3^{24} \times 4^{22}$ is divided by 5?

a) 1   b) 2   c) 3   d) 4

53. Three circles of radius 3.5 cm are placed in such a way that each circle touches the other two. The area of the portion enclosed by the circles is

a) 1.967 cm^2 b) 1.5 cm^2 c) 3.67 cm^2 d) 2.121 cm^2

54. Sachin borrowed Rs 25,000 from Rahul at 8% bi-annual simple interest. If he had agreed to pay 10% annual compound interest, then how much more/less money would he have paid at the end of 3 years?

a) Rs. 3337 less   b) Data insufficient   c) Rs. 3225 more   d) Rs. 3725 less

55. Find the number of integers between 101 and 200 which are not divisible either by 2, 3 or 5?

a) 72   b) 28   c) 65   d) 35

Directions for Question 56: Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements is sufficient to answer the question. Read both the statements and give answer as

a) If the data in statement I alone is sufficient to answer the questions, while the data in statement II alone is not sufficient to answer the question.

b) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.

c) If the data in both statements together are sufficient to answer the question.

d) If the data even in both statements I and II together are not sufficient to answer the question.
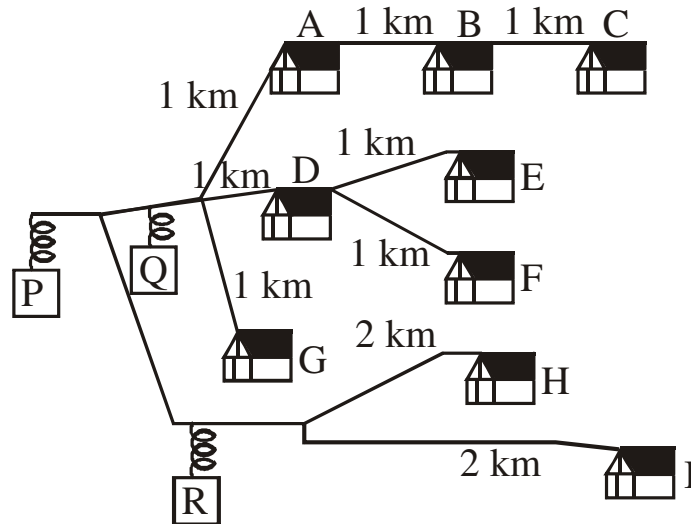
56. Ram works for 5 days and leaves the job. Then in how many days will the remaining work be done by Vikas and Sarfraz together?

I. Ram alone can do the entire work in 30 days and Sarfraz is twice as efficient as Vikas.

II. $33\frac{1}{3}$% of the work is done by Ram in 10 days whereas Vikas and Sarfraz together can do $33\frac{1}{3}$% work in 2 days.

Directions for questions 57 to 61: Answer the following questions based on information given below.

Power plant P produces certain amount of electricity, which it distributes equally to substations Q and R. They further distribute the obtained electricity equally to the different mini stations A, B, C, D, E, F, G, H and I. It is assumed that after the sub-stations, the wire loses 10% of the original electricity it is carrying for every kilometre, i.e. if 10 A is sent through a wire, after 1 km it will have 9 A and after 2 km it will have 8 A and so on.

Power Distribution from a Power Plant

Further it is known that every mini-station retains 50% of the electricity that it receives (after the losses) and passes on the remainder 50% of the electricity that it receive to the stations down the line.

57. If mini-station I is receiving 10 A, then how much is mini-station 'A' receiving?

a) 7.5 A   b) 11.25 A   c) 10.5 A   d) None of these

58. Approximately how much should P produce so that C can get 364.5 A of current?

a) 2300 A   b) 4000 A   c) 3300 A   d) 3600 A

59. Mini-station H is using a device which decreases the current losses on the transmission route directly connected to it to 75%. If H is receiving 34 A, then how much is G receiving?

a) 80 A   b) 26.66 A   c) 24 A   d) None of these

60. If F is receiving 9 A then how much is G receiving?

a) 40 A   b) 45 A   c) 20 A   d) 25 A

61. What percentage of the current produced by P, reaches F?

a) 3.375%   b) 13.5%   c) 15%   d) None of these

Directions for questions 62 to 65: Answer the questions independently.

62. Find the value of smallest number which when divided by 12, 13, 14 and 15 gives the remainder 5, but when divided by 19 gives remainder 0.

a) 2189　　　　　　b) 10925　　　　　　c) 4378　　　　　　d) 21845

63. The price of a 1 litre bottle of Pepsi is Rs. 27. If 25% of the contents are emptied out and replaced with a black liquid, which costs Rs. 3 per litre, what is the cost price of the contents of this 1 litre bottle?

a) Rs. 21　　　　　　b) Rs. 25　　　　　　c)Rs. 23　　　　　　d)Rs. 22

64. A hemispherical bowl is filled to the brim with a beverage. The contents of the bowl are transferred into a cylindrical vessel whose radius is 50% more than its height. If the diameter is same for both the bowl and the cylinder, the volume of the beverage in the cylindrical vessel is what percent of that of the bowl?

a) $66\dfrac{2}{3}\%$　　　　b) $78\dfrac{1}{2}\%$　　　　c) 100%　　　　d) More than 100%

65. In a survey of brand preference for tooth-pastes, 72% of the population (number of people covered for the survey) liked at least one of the brands: I, II and III. 40% of those asked liked brand I, 25% liked brand II and 35% liked brand III. If 10% liked all the three brands, then what percentage of those asked liked exactly two of the three brands?

a) 13　　　　　　b) 10　　　　　　c) 8　　　　　　d) 5

Directions for Questions 66 and 67: Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements is sufficient to answer the question. Read both the statements and give answer as

a) If the data in statement I alone is sufficient to answer the questions, while the data in statement II alone is not sufficient to answer the question.

b) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.

c) If the data in both statements together are sufficient to answer the question.

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

66. A train crosses a signal post in 20 seconds. What is the length of the train?

I. The train crosses a platform of 100 meters in 30 seconds.

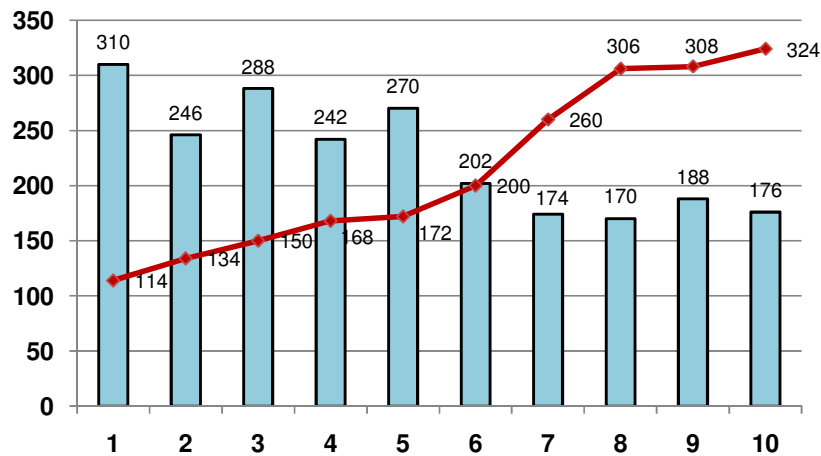II. The train crosses another train 50 m long coming in opposite direction in 10 seconds.

67. Ram's efficiency is 50% more than Shyam's. In how many days can Shyam alone do the whole work?

I. Ram worked for certain number of days and left after completing half the work. The remaining work was done by Shyam in 50% extra time than that taken by Ram.

II. Ram and Shyam together can do the whole work in 12 days.

Directions for questions 68 to 70: Answer the questions based on directions given below.

The Bar chart represents revenue while the Line chart represents expenditure for a firm in the past 10 years. Analyse and answer the following questions.

Revenue and Expenditure of a firm in the last 10 years

68. By what percentage is the total expenditure greater/smaller than the total revenue for the given period?

a) 9.05% less   b) 8.65% less   c) 9.35% more   d) 5.7% less

69. What is the percentage point difference in the maximum percent increase in revenue and the minimum percentage decrease in revenue?

a) 27.7%   b) 14.7%   c) 7.67%   d) None of these

70. Which of the following is true?

I. The revenue and expenditure both follow the same trend for the given period.
II. The revenue and expenditure for both follow the opposite (increase / decrease) trend for the given period.
III. The percentage increase in expenditure is the highest in the seventh year.
IV. The number of years in which the revenue has fallen as compared to the immediately preceding year is seven.

a) Only II   b) II and III   c) Only III   d) None of these

Directions for questions 71 to 75: Answer the following questions independently

71. All different Arithmetic series (i.e. A.P.) are written, having the first term 1 and last term 100. How many different integer values of common differences are possible?

a) 4   b) 5   c) 6   d) 7

72. A vessel contains pure milk. 8 litres of this solution is removed and replaced by water. This process is repeated 3 times in all. Finally, the ratio of milk and water in the vessel is 27 :37. Find the amount of milk contained in the vessel initially.

a) 32 litres   b) 36 litres   c) 40 litres   d) 45 litres

73. A mother says, "I was thrice as old as my daughter was, when I was as old my daughter is". If it is known the sum of the present ages of the mother and the daughter is 32, what was the age of the daughter when her mother was as old as she is now?

a) 2   b) 4   c) 6   d) 8

74. The roots of the quadratic equation $2x^2 + 5x + 3 = 0$ are 'a' and 'b'. Find that equation, whose roots are '3a + 2' and '3b + 2'.
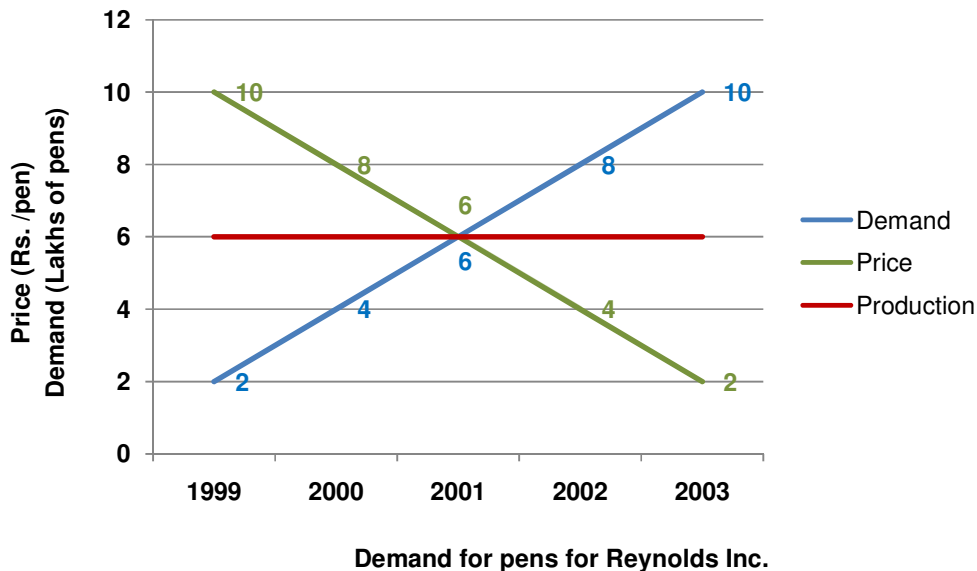
a) $2x^2 - 7x + 10 = 0$ b) $2x^2 + 7x + 10 = 0$ c) $2x^2 + 7x - 69 = 0$ d) $2x^2 - 7x - 69 = 0$

75. The ratio between the 103rd term and the 107th term of a G.P. is 81. If the 10th term of this GP is 2, find the 7th term of this G.P.

a) $\dfrac{2}{27}$ b) $-\dfrac{2}{27}$ c) 54   d) Cannot be determined

Directions for questions 76 to 80: Answer the following questions based on the information given below.

The graph below shows the demand curve for pens for Reynolds Inc. Assume that the company has no stock and any unsold production is waste. Also, assume that if the company is unable to satisfy the demand through its current year's production, the demand goes to its competitors.

Demand for pens for Reynolds Inc.

76. The graph

a) shows a direct proportion between demand and price

b) shows an inverse proportion between demand and price

c) shows an inverse proportion between demand and price at constant production levels

d) None of these

77. Percentage increase in sales between 1999 and 2003 was

a) 90%   b) 80%   c) 66.66%   d) No change

78. The maximum value of sales is in the year

a) 1999   b) 2000   c) 2001   d) Cannot be determined

79. In 1999, sales (no. of pens sold) were what percentage of demand?

a) 0%   b) Infinite   c) 50%   d) 60%

80. The percentage increase in price over the whole period was

a) 500%   b) 300%   c) 400%   d) 800%

Section III – Logical Reasoning

Directions for questions 81 to 85: Answer these questions independent of each other.

81. What should come in place of the question mark (?) in the following Letter series?

HHE, IGH, JFK, ?, LDQ

a) KEL b) KEM c) KNE d) KEN

82. A forest has as many sandal trees as it has Ashoka trees. Three-fourths of the trees are old. One-half of the trees are at the flowering stage. Which of the following statements is definitely true?

a) All Ashoka trees are at the flowering stage b) All Sandal trees are at the flowering stage
c) At least one-half of the Ashoka trees are old. d) None of these

83. Pointing to a boy, a woman said, "His father is the only son of a person who is the father-in-law of my mother." How was that boy related to the woman?

a) Nephew b) Brother c) Son d) Brother-in-law

84. 'A' is the brother of 'B' and 'C', 'D' is the mother of 'B', 'E' is the father of 'A'. Which of the following statements is definitely not true?

a) 'D' is the wife of 'E'

b) 'A' is the daughter of 'B'

c) 'B' is the brother of 'C'

d) 'E' is the father of 'C'

85. Find the code for the given word from the table given below.

BRAIN

	1	2	3	4	5
1	M	H	R	O	B
2	A	S	E	C	G
3	D	B	J	M	P
4	Q	K	N	I	T
5	R	M	L	U	F

	5	6	7	8	9
5	Q	I	V	K	X
6	N	F	D	R	Z
7	B	P	A	L	M
8	J	E	O	N	G
9	T	C	H	S	I

a) 32 13 78 44 88 b)15682144 45 c) 75132199 65 d) 32517656 43

86. In the question below are given four statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts. Give answer:

a) if only Conclusion I follows.

b) if only Conclusion II follows.

c) if neither Conclusion I nor II follows.

d) if both Conclusions I and II follow.

Statements:
Some shops are markets. Some markets are huts. Some huts are rooms. Some rooms are buildings.

Conclusions:
I.   Some buildings are huts.
II.   Some rooms are markets.

87. In the question below is given a statement followed by two courses of actions numbered I and II. A course of action is a step or administrative decision to be taken for improvement, follow-up or further action in regard to the problem, policy etc. On the basis of the information given in the statement, assume everything in the statement to be true and then decide which of the suggested courses of action logically follow for pursuing. Give answer:

a) if only I follows

b) if only II follows

c) if neither I nor II follows

d) if both I and II follow

There have been two blasts at railway station Z during the last fortnight.

I.   All the activities of the railway station should be covered with CCTV cameras.
II.   Entry points to station should have x-ray machines and manual frisking arrangements.

Direction for questions 88 to 91: Answer the questions based on information given below.

There was a recruitment process going on in the bank for the post of a typewriter. As it offered a handsome pay, many people applied for the job. Since it was impossible to interview so many people, the bank decided to conduct a typing test for all the candidates. Groups of 6 candidates were made and the test was conducted in groups. The test involved typing of 400 given words. The one from each group completing it fastest would be shortlisted.

In one such group following pattern was observed. Let us denote the candidates as C1, C2, C3, C4, C5 and C6 for convenience.

(i) C1 was not as fast as C5, but required lesser time than C4
(ii) C6 was the only one who required more time than C4
(iii) The difference between the timings of C1 and C4 was more as compared to that of C3 and C4
(iv) C2 was shortlisted from this group.

88. Who typed faster than C3?

a) C5   b) C1   c) C4   d) both 1 and 2

89. How many people required more time than C1?

a) 2   b) 3   c) 1   d) can't say

90. Who could have been shortlisted if the difference in timing of C5 and C6 was greater than that between C2 and C6?

a) C1   b) C5   c) C4   d) C3

91. Statement 1: C5 could not be shortlisted because he took more time than C2
Statement 2: C5 could not be shortlisted because he typed in lesser time than C3

The reasons mentioned in which of the above two statements justify the fact that C5 was notshortlisted?

a) only 1   b) only 2
c) both 1 and 2   d) neither of the 2 statements justify that fact

Directions for questions 92 to 94: A word arrangement machine, when given a particular input, rearranges it following a particular rule. The following is the illustration of the input and the steps of arrangement:

Input: you do things to help others in difficulty

Step I: do you others to help things difficulty in

Step II: do others you help to difficulty things in

Step III: do others help you difficultyto things in

Step IV: others do help you difficulty to in things

And so on goes the machine again repeating the logic of the first 4 steps. Study the logic and answer the questions that follow.

92. If step II of a given input be 'why are you not in contact with me', what is the seventh step of the input?

a) why in you with are not contact me

b) why you in are with not contact me

c) why in contact are with you not me

d) you why in with are not contact me

93. If step VI of an input is 'above is the message to you from me', what is the step III of that input?

a) above from the message to you is me

b) above the from to message is you me

c) above the message from to you is me

d) the above from message you to is me

94. Given the following Input: I am talking about you, Digvijay Pranav Ashok

What step will be the following arrangement?

Arrangement: about am I talking Digvijay Ashok Pranav you

a) VI   b) VII   c) VIII   d) V

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

Give answer:

a) if only I is implicit

b) if only II is implicit

c) if either I or II is implicit

d) if neither I nor II is implicit

In elections cash, crime, caste and small regional issues have become the deciding factors.

Assumptions:

I.   Previously, the politicians contested the election with stress on ethics, character and moral values.
II.   All voters are under the spell of criminals.

96. In the question below is given a statement followed by two Inferences numbered I and II. You have to consider the statement and decide which of the inference/s is/are supported by the main statements.

Give answer:

a) if only Inference I follows

b) if only Inference II follows.

c) if neither Inference nor Inference II follows.

d) if both the Inferences follow.

Statement: The government has decided to provide monetary relief to the farmers in the drought-hit areas.

Inferences:

I.   The farmers are still living in the drought hit areas.
II. Only farmers in the drought hit areas will be eligible for the monetary relief.

Directions for questions 97 to 99: In each of the following number series, two terms have been put within brackets. Mark your answer as

a) If both the bracketed terms are right

b) If the first bracketed term is right and second is wrong

c) If the first bracketed term is wrong and second is right

d) If both the bracketed terms are wrong

97. 2, (5), 10, 15, (24), 35, 50

98. 2, 3, (6) 11, 18, (30), 38

99. 4, 7, (9), 13, (16), 19, 22

100. Find the code for the given word from the table given below.

   PAWN

	1	2	3	4	5
1	B	Z	K	Q	P
2	W	R	R	M	E
3	I	P	G	A	E
4	C	U	N	X	W
5	A	T	D	G	O

	5	6	7	8	9
5	P	J	Y	Q	H
6	S	D	A	C	N
7	N	T	Z	K	F
8	F	L	B	P	B
9	M	W	V	J	S

a) 15672186   b) 55 517869   c) 32 67 45 24   d) 88 34 96 43

Directions for questions 101 and 102: Determine the correctness or otherwise of the following Assertion [A] and the Reason [R] and choose

Answer:

a) If both [A] and [R] are true and [R] is the correct reason for [A]

b) If both [A] and [R] are true but [R] is not the correct reason for [A]

c) If both [A] and [R] are false

d) If [A] is true but [R] is false

101.
Assertion [A]: Modern English, sometimes described as the first global lingua franca, is the most dominant language in the world.

Reason [R]: English is the required international language of communications, science, information technology, business, seafaring, aviation, entertainment, radio and diplomacy.

102.
Assertion [A]: Global warming refers to the rising average temperature of Earth's atmosphere and oceans and its related effects.

Reason [R]: Earth's average surface temperature increased owing to increasing concentrations of greenhouse gases produced by human activities such as deforestation and burning fossil fuel.

Directions for questions 103 to 106: Answer the following questions based on the information given below.

In a logical reasoning exam, students came across a puzzle which involved family tree of a particular family. A right answer would earn them 3 marks and a wrong answer would not earn them any mark for that question. The puzzle was as follows;

A is the grandfather of G and father of D. B is the mother of C and C is the sister of D. F is the father of H whose maternal aunt is C. G unfortunately lost his/her father in childhood.

103. The students scored 3 marks after attempting the question, 'How are G and H related?'. What option should the students select?

a) Brothers   b) Sisters   c) Uncle-Nephew   d) Cousin

104. The students scored 3 marks after answering this question, 'Amongst the given members, how many fathers are there?'. What option should the students have marked?

a) 1   b) 2   c) can't say   d) 3

105. The students failed to score any mark when they attempted this question, 'What is the relation between H and B?'. Which option must they have surely not marked?

a) daughter–mother   b) grandchild–grandmother
c) brother–sister   d) son-in-law–mother-in-law

106. Students scored 3 marks after attempting this question, 'How many couples are there in the family?'. What option should the students have selected?

a) 3   b) 4   c) 2   d) can't say

107. In the question below is given a statement followed by two courses of actions numbered I and II. A course of action is a step or administrative decision to be taken for improvement, follow-up or further action in regard to the problem, policy etc. On the basis of the information given in the statement, assume everything in the statement to be true and then decide which of the suggested courses of action logically follow for pursuing. Give answer:

a) if only I follows

b) if only II follows

c) if neither I nor II follows

d) if both I and II follow

Death in police custody in area X has caused violent public agitation.

I.   All the employees, responsible for the death should be suspended immediately.
II.   Leaders of public agitation should be arrested.

108. In the question below is given a statement followed by two Inferences numbered I and II. You have to consider the statement and decide which of the inference/s is/are supported by the main statements.

Give answer:

a) if only Inference I follows.

b) if only Inference II follows.

c) if neither Inference nor Inference II follows.

d) if both the Inferences follow.

Statement:All the students of a school were instructed by the Principal to reach school at least 15 minutes before the stipulated time for the coming month.

Inferences:
I.   The students usually reach the school later than the stipulated time.
II.   The coming month is important for the students.

Direction for Questions 109 to 113: Answer the following questions independently

109. If in a certain code, the word MARGINAL is coded as JOBMLZQF, then what would be the word for which SPRINTER will be the code?

a) OUFRSOQH   b) OUFSROQH   c) OUFSHQOR   d) OUFHSQOR

110. Find the odd word out amongst the given set of words:

a) Neptune   b) Uranus   c) Moon   d) Pluto

111. A person leaves his home for his office about an hour before noon and takes a left after walking straight for 10 kms. After walking another 20 kms.he takes a right and then immediately turns left. After walking for about 15 kms. he takes one final turn and realises that he is facing his office and that he has walked for about two hours.But, immediately a strange observation dawns upon him. When he had started his shadow was in front of him, but now his shadow is behind him. Which of the following statements is true about his journey?

a) He covered the 20 kms. journey facing the North, and the last turn he took was a left turn.

b) He covered the 20 kms. journey facing the South, and the last turn he took was a left turn.

c) He covered the 20 kms. journey facing the North, and the last turn he took was a right turn.

d) He covered the 20 kms. journey facing the South, and the last turn he took was a right turn.

112. In the sequence given below, which character is seventh to the right of the third character to the left of the ninth character to the right of the fifth character from the left end?

U 9 7 Q B % O Z @ 1 H C © K W 5 $ 8 A

a) 5   b) $ c) 8   d) A

113. If 13 : 170, 17 : 290, then 19 : ?

a) 230   b) 310   c) 362   d) 370

114. In the question below are given four statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts. Give answer:

a) if only Conclusion I follows.

b) if only Conclusion II follows.

c) if neither Conclusion I nor II follows.

d) if both Conclusions I and II follow.

Statements:All cakes are breads. Some breads are fruits. Some fruits are biscuits. All biscuits are snacks.

Conclusions:
I.   Some snacks are fruits.
II.   Some cakes are fruits.

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

Give answer:

a) if only I is implicit

b) if only II is implicit

c) if either I or II is implicit

d) if neither I nor II is implicit

Many blood-donors collected in the hospital to save the life of a 14-year old boy.

Assumptions:
I. The boy met with an accident and lost sufficient amount of blood.
II. He suffers from some other disease and the blood pumped into his body will save his life.

Direction for Questions 116 to 118: Answer the following questions based on the information given below.

A Sea-food restaurant serves three types of fishes every day, out of a total of five fishes - Rawas, Surmai, Bombil, Bangda, and Pomfret.

Further, it is known that it serves no more than one fish that it served on the previous day.

Also, If Bombilis served on any given day, thenPomfrethas to be served on the same day.

116. Which of following is not the correct list of fishes that could be served on two consecutive days?

a) Day 1: Bombil, Pomfret, Bangda   Day 2: Bangda, Rawas, Surmai

b) Day 1: Surmai, Bangda, Rawas   Day 2: Surmai,Bombil, Pomfret

c) Day 1: Pomfret, Surmai, Rawas   Day 2: Pomfret,Bombil, Bangda

d) Day 1: Bombil, Pomfret, Bangda   Day 2: Bombil, Surmai, Rawas

117. Which of the following fishes cannot be repeated on two consecutive days?

a) Surmai   b) Pomfret   c) Bombil   d) Bangda

118. If Pomfret and Bombilare served on any given day, and Pomfret is repeated on the next day, which of the following is necessarily true about the fishes that are served in the restaurant?

a) Pomfret will be served every day in the restaurant.

b) Surmai will be served on the third day

c) Bangda will be served on the third day

d) Pomfret will not be served on the third day.

Directions for questions 119 and 120: These questions are based on the reasoning in the brief statements or passages:

The popular outrage over the official definition of poverty at abysmally low levels of daily income, of Rs 26 in rural areas and Rs 32 in urban areas, **assumes the state will deny basic services to a household whose income is above the figure.** This is totally erroneous. There is no mechanism in the hands of the government to ascertain income or expenditure to identify the 'poor' on the ground.

119. The highlighted part of the above argument is

a) A fact upon which the writer bases his argument.

b) An assumption that helps the conclusion "this is totally erroneous."

c) An inference used by the writer to contradict a fact.

d) An opinion of the writer that explains a fact.

120. "This is totally erroneous" in the above paragraph is

a) A fact

b) A reasoned judgment

c) A false opinion

d) A supporting conclusion.