

## ATMA Sample Question – III

### **SECTION - I**

#### **QUANTITATIVE SKILLS**

**No. Of Questions: 17 (Questions 1-17)**

**Time: 17 Minutes**

**Directions for Questions 1-5**

Choose the correct answer from the answer choices and then darken the corresponding oval in the answering sheet.

Q.1 and 2. Refer the following definition: For any positive integer  $n$ ,  $n > 1$ , the "Length" of  $n$  is the number of positive primes (not necessarily distinct) whose product is  $n$ . For example, the length of 50 is 3 since  $50 = (2) (5) (5)$

- Q.1. Which of the following integers has length 3?  
(1) 3                      (2) 15                      (3) 60                      (4) 105
- Q.2. What is the greatest possible length of a positive integer less than 1000?  
(1) 7                      (2) 8                      (3) 9                      (4) 10
- Q.3. If  $m$  is an integer such that  $(-2)^{2m} = 2^{9-m}$ , then  $m$  is  
(1) 1                      (2) 2                      (3) 3                      (4) 4
- Q.4. If  $0 \leq x \leq 4$  and  $y < 12$ , which of the following CANNOT be the value of  $xy$ ?  
(1) 0                      (2) -2                      (3) 24                      (4) 48
- Q.5. If  $n$  is a positive integer less than 200 and  $14n/60$  is an integer, then  $n$  has how many different positive prime factors?  
(1) 2                      (2) 3                      (3) 5                      (4) 6

**Directions for Questions 6-10**

In each of the problems, a Question is followed by two statements marked (A) and (B) containing certain data pertaining to the problem. You need to determine whether the data provided by the statements are sufficient to answer the Question from the four Answer choices. Choose the correct answer for each Question based upon the statement data and then darken the corresponding oval in the answer sheet.

Choose-1 - If the Question can be answered by one of the Statements (A) or (B) ALONE but not by the other statement.

Choose-2 - If the Question can be answered by EITHER Statement alone.

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Choose-3 - If the Question can be answered by using both the statements TOGETHER, but cannot be answered by using either statement alone.

Choose-4 - If the question CANNOT BE answered even by using both statements together.

Q.6. Two friends, Taslim and Tanya, bought oranges from a wholesale dealer. How many oranges did they buy?

- (A) Taslim bought one half the number of oranges that Tanya bought.
- (B) The wholesale dealer had a stock of 1500 oranges.
- (1) (A) or (B) alone, but not by the other statements
- (2) Either statement
- (3) Both statements together
- (4) Cannot be answered

Q.7. Is Country A's GDP higher than country C's GDP?

- (1) (A) or (B) alone, but not by other statement
- (2) Either statement
- (3) Both statements together
- (4) Cannot be answered.

Q.8. A square is inscribed in a circle. What is the difference between the areas of the circle and that of the square?

- (A) The diameter of the circle is  $25\sqrt{2}$  cm
- (B) The side of the square is 25 cm
- (1) (A) or (B) alone, but not by the other statement.
- (2) Either statement.
- (3) Both statements together.
- (4) Cannot be answered.

Q.9. What are the values of b and c?

- (A) c is an even integer, b is an odd integer, where  $b > c$
- (B)  $bc = 30$ .
- (1) (A) or (B) alone, but not by other statement.
- (2) Either statement.
- (3) Both statements together.
- (4) Cannot be answered.

Q.10. What is the value of X?

- (A) X and Y are unequal even integers, less than 10, and  $X/Y$  is an odd integer.
- (B) X and Y are even integers, each less than 10, and  $XY = 12$ .
- (1) (A) or (B) alone, but not by other statements.
- (2) Either statements.
- (3) Both statements together.
- (4) Cannot be answered.

**Directions for Questions 11 – 17**

Choose the correct answer from the answer choices given and then **darken the corresponding oval** in the answer sheet.

Q.11. If  $a$ ,  $b$  and  $c$  are consecutive integers and  $a < b < c$ , which of the following **MUST BE TRUE**?

- I.  $c - a = 2$ .
- II.  $abc$  is an even integer.
- III.  $a - b - c/3$  is an integer.

(1) I only      (2) II only      (3) III only      (4) I, II and III

Q.12. Of 30 applicants for a job, 14 had at least 4 years of experience, 18 had degrees, and 3 had less than 4 years of experience and did not have a degree. How many of the applicants had at least 4 years experience and a degree?

(1) 14      (2) 9      (3) 5      (4) 16

Q.13. If the Quotient  $a/b$  is positive, which of the following **MUST BE TRUE**?

- I.  $a > 0$  and  $b > 0$
- II.  $ab > 0$
- III.  $a - b > 0$

(1) I only      (2) II only      (3) III only      (4) I, II and III

Q.14. If 4 is one solution of the equations  $x^2 + 3x + k = 10$ , where  $k$  is a constant, what is the other solution?

(1) -3      (2) -7      (3) 15      (4)  $10\sqrt{2}$

Q.15. A rectangular box is 10 units wide, 10 units long and 5 units high. What is the greatest possible (straight line) distance, in the same units, between any two points on the box?

(1) 15      (2)  $10\sqrt{3}$       (3) 20      (4)  $10\sqrt{2}$

Q.16. If  $b < 2$  and  $2x - 3b = 0$ , which of the following **MUST BE TRUE**?

(1)  $x > -3$       (2)  $x < 3$       (3)  $x < 2$       (4)  $x > 3$

Q.17. One hour after Harry Potter started from X to Y, a distance of 45 kms, J.K. Rowling started walking along the same road from Y to X. If Potter's walking rate was 3kms/hour and Rowling's was 4kms/hour, how many kms had Rowling walked when they met?

(1) 24      (2) 42      (3) 23      (4) 22

**SECTION - II**

**ANALYTICAL REASONING SKILLS**

No. Of Questions: 17 (Questions 18-34)

Time: 17 Minutes

**Directions for Questions 18-34**

For each question, select the best answer from the choices given. Darken the corresponding oval in the Answer sheet.

**Q.18-19.**

Half of the subjects in an experiment—the experimental group—consumed large quantities of a popular artificial sweetener. Afterwards, this group showed lower cognitive abilities than did the other half of the subjects—the control group—who did not consume the sweetener. The detrimental effects were attributed to an amino acid that is one of the sweetener's principal components.

Q.18. Which of the following, if true, would best support the conclusion that some ingredient of the sweetener was responsible for the experimental results?

- (1) The Quality of sweetener consumed by the individuals in the experimental group is considered safe by medical authorities.
- (2) The amino acid referred to in the conclusion is a component of all proteins, some of which must be consumed for adequate nutrition.
- (3) Most consumers of the sweetener do not consume as much of it as the experimental group members did.
- (4) The two groups of subjects were evenly matched with regard to cognitive abilities prior to the experiments.

Q.19. Which of the following, if true, would best help explain how the sweetener might produce the observed effects?

- (1) A high level of amino acid in the blood inhibits the synthesis of a substance required for normal brain functioning.
- (2) Because of the sweetener being used primarily as a food additive, adverse reactions to it are rarely noticed by consumers.
- (3) Subjects in the experiments did not know whether they were consuming the sweetener or a harmless substance.
- (4) The amino acid that is a constituent of the sweetener is also sold separately as a dietary supplement.

Q.20. Editorial.

Regulations recently imposed by the Government of Katanga call for unprecedented reduction in the amounts of pollutants, manufactures are allowed to discharge into environment. It will take costly new pollution control equipment requiring expensive maintenance to comply with these regulations. Resultant price increases.

For Katangan manufactured goods will lead to the loss of some export markets. Clearly, therefore, annual exports of Katangan manufactured goods will in future occur at diminishing levels.

Q.20. Which of the following, if true, most seriously **WEAKENS** the arguments in the editorial?

- (1) By international standards, the Levels of pollutants currently emitted by some of Katanga's manufacturing plants are not considered excessive.
- (2) Savings from utilizing the chemicals captured by the pollution control equipment will remain far below the cost of maintaining the equipment.
- (3) The proposed regulations include a schedule of fines for non-compliance that escalate steeply in cases of repeated non-compliance.
- (4) The need to comply with the new regulations will stimulate the development within Katanga of new pollution control equipment for which a strong worldwide demand is likely to emerge.

Q.21. Automobile Dealer's Advertisement

The Highway Traffic Safety Institute reports that the XL1000 has the fewest injuries per accident of any car in its class. This shows that the XL1000 is one of the safest cars available today.

Q.21. Which of the following, if true, most seriously **WEAKENS** the argument in the advertisement?

- (1) The Highway Traffic Safety Institute issues reports only once in a year.

- (2) The difference between the number of injuries per accident for **XL1000** and that of other cars in its class is **Quite** pronounced.
  - (3) In recent years many more XL1000s have been sold than have **any other kind** of cars in its class.
  - (4) Cars in the class to which the XL1000 belongs are more likely to be **involved in accidents** than are other types of cars.
- Q.22. Chlorofluorocarbons (CFCs) pose known **dangers** to public health. Only **when the** United States government imposes a specific ban on the industrial use of CFCs **cost-effective** and thus reduce public health hazards.
- Q.22. Which of the following is an assumption on which the assertion made above is based?
- (1) The alternative to CFCs currently available **are not widely** used because they are not familiar to sufficient number of industry scientists.
  - (2) The alternatives to CFCs are less hazardous to **public health than** are CFCs.
  - (3) The use of CFCs can result in employment time lost **because of illness**.
  - (4) CFCs are currently the most serious public health hazard **engendered by the** industry in the United States.
- Q.23. The large amount of Carbon Dioxide (CO<sub>2</sub>) now being released into the atmosphere burning fossil fuel will not, in fact, result in green house effects——— an increase in average global temperatures. Since plants use CO<sub>2</sub> in large quantities if the supply is increased, they are able to grow larger and multiply more rigorously, and atmospheric CO<sub>2</sub> concentrations will eventually become stable.
- Q.23. Which of the following, if true, would most seriously **WEAKENS** the conclusion that a green house effect will not result from current release of large amounts of CO<sub>2</sub> into the atmosphere?
- (1) When plant decays, they produce methane, another gas that can have a marked green house effect.
  - (2) The expected rise in average global temperatures, has not yet been observed.
  - (3) Since the beginning of the Industrial Revolution (1790) increased atmospheric concentrations of CO<sub>2</sub> have resulted in agricultural productivity.
  - (4) Ocean waters absorb CO<sub>2</sub> at a greater rate when the atmospheric concentration of CO<sub>2</sub> is higher.

#### **Questions 24-27**

For each Question, two or three, statements are given. These statements are marked (A), (B), and (C), as the case may be, followed by two conclusions marked (I) and (II) that can be logically drawn from two or three statements. Even if the statements vary from well known facts assume **theirs** to be true. Choose the best alternative from the answer choices as given below and darken the corresponding oval in the answer sheet.

#### **Statements:**

- Q.24. (A). No things derived from sensory impressions are items of knowledge of substance itself.  
 (B). All items of knowledge are things derived from sensory impressions.

#### **Conclusion:**

- (I). Things not derived from sensory impressions are not items of knowledge.
- (II). Items of knowledge of substance itself are derived from sensory impressions.

Q.24. What statement(s) is/are the conclusion(s)?  
(1) I only                      (2) II only                      (3) Both I and II                      (4) Neither I nor II.

Q.25. Statements :

- (A) Babies are illogical.
- (B) Nobody is despised who can manage a crocodile
- (C) Illogical persons are despised  
(From Lewis Carroll)

Conclusion :

- (I) Therefore babies cannot manage crocodile.
- (II) All persons who are not despised can manage a crocodile.

Q.25. Which statement(s) is/are the conclusion(s)?

- (1) I only                      (2) II only                      (3) Both I and II                      (4) Neither I nor II

Q.26. Statements :

- (A) Every one who is sane can do logic.
- (B) No lunatics are fit to serve on a jury.
- (C) None of your sons can do Logic.

Conclusion:

- I. All persons who serve on a jury can do logic.
- II. No sons of yours are persons fit to serve on a jury.

Q.26. Which Statement(s) is/are the conclusion(s)?

- (1) I only                      (2) II only                      (3) Both I and II                      (4) Neither I nor II

Q.27. Statements :

- (A) A times when he is sick are times when he complains.
- (B) This time he is not a time when he is sick.

Conclusion :

- I. He is a person who does not complain if he were not sick.
- II. No times when he is not sick are times when he complains.

Q.27. Which statement(s) is/are conclusion(s)?

- (1) I only                      (2) II only                      (3) Both I and II                      (4) Neither I nor II

**Questions 28-31 are based on the following.**

On each weekday evening, Monday through Friday, for one week, a financial consulting firm is offering a class on investments. A pair of exactly two instructors ——— one experienced and other is inexperienced ——— will be chosen to teach each evening. The available experienced instructors are S, T, and U. The available inexperienced instructors are V, W, X, Y, and Z. Instructors will be assigned to teach classes according to the following conditions;

- No instructor can be assigned to teach class on two consecutive evenings.
- S and X, if either assigned to teach, must always be assigned as a pair.
- V must be assigned to teach Wednesday's classes.
- Y cannot be assigned to teach a class on an evening immediately preceding or following on an evening when Z is assigned to teach.

- Q.28. Which of the following can be the pair of instructors assigned to teach Tuesday's class?  
 (1) S and Z            (2) U and Y            (3) T and W            (4) S and W
- Q.29. If T and Z are assigned to teach on Monday's Class, which of the following pairs of instructors can be assigned to teach Tuesday's class?  
 (1) S and X            (2) U and Y            (3) T and W            (4) S and W
- Q.30. If U is assigned to teach exactly one class, which is on Tuesday, which of the following is one of the instructors who must be assigned to teach Thursday's class?  
 (1) S            (2) W            (3) Y            (4) Z
- Q.31. If exactly two of the inexperienced instructors are assigned to teach classes during the week, which of the following must be true?  
 (1). T is assigned to teach exactly two classes.  
 (2). Y is assigned to teach exactly three classes.  
 (3). X is assigned to teach exactly one class.  
 (4). S is assigned to teach exactly two classes.

Questions 32-34 are based on the following:

The art director of an advertising company is preparing a sales brochure for a boat manufacturing company. To represent her client's line of products, she wants a separate full page colour advertisement in the brochure for each of the following five types of boats: Kayak, Motor Boat, Pedal Boat, Raft and Sail Boat. Thus, there will be exactly five printed pages, numbered consecutively one through five, in the brochure. Because, she also wants to show the range of colours that manufacturer uses, one of the boats pictured must be green, one must be orange, one must be tan, one must be white, and one must be yellow.

In designing the brochure, she has made the following decisions :

- The motorboat will be advertised on a lower numbered page than the pedal boat.
- The sailboat will be advertised on a lower numbered page than the Kayak.
- The white boat will be advertised on a lower numbered page than the yellow boat.
- The orange boat will be advertised on page three.
- The pedal boat advertised will be tan.

Q.32. If the Sailboat is advertised on page 2, and the green boat is advertised on page 5, the Sailboat must be?

- (1) Orange    (2) Green            (3) Yellow            (4) White

Q.33. If the Motor boat is green and is advertised on page 4, which of the following MUST BE TRUE?

- (1). The Raft is advertised on page 3  
 (2). The Sail boat is advertised on page 5  
 (3). The Tan boat is advertised on page 2  
 (4). The White boat is advertised on page 1

Q.34. If the Kayak is Green, the boat advertised on page 1 must be?

- (1) White            (2) Green            (3) Yellow            (4) Orange

### **SECTION - III**

#### **VERBAL SKILLS**

Time: 20 Minutes

No. of Questions 16 (Questions 35-50)

#### **Directions for Questions 35-39**

Answer the Questions after reading the following passage. Base your answer on information that is either stated or implied in the passage. Choose the best answer and darken the corresponding oval in the answer sheet.

#### **Passage:**

A good monsoon has improved the economic outlook. With the industrial growth rising from last year's 4.5 percent to 5.7 percent in June, there is cause for cheer. The manufacturing factor in particular has been performing well, especially in the passenger car segment, along with non-cotton textiles, steel and transport equipment. Electricity generation is also up. The farm sector is expected to grow to 7.5 percent generating higher incomes in rural households and adding momentum to the demand for industrial goods. The other positive sign are the huge stocks of food grains and foreign exchange reserves. Exports, too, are growing at a double digit rate and on the balance of payments side, a trade surplus has accrued for the second time. Inflation has remained low.

The only problem is the widening fiscal deficit and government's borrowing pattern. A higher deficit will effect the scope of public investment. In the first Quarter of 2003-2004, the Central and State governments together borrowed Rs 73,218 Crores from the domestic market as compared to Rs 66,702 Crores during same period last year. The Center alone has already borrowed more in the first quarter (April-June), this fiscal than it did over the first half of the last year. Such heavy borrowing could be attributed to the rather low revenue collection so far as the large loan repayments scheduled for July - August this year. When Government borrows so heavily, it has less money to spend on crucial growth promoting areas and the social sector.

The private sector, too, has been reluctant to invest in the expansion of productive capacity and has parked its cash kitty in government bonds and mutual funds. Better demand prospect on account of a favourable monsoon are likely to persuade them to invest more. An increase in both public and private investment will be necessary to bring about GDP growth of 8 percent, as a higher industrial growth alone will not be sufficient.

(Source: A lead article from a national daily, August 2003)

Q.35. According to the author of the passage, which of the following best states the central point of the passage?

- I. The government's heavy borrowing from the market will prevent the central government to invest in crucial growth-promoting areas and the social sector.
- II. A higher industrial growth alone will not be sufficient to bring about a GDP growth of 8 percent; an increase in both public and private investment will be necessary.
- III. A good monsoon has improved the economic outlook for 2003-2004

(1) I                      (2) II Only                      (3) III Only                      (4) I, II, and III



- Q.36. According to the passage, which of the following is/are TRUE?
- (1) The expected growth in the farm sector due to a good monsoon this year will generate higher incomes in rural households and is likely to add momentum to the demand for industrial goods.
  - (2) Despite the fact that exports are growing, however, since the rupee has been rising against the American Dollar, the expected growth in exports may be slowed down at the end of this fiscal.
  - (3) The investments by the private sector in government bonds and mutual funds have improved the capital market.
  - (4) None of the above.
- Q.37. According to the passage, which of the following is/are TRUE?
- (1) Rather low revenue collection and large loan repayments scheduled in July-August of the financial year could be attributed as the cause of the Center's borrowing from market.
  - (2) The positive signs of economy are the improved performance of the manufacturing sector especially in the passenger car segment, non-cotton textiles, steel and transport equipment.
  - (3) A trade surplus and inflation remaining low are also to be positive sign of economy in this fiscal.
- (1) I Only      (2) II Only      (3) III Only      (4) I, II and III
- Q.38. Which of the following statement(s) is/are the main thrust of the author's argument in the passage?
- I. The scope of public investment will be affected to widening the fiscal deficit.
  - II. The Center and the State Governments together borrowed from the domestic market more than 10 percent in the first Quarter of 2003-04 as compared to the same period last year.
  - III. Better demand prospects on account of a favourable monsoon are likely to persuade the private sector to invest more.
- (1) I Only      (2) II Only      (3) III Only      (4) I, II and III
- Q.39. Accepting the line of argument or reasoning as stated in the passage is valid, which of the following statement(s) WEAKEN(S) the conclusion?
- I. Indian economy, since globalization, has been closely linked with world economy and as such not solely dependent on domestic demand.
  - II. Foreign direct investments has declined in this fiscal as a proportion of the GDP.
  - III. The uncertainty in the international and domestic business climate is the main factor for the private sector not to invest in a major way.
  - IV. To reach a higher GDP growth, investment in industrial sector alone would not be sufficient, it would need several important steps in policy measures by the Government of India.
- (1) I Only      (2) III Only      (3) IV Only      (4) I, II and III

**Directions for Questions 40-44.**

Each Question below consists of a word printed in CAPITAL LETTERS, followed by four numbered words or phrases. Choose the number word or phrases that is most nearly OPPOSITE in meaning to the word in capital letters.

- Q.40. STOCK ::  
(1) common characteristic (2) trustworthy (3) unique (4) desirable
- Q.41. ASPERITY ::  
(1) sureness of judgment (2) failure of imagination  
(3) mildness of temper (4) brevity of speech
- Q.42. IDYLL ::  
(1) pedestrian arguments (2) experience fraught with tension  
(3) negative appraisal (4) action motivated by greed
- Q.43. DESULTORY ::  
(1) Strictly methodical (2) cheerfully accepted  
(3) Lightly considered (4) strongly highlighted
- Q.44. ANCHOR ::  
(1) Disorganized activity (2) metallic object  
(3) Fixed goal (4) coordinating among different elements

**Directions for Questions 45-47.**

Each sentence that follows has one or two blanks, each blank indicating something has been omitted. Following the sentence are four numbered words or set of words. Choose the word or set of words for each blank that best fits the meaning of the sentence as a whole. Darken the corresponding oval in the answer sheet.

- Q.45. Prudery actually drawn attention to the vice it is supposed to \_\_\_\_\_ the very act that forbids speech or prohibits sight \_\_\_\_\_ what is hidden.  
(1) condemn ..... distort (2) repress.... dramatizes  
(3) divulge ..... conceal (4) obviate ..... fosters
- Q.46. Compared mathematically to smoking and driving, almost everything else seems relatively risk free, \_\_\_\_\_ almost nothing seems worth regulating.  
(1) so (2) yet (3) since (4) even though
- Q.47. While some see in practical jokes a wish for mastery in miniature over a world that seems very \_\_\_\_\_ others believe that jokes' purpose is to disrupt, by reducing all transactions to \_\_\_\_\_.  
(1) unruly.....chaos (2) harmonious.....dissonance  
(3) turbulent.....uniformly (4) dubious.....confusion

**Directions for Questions 48-50.**

These Questions test your ability to recognize corrective and effective expression. Follow the requirements of standard written English grammar, choice of words, and sentence construction.

In each question below either part or all of the sentence is underlined. The sentence is followed by four ways of writing the underlined parts. Choose the answer which results in the clearest, most exact sentence. The answer choice (1) repeats the original; the other answer choices numbered (2),

(3) and (4) vary. If you think the original phrasing is the best, select that choice. Choose the best or the correct one for the Question. Darken the corresponding oval in the answer sheet.

Q.48. Because of enemy's new ship is the quietest and it is therefore the most elusive submarine, it is being increasingly viewed by the Indian Navy as a threat to security.

- (1) and it is therefore the most elusive submarine, it is being increasingly viewed.
- (2) and therefore it is the most elusive submarine, there is an increasing view.
- (3) and therefore the most elusive submarine, it is being increasing viewed.
- (4) Therefore being the most elusive of submarines, it is increasingly viewed.

Q.49. A large rise in the number of housing starts in the coming year (2004-2005) due to decrease in the interest rate on housing loans by almost all Banks should boost new construction of houses by several million rupees, making the construction industry's economic health much more robust than five years ago.

- (1) making the construction industry's economic health much more robust than five years ago.
- (2) To make the construction industry's economic health much more robust than five years ago.
- (3) making the construction industry's economic health much more robust than it was five years ago.
- (4) in making the construction industry's economic health much more robust than it was five years ago.

Q.50. The standard explanations of all administration when incidents of these nature like the violence in Assam occurs, is that they didn't have adequate force at their disposal to be dealt in the situation.

- (1) The standard explanations of all administration when incidents of these nature like the violence in Assam occurs is that they didn't have adequate force at their disposal to be dealt in the situation.
- (2) The standard explanation of all administration when incident of this nature like the violence in Assam occurs is that they didn't have adequate force at their disposal to be dealt with in the situation.
- (3) The standard explanation of all administration when incident of this nature like the violence in Assam, occurs is that they didn't have adequate force at their disposal to be dealt with in situation.
- (4) The standard explanation of all administrations when incidents of this nature, like the violence in Assam, occur is that they didn't have adequate force at their disposal to deal with the situation.

#### **SECTION - IV**

#### **ANALYTICAL REASONING SKILLS**

No of Questions 17 (Questions 51-67)

Time: 17 Minutes

#### **Directions for Questions 51-57**

Each Question or set of Questions is based on a passage or set of conditions. In answering some of the Questions, it may be useful to draw a rough diagram. For each Question select the best answer choice given. Then darken the corresponding oval in the answer sheet.

- Q.51. To prevent some conflict of interest, Indian Parliament passed a Bill which prohibits high-level government officials from accepting highly-paid positions in MNCs for five years after such officials leave government service. One such official concluded, however, that such a prohibition was unfortunate because it prevented high-level government officials from earning a decent livelihood for five years.
- Q.51. The official's conclusion logically depends on which of the following assumptions?
- (1) Laws should not restrict the behaviour of former government officials, instead should treat them as ordinary citizens after retirement from the government-post.
  - (2) High-level government officials who leave government service are capable of earning a decent livelihood in MNCs only.
  - (3) All high-level government officials after leaving government services act as influence-peddlers if they join highly-paid jobs in MNCs.
  - (4) Low-level government officials do not often become intermediaries when they leave government service.
- Q.52. A Conservation group in the Bombay Natural History Society (BNHS-Hornbill House) is trying to change the long-standing image of bats as frightening creatures. The group contends that bats are feared and persecuted solely because they are shy animals that are active only in nights.
- Q.52. Which of the following, if true, would cast the most serious doubt on the accuracy of the group's contention?
- (1) There are other animals, for example, raccoons and owls, who are shy and active only at night; yet they are not generally feared and persecuted.
  - (2) Bats are regarded as frightening creatures not only in India but also in many other countries such as in the USA, European countries, Africa and South America.
  - (3) Bats are steadily losing natural roosting places such as caves and hollow trees and are thus turning to more developed areas for roosting.
  - (4) People know more about the behaviour of other greatly feared animals like big cats, crocodiles, elephants, than they do about the behaviour of bats.
- Q.53. Opponents of laws that require automobile drivers and passengers to wear seat belts argue that in a free democratic society people have the right to take risks as long as the people do not harm others as a result of taking the risks. As a result, they conclude that it should be each person's decision whether or not to wear a seat belt.
- Q.53. Which of the following, if true, most seriously weakens the conclusion drawn above?
- (1) The rate of automobile fatalities in states that do not have mandatory seat-belts laws is greater than the rate of fatalities in states that do have such laws.
  - (2) In automobile accidents, a greater number of passengers who do not wear seat-belts are injured than are passengers who do wear seat belts.
  - (3) Passengers in aeroplanes are required to wear seat-belts during take-offs and landings.
  - (4) Automobile insurance rates for all automobile owners and drivers are higher because of the need to pay for the increased injuries or death of people not wearing seat-belts.
- Q.54. The cost of producing radios in country M is ten percent less than the cost of producing radios in country N. Even after transportation fees and traffic charges are added, it is still cheaper for a company to import radios from country M to country N than to produce radios in country N.

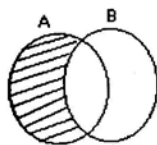
- Q.54. The statement above, if true, best supports which of the following assertions?
- (1) It takes ten percent less time to manufacture a radio in country M than it does in country N.
  - (2) Labour costs in country M are ten percent below those in country N.
  - (3) The fee for transporting a radio from country M to country N is more than ten percent of the cost of manufacturing the radio in country N.
  - (4) The tariff on a radio imported from country M to country N is less than ten percent of the cost of manufacturing the radios in country N.
- Q.55. Even though most universities retain royalties from faculty members' inventions, the members retain royalties from books and articles they write. Therefore, faculty members should retain the royalties from the educational computer software they develop.
- Q.55. The conclusion above would be more reasonably drawn if which of the following were inserted into the argument as an additional premise?
- (1) In the experience of most universities, educational software programmes are more marketable than books and articles.
  - (2) Inventions bring more prestige to universities than do books and articles.
  - (3) In terms of the criteria used to award royalties, educational software programmes are more nearly comparable to books and articles than to inventions.
  - (4) Faculty members are more likely to produce educational software programmes than inventions.
- Q.56. Which of the following best completes the passage below?  
People buy prestige when they buy a premium product. They want to be associated with special Mass-Marketing techniques and price-reduction strategies should not be used because.....
- (1) expansion of the market niche to include a broader spectrum of consumers will increase profits.
  - (2) Purchases of premium products are concerned with the Quality as well as with the price of the products.
  - (3) Continued sales depend directly on the maintenance of an aura of exclusivity.
  - (4) Manufacturing a premium brand not necessarily not more costly than manufacturing a standard brand of the same product.
- Q.57. Which of the following best completes the passage below?  
Established companies concentrate on defending what they already have. Consequently, they tend not to be innovative themselves and tend to underestimate the effects of the innovations of others. The clearest example of this defensive strategy is the fact that\_\_\_\_\_.
- (1) ballpoint pens and soft-tip markers have eliminated the traditional market for fountain pens, clearing the way for marketing of fountain pens as luxury or prestige items.
  - (2) a once- successful manufacturer of slide rules reacted to the introduction of electronics calculators by trying to make better slide rules.
  - (3) the inventor of a commonly used anesthetic did not intend the product to be used by dentists, who currently account for almost the entire market for that drug.
  - (4) a highly successful automobile was introduced by the same company that had earlier introduced a model that had been a dismal failure.

**Directions for Questions 58-60.**

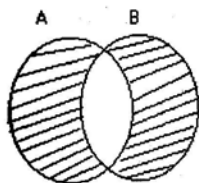
Below you will find few statements or a set of statements followed by 3 or figures – numbered (1), (2), (3) and (4). Each figure is drawn as three overlapping circles (Venn diagram) describing the probable relationship among three class of objects, groups, persons, etc., stated in the statement(s). Each circle represents one class of objects, things, groups, persons, etc, indicated by CAPITALIZED initials shown in the parenthesis in the statement(s). Venn diagrams (or set of diagrams) here are the diagrammatic representation of sets or set operations. You will also find here the symbols/expressions/figures denoting the basic (i.e., standard) operations of sets such as union, intersection, and compliments of a set. Union (or join) of two or more sets means it contains all the elements (or members) of the sets (say A and B) avoiding duplication and is denoted as  $A \cup B$  i.e., "A union B". The second basic operation i.e., intersection (or meet) of two or more sets means all the elements/members that belong to (i.e., common) both/ all the sets. for instance,  $A \cap B$  is read as "A intersection B". The compliment of a set denotes  $(A^c)$  those elements/members which do not belong to set A.

In the figure, the un-shaded part means that the class or sub-class or sub-set is empty or there is no member/element in that class or sub-class or sub-set, i.e., a null-set.

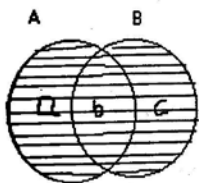
In particular the following Venn diagrams and/or expressions illustrate the probable relationship between any two sets or class:



Indicates there is no A which is B, or there is no member which belongs to both sets A and B; it also indicates the set B is an empty set or null set or  $A \cup B = A - B$  or  $A \cap B = \{0\}$  a null set.



Indicates there is no common member between sets A and B or  $A \cap B$  is an empty set.



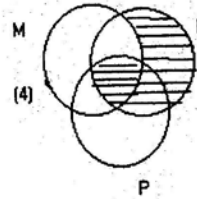
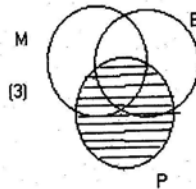
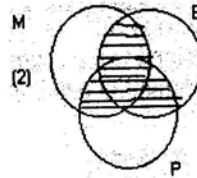
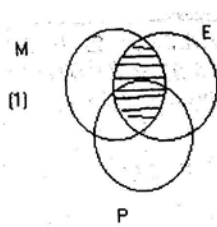
Indicates there is no empty set; the figure represents (a) some A is not B i.e.,  $A \cap B^c$ , (b) some A is B and vice – versa i.e.,  $A \cap B$  and (c) some B is not A i.e.,  $A^c \cap B$ .

### Questions 58-60

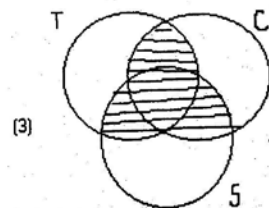
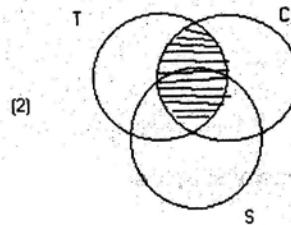
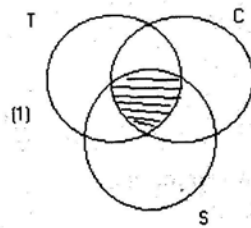
For each set of statement(s) 3 or 4 figures (Venn Diagrams/ expressions using set symbols) numbered (1), (2), (3) and (4) are given.

Choose the diagram/set expression that describe the probable relationship among the class of objects, things etc., and darken the corresponding oval in the answer sheet.

Q.58. No one present (P) is out of work. No members (M) are absent. Therefore, all members are employed (E).

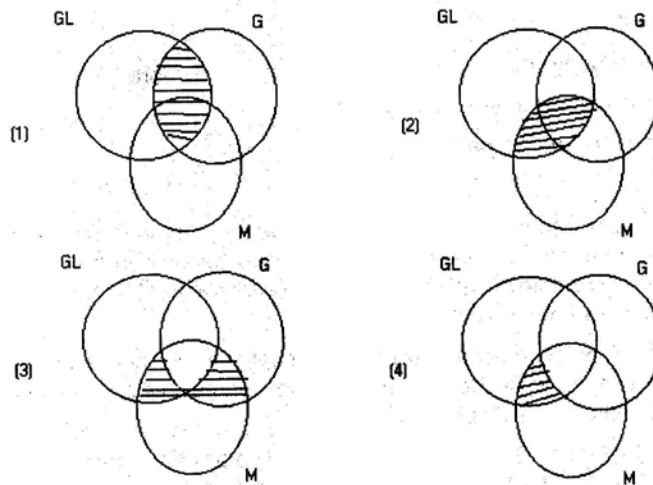


Q.59. Although he complains (C) whenever (T) he is sick (S), his health is excellent, so he won't complain.



(4). None of the these.

Q.60. All that glitters (GL) is not gold (G), so gold is not the precious metal, since only precious metals (M) glitter.



#### Questions 61-64

These Questions are based on a proposition or a sentence or a passage. Each proposition/sentence/ passage represents an argument, which consists of several parts such as an assumption, a conclusion, an inference, or a premise. These terms are defined as follows.

**Argument:** an argument in any group of propositions of which one is claimed to follow from others, which are regarded as providing support or grounds for truth of that one.

**Assumption:** An assumption is an unstated and/or implied premise(s) that supports the conclusion.

**Conclusion:** The conclusion of an argument is the proposition that is affirmed on the basis of other propositions of the argument. These other propositions which are affirmed (or assumed) as providing support or reasons for accepting the conclusion, are the premises of that argument. Conclusion and inference are often used synonymously in an argument. In argument passage, there could be one or more conclusion(s) which serve(s) as the premise(s) for the major or main conclusion of the argument passage.

**Premise:** a premise is a stated reason or a piece of evidence, facts, examples, that support(s) the conclusion or inference.

In this part, an argument passage, an excerpt or a passage, is followed by questions which are statements either concerned with or related to the passage or reproduced from the argument passage. These questions are concerned with the parts of an argument as defined above i.e., assumption, conclusion or inference, premise, etc.,

Identify if the statement(s) given in the question is an assumption, a conclusion/ an inference, a premise, or none of these.



Choose the following number as indicated below,

Choose 1- if the statement is an assumption

Choose 2- if the statement is a conclusion

Choose 3- if the statement is a premise

Choose 4- if the statement is not an argument

Darken the corresponding oval in the answer sheet.

**Questions 61-64 are based on the following passage.**

**Passage:**

Swimming is good for your body – but swimming with dolphins is good for your soul. The healing power of dolphins has been widely promoted, but in the first controlled trials researchers have shown that an hour a day in the water with the sociable aquatic creatures is an effective treatment for mild to moderate depression, and better than swimming with other humans.

Psychiatrists from the university of Leicester compared two groups of patients with depression, half of whom swam and snorkeled with dolphins while the other half spent the same time snorkeling with each other on a coral reef in the absence of the dolphins.

In the study, at the Roatan Institute for Marine Sciences in Honduras, all participants stopped taking antidepressants or psychotherapy at least four weeks before the start of the treatment and their depression score was measured. After two weeks results showed the group who had swum with dolphins had improved significantly more than the control group. Three months after the study, participants reported lasting improvement in their symptoms which did not need treatment.

The authors say the natural setting of the island with coral reef was an important factor in the treatment. But they add “The effects exerted by the animals were considerably greater than those of just the natural setting. The eco – Location system (the sounds of the dolphins emit to navigate), the aesthetic value and the emotions raised by the interaction with dolphins may explain the animals’ healing properties”. The findings confirm the importance of biophilia, the recognition that human health and well – being are dependent on our relationships with the environment, they say.

(Source: Originally published in the Independent London, reproduced in one of the national dailies in India, Nov, 2005)

Q.61. Psychiatrist.....compared two groups of patients with depression, half of whom swam and snorkelled with dolphins while the other half spent the same time snorkelling with each other ..... in the absence of the dolphins.

- |                   |                     |
|-------------------|---------------------|
| (1) an assumption | (2) a conclusion    |
| (3) a premise     | (4) not an argument |

Q.62. Of all the aquatic animals, dolphins are the most intelligent and social, and dolphins also show emotional responses like humans.

- |                   |                     |
|-------------------|---------------------|
| (1) an assumption | (2) a conclusion    |
| (3) a premise     | (4) not an argument |

Q.63. .... an hour a day in water with the sociable aquatic creatures is an effective treatment for mild to moderate depression, and better than other humans.

- |                   |                     |
|-------------------|---------------------|
| (1) an assumption | (2) a conclusion    |
| (3) a premise     | (4) not an argument |

- Q.64. After two weeks, results showed the group who had swum with the dolphins had improved significantly more than the control group.  
(1) an assumption (2) a conclusion (3) a premise (4) not an argument

**Directions for Questions 65-67**

Each question or set of questions is based on a passage or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question select the best answer choice given. Then darken the corresponding oval in the answer sheet.

- Q.65. The sustained massive use of pesticide in farming has two effects that are especially pernicious. First, it often kills off the pests' natural enemies in the area. Second, it often unintentionally gives rise to insecticide - resistance pests, since those insects that survive a particular insecticide will be the ones most resistance to it, and they are left to breed.
- Q.65. From the passage above, it can be properly inferred that the effectiveness of the sustained massive use of pesticides can be extended by doing which of the following, assuming that each is a realistic probability?
- (1) Leaving a few fields without farming any crop every year.
  - (2) Periodically switching the type of insecticide used.
  - (3) Breeding high-yielding varieties of crop plants.
  - (4) Gradually increasing the quantities of pesticide.
- Q.66. When polygraph test is judged inconclusive, this is no reflection on the examinee. Rather, such a judgement means that the test has failed to show whether the examinee was truthful or untruthful. Nevertheless, employers will sometimes refuse to hire a job applicant because of an inconclusive polygraph result.
- Q.66. Which of the following, if true, could be the conclusion on basis on the above?
- (1) Some employers have refused to consider the results of polygraph tests when evaluating job applicants.
  - (2) A polygraph test indicating that an examinee is untruthful can sometimes be mistaken.
  - (3) An inconclusive polygraph test result is some times be mistaken.
  - (4) Polygraph test should not be used by employers in the consideration of job applicants.
- Q.67. Dental researchers recently discovered that toothbrushes can become contaminated with bacteria that cause pneumonia and sore throat. They found that contamination usually occurs after toothbrushes have been used for four weeks. For that reason, people should replace their toothbrushes at least once in a month.
- Q.67. Which of the following, if true, would most weaken the conclusion above?
- (1) The dental researchers found that, after six weeks of use, greater length of use of a toothbrush did not correlate with a higher number of bacteria being present.
  - (2) The dental researchers found that people who rinsed their toothbrushes thoroughly in hot water after each use were as likely to have contaminated toothbrushes as were people who only rinsed their toothbrushes hurriedly in cold water after each use.
  - (3) The dental researchers failed to investigate contamination of toothbrushes by viruses, yeasts, and other pathogenic micro-organisms.
  - (4) The dental researchers found that among people who used toothbrushes contaminated with bacteria that cause pneumonia and sore throat, the incidence of these diseases no higher than among people who used uncontaminated toothbrushes.