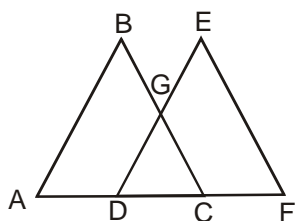


# CMAT Sample Paper - 3

## Section – I : Quantitative Techniques & Data Interpretation

- Sameer's salary is  $\frac{5}{6}$  th of Vinod's salary and Vinod's salary is 25% less than Pradeep's salary. If Pradeep's salary is ₹ 24,000, then what is the salary of Sameer?  
 (a) ₹ 30,000                      (b) ₹ 20,000                      (c) ₹ 15,000                      (d) ₹ 28,000
- The range of values of x for  $\frac{x-2}{x^2-4x+3} > 0$   
 (a)  $x \in [1, 2] \cup [3, \infty)$       (b)  $x \in [1, 2) \cup [3, \infty)$       (c)  $x \in (1, 2) \cup (3, \infty)$       (d) None of these
- Find the principal, if the difference between the simple interest and the compound interest is ₹ 120 at the end of 2 years at 20% rate of interest per annum.  
 (a) ₹ 2,500                      (b) ₹ 3,000                      (c) ₹ 3,500                      (d) ₹ 4,000
- If the first term of an arithmetic progression is 7 and the common difference is 0.6, then what is the sum of the first 12 terms of the arithmetic progression?  
 (a) 123.6                      (b) 121.4                      (c) 133.6                      (d) 131.4
- Stations A and B are 1200 km apart. The ratio of the speeds of Harish and Sunil is 3 : 2. If Harish and Sunil start from stations A and B respectively and meet for the first time at a point C, then what is the distance between the point C and the station B?  
 (a) 240 km                      (b) 360 km                      (c) 480 km                      (d) 720 km
- A sphere of radius 'r' is melted to form a cone of the same radius. What is the ratio of the total surface area of the sphere to that of the cone?  
 (a)  $4 : (\sqrt{17} + 1)$                       (b)  $4 : (\sqrt{17} - 1)$                       (c)  $4 : (\sqrt{5} + 1)$                       (d)  $4 : (\sqrt{5} - 1)$
- A and B invested ₹ 6,000 and ₹ 9,000 respectively in a business. After 7 months, B withdrew from the business. If at the end of the year, the total profit was ₹ 4,500, then how much did B get?  
 (a) ₹ 2,100                      (b) ₹ 2,400                      (c) ₹ 1,800                      (d) ₹ 2,700
- Pure spirit costs ₹ 100 per liter. If 90% spirit solution is mixed with 60% spirit solution, Shyam makes a profit of 25% by selling the mixture at ₹ 100 per liter. In what ratio does he mix the two?  
 (a) 2 : 1                      (b) 1 : 2                      (c) 1 : 3                      (d) 3 : 1
- A and B together can complete a piece of work in 12 days. A and C together can complete the work in 20 days. If three of them together can complete the work in 8 days, then in how many days can A alone complete the work?  
 (a) 24                      (b)  $13\frac{1}{3}$                       (c) 120                      (d) 60

10. A mason used to earn ₹ 180 on Saturdays, ₹ 210 on Sundays and a fixed amount on the remaining five days of the weeks in a particular year. If the average income of the mason in the month of April, whose first day was Sunday, was ₹ 164, then what was the fixed amount (in ₹) he used to earn on the remaining five days of the weeks? (Assume that the mason worked on all the 30 days of the month).
- (a) 140                                  (b) 150                                  (c) 165                                  (d) 170
11. The ratio of the present age of a mother to that of her daughter is 9 : 4. Ten years ago, the ratio of their ages was 7 : 2. What are their present ages?
- (a) 54 years, 24 years                                  (b) 45 years, 20 years  
(c) 54 years, 28 years                                  (d) 36 years, 16 years
12. In the following figure, if  $\angle BCA = 50^\circ$  and  $\angle BGE = 95^\circ$ , then what is the value of  $\angle EDF$ ?



- (a)  $45^\circ$                                   (b)  $40^\circ$                                   (c)  $35^\circ$                                   (d)  $30^\circ$
13. There are 7 objective type questions in an examination. First four questions have 4 options each and the remaining 3 questions have 5 options each. How many sequences of answers are possible?
- (a) 675000                                  (b) 135000                                  (c) 32000                                  (d) 16000
14. If 3 dice are thrown simultaneously, then what is the probability that the same number appears on each of them?
- (a)  $\frac{1}{216}$                                   (b)  $\frac{1}{18}$                                   (c)  $\frac{1}{27}$                                   (d)  $\frac{1}{36}$
15. The table given below shows the number of students in five management institutes in five different disciplines.

Discipline	Management Institutes				
	A	B	C	D	E
HR	46	49	54	38	63
Marketing	78	85	70	66	73
Operations	34	28	42	18	24
Finance	65	75	58	52	48
Others	62	77	55	88	74

- What is the ratio of the total number of students in institute C to the total number of students in institute E in all the disciplines together?
- (a) 93 : 95                                  (b) 1 : 1                                  (c) 93 : 94                                  (d) 31 : 32

16. The numbers P and Q when divided by a certain divisor leave remainders 32 and 19 respectively. When P + Q is divided by the same divisor, the remainder is 13. What is the divisor?  
 (a) 51 (b) 19 (c) 38 (d) Cannot be determined
17. Using base BC of  $\triangle ABC$ , another triangle BCD is constructed, such that  $\angle BAC = \angle BDC$  and AC is parallel to BD. If the area of  $\triangle ABC$  is  $45 \text{ cm}^2$ , then what is the area of the  $\triangle BDC$ ?  
 (a)  $36 \text{ cm}^2$  (b)  $45 \text{ cm}^2$  (c)  $48 \text{ cm}^2$  (d)  $60 \text{ cm}^2$
18. A jar contains 36 liters solution of milk and water in the ratio of 5 : 7 respectively. Out of this, 24 liters solution is taken out and replaced with water. What is the quantity of water (in liters) present in the final solution?  
 (a) 27 (b) 31 (c) 29 (d) 30
19. The difference between the third and the first term of a geometric progression is 3. If the first term and the common ratio are positive integers, then find the sum of the first three terms of the progression?  
 (a) 6 (b) 7 (c) 9 (d) 10
20. The question is followed by two statements I and II.  
**Mark the answer as:**  
 (a) if the question can be answered by using one of the statements alone but not by the other statement alone.  
 (b) if the question can be answered by using either statement I or statement II alone.  
 (c) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.  
 (d) if the question cannot be answered even by using both the statements together.
- Is 'A' positive?  
 I.  $C^2 > A$  (C is positive)  
 II.  $A > B^2$  (B is negative)
21. When the digits of a two-digit number are reversed, the number increases by 27. How many values the number can assume?  
 (a) 4 (b) 6 (c) 8 (d) 12
22. Out of 460 employees in an organization, 240 employees are MBA, 160 are B.Tech. and 45 are both MBA and B.Tech. How many employees are neither MBA nor B.Tech.?  
 (a) 15 (b) 105 (c) 115 (d) 60
23. Each of Atul, Yogesh and Riyaz can complete a piece of work in 12 days, 36 days and 54 days respectively. They started the work together, but Atul left after working for 6 days and Yogesh left 8 days before the completion of the work. In how many days was the work completed?  
 (a) 16 (b) 17 (c) 20 (d)  $15\frac{3}{5}$
24. ` 1,200 at 5% per annum compound interest amounts to ` 1,323 in  
 (a) 1 year (b) 2 years (c) 3 years (d) 4 years



## Section – II : Logical Reasoning

26. Five students Abhay, Baruni, Chirag, Disha and Erman have completed their MBA from five different institutes IIMB, IIML, MDI, JBIMS and SIES, not necessarily in the same order. Each of them is now working with a different company A, B, C, D and E. Chirag is working with company D but he has done MBA neither from MDI nor from IIML. Erman has done MBA from JBIMS and is working with company B. Baruni has done MBA from IIMB and Abhay is working with company C.

Who is MBA from SIES?

- (a) Abhay                      (b) Chirag                      (c) Disha                      (d) Baruni
27. Given below is a passage followed by a possible inference which can be drawn from the facts stated in the passage. Read the passage and decide upon the degree of truth or falsity of this inference.

**Mark your answer as:**

- (a) If the 'data is inadequate', i.e. from the given information you cannot say whether the inference is likely to be true or false.  
(b) If the inference is 'definitely true', i.e. properly follows from the given facts.  
(c) If the inference is 'probably false', though not 'definitely false' in the light of the given information.  
(d) If the inference is 'definitely false', i.e. it cannot be drawn from the facts given or it contradicts the given facts.

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

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

28. Eight students A, B, C, D, E, F, G and H are sitting around a circular table such that:  
(1) 'F' is sitting opposite to 'D'.  
(2) 'B' is sitting three seats to the left of 'F'.  
(3) 'A' is sitting opposite to 'H' who sits adjacent to 'C'.  
(4) 'C' is sitting next to 'E'.

Who is sitting to the immediate right of 'A'?

- (a) D                      (b) B                      (c) F                      (d) C

29. The passage given below is followed by a question. Choose the most appropriate answer to the question.

Inflation can only be fundamentally caused by two factors: supply side factors and demand side factors. These factors are either reductions in the supply of goods and services or increase in demand due to, either the interfered availability of money or the reallocation of demand. Unless other compensating changes also occur, inflation is bound to result if either of these occurs. In economies prior to the introduction of banks (a pre-banking economy) the quantity of money available, and hence, the level of demand, was equivalent to the quantity of gold available.

If the statements above are true, then it is also true that in a pre-banking economy

- (a) if other factors in the economy are unchanged, increasing the quantity of gold available would lead to inflation.
  - (b) any inflation would be the result of reductions in the supply of goods and services.
  - (c) if there is a reduction in the quantity of gold available, then, other things being equal, inflation would result.
  - (d) whatever changes in demand occur, there would be compensating changes in the supply of goods and services.
30. Ten points (1 – 10) in the same order are marked in a row from left to right such that distance between any two consecutive points is 1 km. Each of the seven trees A, B, C, D, E, F and G (not necessarily in the same order) is planted at a different point in the row such that these seven points are cosecutive numbers. It is also known that:
- (1) Distance between G and A is 5 km.
  - (2) Distance between F and C is 3 km.
  - (3) D and E are at 4th and 7th numbers respectively.
  - (4) Distance between A and C is 6 km.
  - (5) Distance between D and A is more than 1 km.

The distance between the trees E and G, is

- (a) 4 km
  - (b) 2 km
  - (c) 5 km
  - (d) 3 km
31. The passage given below is followed by a question. Choose the most appropriate answer to the question.

The greater the division of labour in an economy, the greater the need for coordination. This is because increased division of labour entails a larger number of specialised producers, which results in a greater burden on managers and, potentially in a greater number of disruptions of supply and production. There is always more division of labour in market economies than in planned economies.

If all the statements above are true then which of the following must also be true?

- (a) There are more specialised producers in planned economies than in market economies.
- (b) A manager's task is easier in a market economy than in a planned economy.
- (c) Division of labour functions more effectively in market economy than in planned economy.
- (d) The need for coordination in market economies is greater than in planned economies.

32. In a certain code language, HISTORY is coded as IGVPTLF. What will be the code for PHYSICS in the same code language?  
(a) QFBOWNZ                      (b) QFBONWZ                      (c) QJBWNIZ                      (d) QJBWINZ

33. The passage given below is followed by a question. Choose the most appropriate answer to the question.

Socrates' mother had been a midwife and that is how he saw himself too. For ideas to be born, a midwife is needed. That was one of the greatest of all discoveries .

Which of the following is implied by the passage?

- (a) Socrates, though a male, helped in childbirths.  
(b) Socrates saw his role in helping ideas evolve.  
(c) Socrates saw himself as progenitor of ideas.  
(d) Socrates was a mediator between ideas and discoveries.
34. A century year can end with which of the following days?  
(a) Sunday                      (b) Tuesday                      (c) Thursday                      (d) Saturday

35. The passage given below is followed by a question. Choose the most appropriate answer to the question.

A new project, based on the unique concept of Creative Learning and Teaching (CLT), may have successfully bridged the gender gap in government-run primary schools in Pali district in Rajasthan. The project has not only improved the quality of education and ensured higher attendance and learning outcomes for all girls, but also emphasized on community ownership of schools. Working in 2,342 government schools across the district, Mumbai-based non-government organization 'Educate Girls' has leveraged the existing government and community resources to improve the school infrastructure. It has developed a comprehensive model that reforms the schools and ensures 100 per cent enrolment, higher attendance and lower number of school dropouts.

It can be inferred from the above passage that

- (a) there is a gender gap in some government schools in Rajasthan.  
(b) Pali district has 2,342 government run schools.  
(c) improvement in the school infrastructure is responsible for ensuring 100 per cent enrolment, higher attendance and retention of girls without dropping out.  
(d) the new project mentioned above was piloted in Pali district.
36. Four boys – Arshad, Ranbir, Irfan and Abhay and four girls Vidya, Raima, Shabana and Smita – were sitting around a circular table. Each of them was sitting diametrically opposite to exactly one of the other. Arshad was sitting second to the right of Raima who in turn was sitting to the immediate right of Smita. Abhay was sitting opposite to Ranbir. Vidya was sitting to the immediate left of Ranbir.

Who is sitting to the immediate left of Vidya?

- (a) Ranbir                      (b) Shabana                      (c) Irfan                      (d) Either (b) or (c)

37. The passage given below is followed by a question. Choose the most appropriate answer to the question.

The right of a competent, terminally ill person to avoid excruciating pain and embrace a timely and dignified death (euthanasia) bears the sanction of history and is implicit in the concept of ordered liberty. A state's categorical ban on physician assistance to suicide -- as applied to competent, terminally ill patients who wish to avoid unendurable pain and hasten inevitable death -- substantially interferes with this protected liberty interest and cannot be sustained.

Which of the following, if true, weakens the argument above?

- (a) It is contrary to the vocation of medicine to intentionally hasten or cause death.
  - (b) Euthanasia could also readily be extended to incompetent patients and other vulnerable populations.
  - (c) Our society should mobilize a life-giving health care system that includes compassionate care for the dying, adequate analgesia and human comforts near the end of life, and widespread education about the right to refuse burdensome medical care.
  - (d) The Church has always taught since time immemorial that abortion and euthanasia are grave sins.
38. Eight members – P, Q, R, S, T, V, H and L – are sitting in two rows with equal number of members in each row. Members of one row are facing North and those in the other row are facing South. Each member in one row is sitting exactly opposite to a member in the other row. P is sitting in row facing North, to the immediate right of H, who is sitting exactly opposite to R. L is sitting to the immediate right of R and S is sitting exactly opposite to T, who is sitting to the immediate right of P. V is not sitting at any of the ends of any row.

Which of the following pairs of members are sitting exactly opposite to each other?

- (a) VQ
  - (b) LV
  - (c) VH
  - (d) VP
39. In the question given below there are two 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 with commonly known facts. Read all the conclusions and then decide which of the given conclusion 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 both conclusions I and II follow
- (d) if neither conclusions I and II follows

**Statement 1:** All prisoners are foolish.

**Statement 2:** No prisoner is innocent.

**Conclusions:**

- I. No foolish is innocent.
- II. Some foolish may be innocent.



40. Pointing to a photograph a man said, "She is the daughter of the man who is the father of husband of my mother". Who is the lady in the photograph?  
(a) His daughter            (b) His sister            (c) His cousin            (d) His aunt

41. In the question given below there are two 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 with commonly known facts. Read all the conclusions and then decide which of the given conclusion 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 both conclusions I and II follow
- (d) if neither conclusions I and II follows

**Statement 1:** Some books are boring.

**Statement 2:** All books are magazines.

**Conclusions:**

- I. Some magazines are boring.
- II. Some magazines are not boring.

42. How Sunpreet is related to his/her mother's sister's son's wife's mother-in-law's?  
(a) Nephew            (b) Son-in-law            (c) Niece            (d) Either (a) or (c)

43. In the question given below there are two 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 with commonly known facts. Read all the conclusions and then decide which of the given conclusion 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 both conclusions I and II follow
- (d) if neither conclusions I and II follows

**Statement 1:** All earth is universe.

**Statement 2:** Some matter is earth.

**Conclusions:**

- I. Some earth is matter.
- II. Some matter is universe.

44. Each of the five friends – Vinod, Sherlyn, Aditi, Jyoti and Alok – belongs to a different city among Nagpur, Kanpur, Sholapur, Dhampur and Kannur, not necessarily in the given order. They own a different vehicle among BMW, Corolla, Audi, CRV and Porche and has a different house number (H.No.) among 9, 8, 1, 4 and 5. Vinod owns BMW and the person who is from Kannur has H.No. 8. Aditi owns Audi and lives in Sholapur and her H.No. is 1. Sherlyn lives in Kanpur and her H.No. is 5 but she doesn't own Porche. The person who owns CRV lives in Dhampur. Vinod and Alok have consecutive H.No. but Alok doesn't own CRV.

Who owns Corolla?

- (a) Sherlyn                      (b) Jyoti                      (c) Alok                      (d) Either (a) or (b)

45. Given below is a pair of events A and B. You have to read both the events A and B and decide their nature of relationship. You have to assume that the information given in A and B is true and do not assume anything beyond the given information in deciding the answer.

**Mark your answer as:**

- (a) if A is the effect and B its cause.  
(b) if A is the cause and B its effect.  
(c) Both A and B are independent causes.  
(d) Both A and B are independent effects.

**Event (A):**

Mossad, the intelligence service of Israel, hunted down Palestinian terrorists for killing Israeli athletes at the 1972 Munich Olympics.

**Event (B):**

India has decided to seek the help of Israel in tackling cross-border terrorism.

46. Five friends – A, B, C, D and E – live in a six storey building (ground and five floors). B lives only above C, A lives immediately above E and D does not live on the top floor.

If B lives on the second floor, then who lives on the fourth floor?

- (a) C                      (b) E                      (c) D                      (d) A

47. Given below is a statement followed by two courses of action 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. You have to assume everything in the statement to be true and decide which of the two given course of actions logically follow.

**Mark your answer as:**

- (a) If only I follows
- (b) if only II follows
- (c) if neither I nor II follows
- (d) if both I and II follow

**Statement:** The public transport will be severely hampered in Delhi because the Supreme Court has decided to stop the plying of buses which are more than eight years old.

**Courses of Action:**

- I. The SC orders should be shelved aside because it is not in the interest of the commuters.
- II. The government should press its fleet of interstate buses which meets this requirement, on the city routes.

48. Complete the given series:  
28, 40, 60, 90, 132, 188, ?  
(a) 210                      (b) 224                      (c) 240                      (d) 260
49. The following question has a set of four sequentially ordered statements. Each statement can be classified as one of the following:
- Facts, which deal with pieces of information that one has heard, seen or read, and which are open to discovery or verification (the answer option indicates such a statement with an 'F').
  - Inferences, which are conclusions drawn about the unknown, on the basis of the known (the answer option indicates such a statement with an 'I').
  - Judgements, which are opinions that imply approval or disapproval of persons, objects, situations and occurrences in the past, the present or the future (the answer option indicates such a statement with a 'J')

Select the answer option that best describes the set of four statements.

- 1. The human brain is truly phenomenal.
- 2. The brain is divided into four sections, namely the cerebrum, the cerebellum, the diencephalon, and the brain stem.
- 3. It functions effectively only because of the presence of these four sections.
- 4. Much of the brain's job involves receiving information from the rest of the body.

- (a) FFIF                      (b) JFIF                      (c) JFFF                      (d) JJIF

50. Complete the given series:  
A2Z, D4W, G8T, J16Q, M32N, P64K, ?  
(a) S128H                      (b) T126G                      (c) U256I                      (d) S256H

## Section – III : Language Comprehension

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51. In the following question a sentence has been written in four different ways. Choose the sentence which corresponds to the correct usage of standard written English.

We want the trainer to be him who has the best knowledge about the subject and the most superior communication skills.

- (a) We want him to be the trainer who has the best knowledge about the subject and the most superior communication skills.
  - (b) We want the trainer to be he who has the best knowledge about the subject and the most superior communication skills.
  - (c) We want the trainer to be him who has the best knowledge about the subject and the most superior communication skills.
  - (d) We desire that the trainer be him who has the best knowledge about the subject and the most superior communication skills.
52. In the following question a sentence has been written in four different ways. Choose the sentence which corresponds to the correct usage of standard written English.

The government's failing to keep its pledges will have the effect of earning distrust from all the other nations in the region.

- (a) The government's failing to keep its' pledges will have the effect of earning distrust from all the other nations in the region.
  - (b) The government is failing to keep it's pledges will have the effect of earning distrust from all the other nations in the region.
  - (c) The government's failing to keep its pledges will have the effect of earning distrust from all the other nations in region.
  - (d) The government's failing to keep its pledges will have the effect of earning distrust from all the other nations in the region.
53. There are two blanks in the following sentence. From the pairs of words given, choose the one that fills the blanks most appropriately. The first word in the pair should fill the first blank.

It is an orgy of destruction, an \_\_\_\_\_ agony, a \_\_\_\_\_ on our species and a curse of our predicament that we prepare for war even as we long for peace.

- (a) unmitigated, smirch
- (b) implied, damn
- (c) unshakable, demon
- (d) unforeseen, devil

54. There are two blanks in the following sentence. From the pairs of words given, choose the one that fills the blanks most appropriately. The first word in the pair should fill the first blank.

The ancient people in India \_\_\_\_ cosmic energy in its triple aspects, of \_\_\_\_ preservation and destruction.

- (a) conceived, recreation
- (b) perceived, creation
- (c) deceived, procreation
- (d) received, satisfaction

55. Choose the option that is closest in meaning to the capitalized word.

CADENCE

- (a) Languid
- (b) Credit
- (c) Rhythm
- (d) Effluence

56. Choose the option that is closest in meaning to the capitalized word.

HACKNEYED

- (a) Phony
- (b) Respite
- (c) Trite
- (d) Elaborate

57. Choose the option that is most opposite in meaning to the capitalized word.

EPHEMERAL

- (a) Ethereal
- (b) Eternal
- (c) Evanescent
- (d) Exigent

58. Choose the option that is most opposite in meaning to the capitalized word.

PARSIMONIOUS

- (a) Lavish
- (b) Successful
- (c) Prudent
- (d) Harmonious

59. Five sentences are given below, labeled A, B, C, D and E. They need to be arranged in a logical order to form a coherent paragraph/passage. From the given options, choose the most appropriate one.

- A. Using biofuels made from corn, sugar cane and soya could have a greater environmental impact than burning fossil fuels, according to experts.
- B. Although the fuels themselves emit fewer greenhouse gases, they all have higher costs in terms of bio-diversity loss and destruction of farmland.
- C. The EU has proposed that 10% of all fuel used in transport should come from biofuels by 2020 and the emerging global market is expected to be worth billions of dollars a year.
- D. But the new fuels have attracted controversy.
- E. The problems of climate change and the rising cost of oil have led to a race to develop environment-friendly biofuels, such as palm oil or ethanol derived from corn and sugar cane.

- (a) DECBA
- (b) ABCED
- (c) ABECD
- (d) CEDBA



63. Given below are jumbled letters that form a meaningful word. What is the first letter of the correct word?

'uchage'

- (a) h                                      (b) a                                      (c) g                                      (d) u

64. Given below are four ways of writing a given word. Select the correct spelling out of these.

- (a) emolient                              (b) emollient                              (c) emolliant                              (d) emmolient

65. A paragraph is given below from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Do psychologists have anything to say about what sorts of experiential purchases yield the most enduring satisfaction? As it happens, they do. Things you experience on your last day of vacation will be enhanced simply because you know they're happening at the end. Psychology researchers Ed O'Brien and Phoebe Ellsworth had University of Michigan students taste five types of chocolates—milk, dark, crème, caramel, and almond—varying the order in which they were eaten. Some students ate the last one knowing it was the last; others were not given that info and were left to assume it was just another in the series. When later asked to pick which one was their favorite, two-thirds chose the last one when they knew it was the finale when they ate it; only a fifth did so when they hadn't known it was the last.

- (a) So it proves a lot -doesn't it?  
(b) So last is always the best.  
(c) Vacations are meant for indulging in sinful food.  
(d) So be sure to choose something like chocolate on the last day or two of your vacation—something good that will seem even better because it comes at the end.

66. A paragraph is given below from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Lewis Mandell has gone renegade. An esteemed educator and early proponent of teaching kids about money in the classroom, in recent years Mandell has come to see financial education as largely futile - and now he's even railing against allowance. No kidding. Parents have been helping their kids learn how to budget and make spending choices through a weekly allowance for more than 100 years. In that time, the only controversy has been over whether to tie the kids' allowance to chores or simply pay it as an entitlement. But Mandell is changing the discussion by asserting that allowance should not be paid, period. He seems to favor a system where parents simply pay ad hoc for the things they are willing to let their kids have. It's all part of his evolving view on how to best raise kids to become adults who won't struggle with credit-card debt and poor savings.

- (a) Renegade is to go back on your words.  
(b) His policy is "' catch them young'.  
(c) There are good arguments on both sides.  
(d) He has seen many adults struggle with debts and poor savings.

67. A paragraph is given below from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Spare a thought for the poor introverts among us. In a world of party animals and glad-handers, they're the ones who stand by the punch bowl. In a world of mixers and pub crawls, they prefer to stay home with a book. Everywhere around them cell phones ring and e-mails chime but they just want a little quiet. But you know what? New research - which we report in this week's cover story "The Upside of Being an Introvert" suggests that introverts may be a whole lot happier than they seem to be.

- (a) They may seem to be unhappy but the unhappiness is only surface deep.
- (b) Introverts are people who keep to themselves.
- (c) The research has thrown up unexpected findings.
- (d) And even if they're not, they still may wind up a whole lot more successful than everyone else

68. The passage given below is followed by a question. Choose the most appropriate answer to the question.

The cost of housing in many urban parts of India has become so excessive that many young couples, with above-average salaries, can only afford small apartments. EMI and rent commitments are so huge that they cannot consider the possibility of starting a family since a new baby would probably mean either the mother or father giving up a well-paid position, something they can ill afford. The lack of or great cost of child care facilities further necessitate the return of both parents to work.

Which of the following adjustments could practically be made to the situation described above which would allow young couples to improve their housing prospects?

- (a) Encourage couples to have only one child.
- (b) Encourage couples to remain childless.
- (c) Encourage young couples to move to cheaper areas for living.
- (d) None of these is likely to have an impact on the current situation.

69. The passage given below is followed by a question. Choose the most appropriate answer to the question.

While I am not a supporter of nationalities as they are based on contracts made by people who have not existed for hundreds or thousands of years, I respect cultural diversity. And there are simple ways to cope with these differences, universally applicable to the diversity of personalities and to the diversity of cultures. The first step is to overcome the hubris of feeling superior when compared to another individual. Also, the creation of a common ground is important since the fault in cultural diversity education is to focus more on the differences rather than in the similarities.

The tone of the author in the entire passage is

- (a) Descriptive
- (b) Critical
- (c) Optimistic
- (d) Analytical



70. The passage given below is followed by a question. Choose the most appropriate answer to the question.

We live by the mantra of instant gratification. As a result, when something is not happening, rather than leaving it alone for a while, we are liable to go at it with hammer and tongs in a bid to make it happen. When it still refuses to happen, we reach a point where we simply want to be done with it. We end up settling for an end product that is vastly inferior to how we first envisioned it. As I mentioned before, sometimes contractual and commercial obligations are responsible for such a turn of events. That, however, does not apply to first-time novelists who rarely, if ever, write with a book contract in hand. Edison once said: Many of life's failures are people who did not realize how close they were to success when they gave up. We would all do well to remember those words, before settling for mediocrity.

The author is likely to not agree with which of the following?

- (a) Patience is an important virtue.
  - (b) "When things go wrong as they sometimes will, rest if you must but don't you quit."
  - (c) "Better is the enemy of good."
  - (d) "Use what talent you possess: the woods would be very silent if no birds sang except those that sang best."
71. The passage given below is followed by a question. Choose the most appropriate answer to the question.

It is not easy to mesh Chekhov and Kafka; one was interested in the absurd, the other in the sinister. Our politicians, however, appear to be managing quite nicely. Our politicians' attempts to curb freedom of speech would be absurd if they weren't also so scary. Make no mistake about it. This is a matter of concern for all of us. We writers tend to live in the world inside our heads. When we move out of that world, it is often to criticize each other. While we can be accused of a number of things, solidarity is not one of them. We are a wildly anarchic tribe. Yet, there are times where a measure of solidarity is needed. This is one of them.

Which of the following can be validly inferred from the above?

- (a) Chekhov and Kafka wrote about absurdity and the sinister.
- (b) If writers decide to unite, they will be able to handle successfully the politicians' attempt to curb freedom of speech.
- (c) The author thinks that writers need to unite against the politics of curbing freedom of speech.
- (d) For writers, politicians are people to be scared of.

72. The passage given below is followed by a question. Choose the most appropriate answer to the question.

The military should be allowed to recruit in public schools, because it may be the only opportunity for many children to find out about the military. Most military recruits come from poorer families. Without the benefit of the military, these recruits would not have access to the education and leadership tools that the military utilizes. The military needs to have access to these students in order to recruit them. Without coming into schools, the military would have limited access to the said students.

Which of the following cannot be inferred from the given passage?

- (a) But for the recruitment drive in schools, military would not have easy access to the said students.
  - (b) Students have limited opportunities to find out about the military.
  - (c) Quite a few students going to public schools come from poorer families.
  - (d) Schools and colleges are the right platform for the meeting of the military and the student recruits.
73. Four alternative summaries are given below each text. Choose the option that best captures the essence of the text.

'No nukes' was once the slogan of environmentalists, but when green became concerned with the depletion of fossil fuels, nuclear power became popular in their camp. Their flip-flop on the issue reflects the switch in the relative market share of oil and nuclear power. Thirty years ago, nuclear power accounted for 3 percent of electricity while oil accounted for 20 percent. Today these figures are almost exactly reversed. Coal releases toxic waste that is too immense to contain safely. Especially interesting is the quantity of radioactive releases into the environment caused by coal. Radon gas from uranium normally is confined underground but is released when coal is mined. A 1,000 megawatt electric coal-fired power plant releases about 100 times as much radioactivity into the environment as a comparable nuclear plant.

- (a) Though at one time environmentalists opposed nuclear energy, today they support it because fossil fuels are disappearing and nuclear energy pollutes the environment less. A coal-fired power plant releases hundred times as much radioactivity into the environment as compared to a nuclear plant of similar capacity.
- (b) Environmentalists have not been consistent in their stand. At one time they opposed nuclear fuel, now they support it as its share in electricity production has increased while that of coal has declined. Further coal releases more radioactivity into the environment than nuclear fuel.
- (c) 'No nukes' the environmentalists once said but concerned with the depletion of fossil fuel they now support nuclear energy as its share in electricity production has increased. Coal releases radon gas into the atmosphere while nuclear fuel contains it underground.
- (d) Environmentalists have changed their stand on nuclear power as coal releases more toxic waste like radon than nuclear fuel. They are also concerned with reduction in fossil fuel.

74. Four alternative summaries are given below each text. Choose the option that best captures the essence of the text.

You seemed at first to take no notice of your school-fellows, or rather to set yourself against them because they were strangers to you. They knew as little of you as you did of them; this would have been the reason for their keeping aloof from you as well, which you would have felt as a hardship. Learn never to conceive a prejudice against an other because you know nothing of them. It is bad reasoning and makes enemies of half the world. Do not think ill of them till they behave ill to you; and then strive to avoid the faults which you see in them. This will disarm their hostility sooner than pique or resentment or complaint.

- (a) You encountered hardship amongst your school-fellows because you did not know them well. You should learn to not make enemies because of your prejudices irrespective of their behaviour towards you.
- (b) The discomfort you felt with your school-fellows was because both sides knew little of each other. Avoid prejudice and negative thoughts till you encounter bad behaviour from other, and then win them over by shunning the faults you have observed.
- (c) The discomfort you felt with your school-fellows was because both sides knew little of each other. You should not complain unless you find others prejudiced against you and have attempted to carefully analyze the faults you have observed in them.
- (d) You encountered hardship amongst your school-fellows because you did not know them well. You should learn to not make enemies because of your prejudices unless they behave badly with you.

75. Four alternative summaries are given below each text. Choose the option that best captures the essence of the text.

The human race is spread all over the world, from the polar regions to the tropics. The people of whom it is made up eat different kinds of food, partly according to the climate in which they live, and partly according to the kind of food which their country produces. In hot climate, meat and fat are not much needed; but in the Arctic regions they seem to be very necessary for keeping up the heat of the body. Thus, in India, people live chiefly on different kinds of grains, eggs, milk, or sometimes fish and meat. In Europe, people eat more meat and less grain. In the Arctic regions, where no grains and fruits are produced, the Eskimo and other races live almost entirely on meat and fish.

- (a) In hot countries people eat mainly grains while in the Arctic, they eat meat and fish because they cannot grow grains.
- (b) Hot climates require people to eat grains while cold regions require people to eat meat and fish.
- (c) Food eaten by people in different regions of the world depends on the climate and produce of the region and varies from meat and fish in the Arctic to predominantly grains in the tropics.
- (d) While people in Arctic regions like meat and fish and those in hot regions like India prefer mainly grains, they have to change what they eat depending on the local climate and the local produce.

## Section – IV : General Awareness

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76. Which of the following river originates at Amar Kantak?  
(a) Narmada (b) Tapi  
(c) Shipra (d) Mahi
77. Who is the chairman of Indian Space Research Organisation?  
(a) K. Radhakrishnan (b) A.P.J Abdul Kalam  
(c) S.K Shivakumar (d) T.K. Alex
78. Which of the following is a joint venture between the Sistema of Russia and Shyam Group of India?  
(a) MTS India (b) Aircel  
(c) Micromax (d) Jabong.com
79. Who is the current men's singles world champion in badminton?  
(a) Lee Chong Wei (b) Lin Dan  
(c) Cheng Jin (d) Peter Gade
80. The first Economic Census of India was conducted in year  
(a) 1951 (b) 1967  
(c) 1977 (d) 1991
81. Which of the following is a Japanese company?  
(a) AT&T (b) POSCO  
(c) Baosteel (d) DOCOMO
82. Who won the gold medal in men's hockey at the 2012 London Olympics?  
(a) Netherlands (b) Germany  
(c) Australia (d) Spain
83. Table tennis was first introduced in the Olympics in  
(a) 1976 (b) 1980  
(c) 1984 (d) 1988
84. Who among the following is the chairman of HDFC Bank?  
(a) Aditya Puri (b) Keki Mistry  
(c) Deepak Parekh (d) Renu Karnad
85. Which of the following countries is the president of the Afro-Asian Rural Development Organisation (AARDO)?  
(a) Egypt (b) Ghana  
(c) India (d) China
86. Which of the following is not a land locked country?  
(a) Afghanistan (b) Uzbekistan  
(c) Nepal (d) Denmark

87. Who among the following conferred Ram Mohun Roy, the title of Raja (king)?  
(a) Muhammad Ali Shah, the Nawab of Awadh  
(b) Akbar II, the Mughal Emperor  
(c) Lord William Bentinck  
(d) David Hare
88. Eight players at the London Olympics were disqualified after being charged with trying to throw their matches. With which sports were they associated with?  
(a) Badminton  
(b) Table tennis  
(c) Swimming  
(d) Wrestling
89. Shalimar Bagh was built in Jammu and Kashmir by which of the following ruler?  
(a) Akbar  
(b) Jahangir  
(c) Shahjahan  
(d) Aurangzeb
90. Who won the 2012 Sultan Azlan Shah hockey title?  
(a) Australia  
(b) Germany  
(c) New Zealand  
(d) Pakistan
91. The first electric train in India was 'Deccan Queen'. It was started between:  
(a) Goa and Bombay  
(b) Bombay and Poona  
(c) Goa to Poona  
(d) Dadar to Bombay
92. The Mullaperiyar Dam is located in  
(a) Tamil Nadu  
(b) Kerala  
(c) Andhra Pradesh  
(d) Karnataka
93. Consider the following statements  
I. Passive Euthanasia is legal in India.  
II. India was at the top of the chart of under five deaths in 2011.
- Which of the above statements is/are correct?  
(a) I  
(b) II  
(c) I and II  
(d) none
94. Who among the following is the brand ambassador of the Nirmal Bharat Yatra, an effort to promote the message of making the country open defecation-free and ensuring proper sanitation in rural areas?  
(a) Anurag Kashyap  
(b) Sachin Tendulkar  
(c) Sushmita Sen  
(d) Vidya Balan
95. The 16th Non-Aligned Movement Summit was held in  
(a) Tehran  
(b) New Delhi  
(c) Johannesburg  
(d) Colombo

96. Which of the following countries, in August 2012, officially became a member of the World Trade Organisation?  
(a) Iran (b) North Korea  
(c) Russia (d) Cuba
97. Which of the following countries, in August 2012, granted political asylum to the Wikileaks founder Julian Assange?  
(a) Russia (b) Ecuador  
(c) France (d) Peru
98. Which of the following banks was penalised over \$300 million for alleged illegal transactions with Iran, Sudan, Lybia and Burma?  
(a) Royal Bank of Scotland (b) Barclays  
(c) Standard Chartered (d) Deutsche Bank
99. Who won the Lal Bahadur Shastri National Award 2012?  
(a) Tessy Thomas (b) Prof. Yash Pal  
(c) Aruna Roy (d) Sunil Bharti Mittal
100. Who among the following is not a Ramon Magsaysay Award recipient?  
(a) Ravi Shankar (b) T.N. Seshan  
(c) Kiran Bedi (d) Lata Mangeshkar

## Answers

1	c	2	c	3	b	4	a	5	c	6	a	7	a	8	a	9	c	10	b
11	b	12	c	13	b	14	d	15	c	16	c	17	b	18	b	19	b	20	a
21	b	22	b	23	d	24	b	25	b	26	b	27	a	28	c	29	a	30	a
31	d	32	b	33	b	34	a	35	a	36	d	37	b	38	d	39	b	40	d
41	a	42	d	43	c	44	a	45	d	46	b	47	b	48	d	49	c	50	a
51	a	52	d	53	a	54	b	55	c	56	c	57	b	58	a	59	c	60	b
61	a	62	c	63	c	64	b	65	d	66	c	67	d	68	c	69	d	70	c
71	c	72	d	73	a	74	b	75	c	76	a	77	a	78	a	79	b	80	c
81	d	82	b	83	d	84	c	85	a	86	d	87	b	88	a	89	b	90	c
91	b	92	b	93	c	94	d	95	a	96	c	97	b	98	c	99	a	100	d

1. c Vinod's salary =  $24,000 \times \frac{75}{100} = ₹ 18,000$

∴ Sameer's salary =  $\frac{5}{6} \times 18000 = ₹ 15,000$ .

2. c We have,  $\frac{x-2}{x^2-4x+3} > 0$

$\Rightarrow \frac{(x-2)}{(x-1)(x-3)} > 0$

$\Rightarrow \frac{(x-2)^2}{(x-1)(x-2)(x-3)} > 0$

$\Rightarrow (x-1)(x-2)(x-3) > 0$

$\Rightarrow 1 < x < 2$  and  $x > 3$

Hence,  $x \in (1, 2) \cup (3, \infty)$ .

3. b Let P be the principal.

∴  $\frac{Pr^2}{100^2} = 120$

$\Rightarrow P \times \frac{20^2}{100^2} = 120$

$\Rightarrow P = \frac{120 \times 100 \times 100}{20 \times 20} = ₹ 3,000$ .

4. a Here, first term (a) = 7 and common difference (d) = 0.6.

$S_n = \frac{n}{2}[2a + (n-1)d]$

$\Rightarrow S_{12} = \frac{12}{2}[2 \times 7 + (12-1) \times 0.6]$

=  $6[14 + 11 \times 0.6]$

= 123.6.

5. c Let the speed of Harish and that of Sunil be  $3x$  km/hr and  $2x$  km/hr respectively.

∴  $BC = AB - AC = 1200 - \frac{1200}{5x} \times 3x$

=  $1200 - 720 = 480$  km.

6. a Let the height and radius of the cone be  $h$  and  $r$  respectively.

∴  $\frac{4}{3}\pi r^3 = \frac{1}{3}\pi r^2 h \Rightarrow h = 4r$

Total surface area of the sphere =  $4\pi r^2$

Total surface area of the cone =  $\pi r(r+l)$

=  $\pi r \left( r + \sqrt{r^2 + (4r)^2} \right)$  ( $\because l = \sqrt{r^2 + h^2}$ )

=  $\pi r \left( r + \sqrt{17}r \right) = \pi r^2 \left( 1 + \sqrt{17} \right)$

∴ Required ratio =  $\frac{4\pi r^2}{\pi r^2 \left( 1 + \sqrt{17} \right)} = 4 : \left( 1 + \sqrt{17} \right)$ .

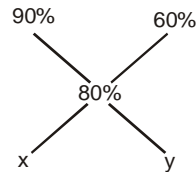
7. a The ratio in which A and B shared profit =  $6000 \times 12 : 9000 \times 7 = 8 : 7$ .

∴ B's share in profit =  $4,500 \times \frac{7}{15} = ₹ 2,100$ .

8. a S.P. of the mixture formed = ₹ 100 per liter  
Since profit earned is 25%, therefore,

C.P. of the mixture formed =  $\frac{100}{1.25} = ₹ 80$

Now, as 100% pure spirit costs ₹ 100, therefore, 80% pure spirit costs ₹ 80.



$\Rightarrow \frac{y}{x} = \frac{90-80}{80-60} \Rightarrow x : y = 2 : 1$

Hence, 90% spirit solution is mixed with 60% spirit solution in the ratio of 2:1.

9. c  $\frac{1}{A} + \frac{1}{B} = \frac{1}{12}$  ... (i)

$\frac{1}{A} + \frac{1}{C} = \frac{1}{20}$  ... (ii)

$\frac{1}{A} + \frac{1}{B} + \frac{1}{C} = \frac{1}{8}$  ... (iii)

Adding (i) and (ii), we get

$\frac{2}{A} + \frac{1}{B} + \frac{1}{C} = \frac{8}{60}$  ... (iv)

Subtracting (iii) from (iv), we get

$\frac{1}{A} = \frac{8}{60} - \frac{1}{8} = \frac{1}{120}$

Hence, A alone can complete the whole work in 120 days.



10. b In the month of April there were five Sunday and four Saturday.  
Let the amount earned on the rest of the five day be  $x$ .

$$\frac{(210 \times 5) + (180 \times 4) + (x + 21)}{30} = 164 \Rightarrow x = 150.$$

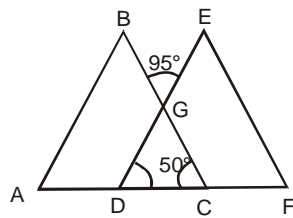
11. b Let present ages (in years) of mother and daughter be  $9x$  and  $4x$  respectively.

$$\therefore \frac{9x - 10}{4x - 10} = \frac{7}{2}$$

$$\Rightarrow x = 5$$

Hence, present ages of mother and daughter are 45 years and 20 years respectively.

12. c



$\angle DGC = \angle BGE = 95^\circ$  (Vertically Opposite Angles)

In  $\triangle CDG$ ,

$$\angle GDC + \angle GCD + \angle DGC = 180^\circ$$

$$\Rightarrow \angle GDC + 50^\circ + 95^\circ = 180^\circ$$

$$\Rightarrow \angle GDC = 35^\circ \text{ i.e. } \angle EDF = 35^\circ.$$

13. b Each one of the first 4 questions can be dealt in 5 ways, either by marking any of the four options or by leaving the question. Similarly, remaining 3 questions can be dealt in 6 ways.

Hence, the total number of different sequences of answers =  $5 \times 5 \times 5 \times 5 \times 6 \times 6 \times 6 = 5^4 \times 6^3 = 135000$ .

14. d Total number of possible outcomes when three dice are thrown =  $6 \times 6 \times 6 = 216$

The favourable cases are (1, 1, 1), (2, 2, 2), (3, 3, 3), (4, 4, 4), (5, 5, 5) and (6, 6, 6).

$$\therefore \text{Required probability} = \frac{6}{216} = \frac{1}{36}.$$

15. c Required ratio =  $\frac{279}{282} = 93 : 94$ .

16. c Let  $q$  be the divisor.

Then,  $P = qx + 32$  and  $Q = qy + 19$

$$\therefore P + Q = q(x + y) + 32 + 19$$

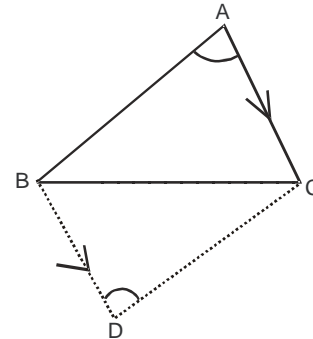
$$\Rightarrow P + Q = \{q(x + y) + 38\} + 13$$

Hence,  $q$  must be a factor of 38 i.e. 1, 2, 19 or 38.

As divisor is always greater than the remainder, therefore,  $q$  must be greater than 32.

Hence,  $q = 38$ .

17. b



In  $\triangle ABC$  and  $\triangle DCB$ ,

$\angle BAC = \angle BDC$  and  $AC$  is parallel to  $BD$

$\therefore \angle ABC = \angle DCB$  and hence,  $\triangle ABC \cong \triangle DCB$

(by AAS congruency)

Thus, area of  $\triangle ABC = \text{area of } \triangle DCB = 45 \text{ cm}^2$ .

18. b The quantity =  $\frac{36 \times 7}{12} - \frac{24 \times 7}{12} + 24 = 31$  liters.

19. b Let the three terms of the G.P. be  $a$ ,  $ar$  and  $ar^2$  (where ' $a$ ' is the first term and ' $r$ ' is the common ratio.)

$$\therefore ar^2 - a = 3$$

$$\Rightarrow a(r^2 - 1) = 3$$

$$\Rightarrow a = 1 \text{ and } r^2 - 1 = 3$$

(Since ' $a$ ' and ' $r$ ' are positive integers)

$$r^2 = 4 \Rightarrow r = 2.$$

The required sum

$$= 1 + 2 + 4 = 7.$$

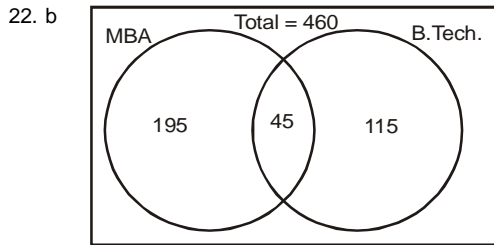
20. a From statement I:  $C^2 > A \Rightarrow A$  may or may not be positive.

From statement II:  $A > B^2 \Rightarrow A$  is positive is sufficient.

Hence, statement II alone is sufficient.

21. b Let the number be  $10x + y$ .  
According to the given condition:  
 $(10y + x) - (10x + y) = 27$   
 $\Rightarrow 9(y - x) = 27$   
 $\Rightarrow y - x = 3$

Hence, we can conclude that for such numbers the difference between the digits must be 3. Thus, the possible numbers are 14, 25, 36, 47, 58 and 69.



Number of employees who are neither MBA nor B.Tech.  
 $= 460 - (195 + 45 + 115)$   
 $= 460 - 355 = 105$ .

23. d Let us assume that the work can be completed in  $n$  days. Thus,

$$\frac{6}{12} + \frac{n-8}{36} + \frac{n}{54} = 1$$

$$\Rightarrow \frac{n-8}{36} + \frac{n}{54} = \frac{1}{2}$$

$$\Rightarrow \frac{3n-24+2n}{108} = \frac{1}{2}$$

$$\Rightarrow 5n = 54 + 24 = 78 \Rightarrow n = 15\frac{3}{5}$$

24. b Let  $n$  be the number of years. Then,

$$1323 = 1200 \left(1 + \frac{5}{100}\right)^n$$

$$\Rightarrow \frac{441}{400} = \left(1 + \frac{5}{100}\right)^n$$

$$\Rightarrow \left(\frac{21}{20}\right)^2 = \left(\frac{21}{20}\right)^n$$

$$\Rightarrow n = 2 \text{ years.}$$

25. b Total revenue (in ₹ 10000) =  $(3330 + 4680 + 2772 + 4338 + 2880)$   
 $= 18,000$

∴ Percentage share of DPS in total revenue

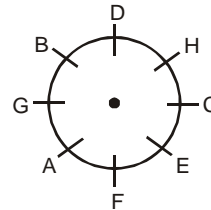
$$= \frac{46800000}{180000000} \times 100 = 26\%$$

26. b The given information can be tabulated as follows:

Student	Institute	Company
Abhay	IIML/MDI	C
Baruni	IIMB	A/E
Chirag	SIES	D
Disha	MDI/IIML	E/A
Erman	JBIMS	B

27. a The passage talks about India's progress getting weakened as a result of drought, floods and a gap between water supply and demand. However, the data given in the passage does not state that there is an urgency to manage the water resources. Thus, the given data is inadequate to draw the above inference.

28. c The given information can be shown as:



29. a It is stated that in a pre-banking economy the level of demand for money was equivalent to the quantity of gold available. Hence, if the quantity of available gold was increased the demand for money would also increase, leading to inflation. Thus, option (a) is the correct answer.

30. a The given information can be tabulated as follows.

Km No.	1	2	3	4	5	6	7	8	9	10
Tree		C	G	D	F	B	E	A		

31. d The passage states that greater the division of labour, greater the need for coordination and management and higher the number of specialized producers. The last line states that division of labour is more in market economies as compared to planned economies. So, we can say that the need for coordination is also higher in market economies. Thus, option (d) is the correct answer.

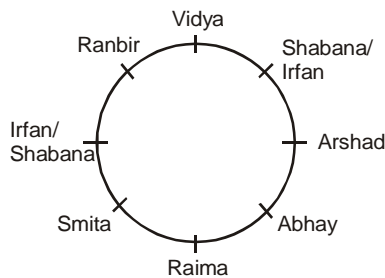
32. b  $H(8) + 1 \rightarrow I(9)$        $P(16) + 1 \rightarrow Q(17)$   
 $I(9) - 2 \rightarrow G(7)$        $H(8) - 2 \rightarrow F(6)$   
 $S(19) + 3 \rightarrow V(22)$      $Y(25) + 3 \rightarrow B(2)$   
 $T(20) - 4 \rightarrow P(16)$      $S(19) - 4 \rightarrow O(15)$   
 $O(15) + 5 \rightarrow T(20)$      $I(9) + 5 \rightarrow N(14)$   
 $R(18) - 6 \rightarrow L(12)$      $C(3) - 6 \rightarrow W(23)$   
 $Y(25) + 7 \rightarrow F(6)$        $S(19) + 7 \rightarrow Z(26)$   
 $\therefore$  Code for PHYSICS is QFBONWZ.

33. b In the passage the word *midwife* has been used *figuratively* to denote or define somebody who helps in giving birth to new things (ideas). Socrates saw himself as someone who would bring out new things (ideas) to the world. Hence, option (b) is the correct answer.

34. a A century year is a leap year only if it is divisible by 400, therefore:  
 Number of odd days in the first 100 years =  $100 + 24$  i.e. 5  
 Number of odd days in the first 200 years =  $200 + 48$  i.e. 3  
 Number of odd days in the first 300 years =  $300 + 72$  i.e. 1  
 Number of odd days in the first 400 years =  $400 + 97$  i.e. 0  
 The same pattern will repeat for the next 400 years. Therefore, a century year can end with either Friday or Wednesday or Monday or Sunday.

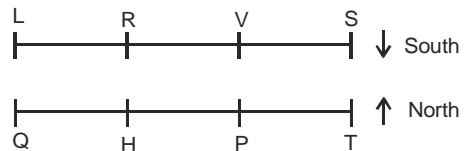
35. a Although the passage only talks about government schools in the Pali district of Rajasthan, it can still be said that there is a gender gap in some government schools in Rajasthan. Thus, option (a) is the correct answer. Option (b) cannot be inferred because, though it is mentioned that the project has been run in 2342 government-run primary schools, it cannot be assumed that there are no more government schools in Pali. Option (c) is incorrect because a comprehensive model is also responsible for '100 percent enrollment... school-dropouts'. Option (d) cannot be inferred because the passage does not state that the given project has not been tried or piloted elsewhere.

36. d From the given information the following cases are possible:

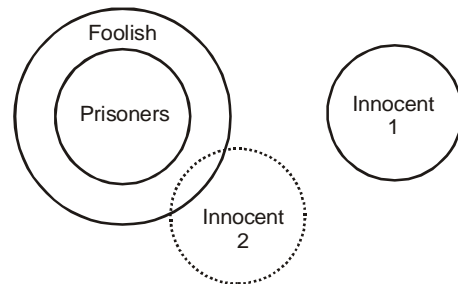


37. b The argument states that a blanket ban by the state on the practice of euthanasia, even when it may be voluntarily desired by a 'competent, terminally ill person to avoid excruciating pain and embrace a timely and dignified death' is unjustified and 'cannot be sustained.' Option (b) outlines a situation of potential misuse of the practice of euthanasia, thus providing a valid reason for a 'categorical ban' to avoid ambiguity. It is therefore the correct answer. Option (a), though states a reason in favor of the state's ban on euthanasia and looks to weaken the author's assertion, doesn't follow the same line of reasoning as of the author in countering the state's ban. The premise of the argument is that euthanasia bears the sanction of history and a blanket ban on it compromises the rights of competent, terminally ill patients to embrace a timely and dignified death. It doesn't bring in the argument of medical ethics and solely rests on the human rights aspect. Thus, option (a) is incorrect. Option (c) is out of context of the passage; it is a suggestion and doesn't say anything about the state's ban on euthanasia. Option (d) doesn't weaken the argument in any way. The premise of the argument is that euthanasia bears the sanction of 'history' which necessarily implies that such an act is not unprecedented and has been practiced earlier. It may not have the sanction of religion or Church but has more to do with the socio-legal implications of the practice. Thus, what the Church has taught since time immemorial is immaterial to the premise. Option (b), thus, is the correct answer.

38. d The given information can be represented as:



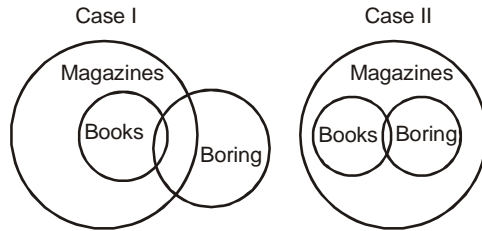
39. b



From the above Venn diagram, we can conclude that conclusion II definitely follows.

40. d From the given information, it can be concluded that the lady in the photograph is sister of the father of the man.  
Hence, the person in the photograph is aunt of the man.

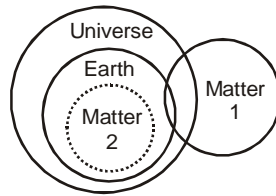
41. a



There are two ways in which we can draw a Venn diagram for the given statements. Looking at both case I and II, we can definitely conclude that only conclusion I follows.

42. d Wife's mother-in-law is mother.  
Thus, Sunpreet's mother's sister's son is Sunpreet's cousin and his mother is Sunpreet's aunt. Thus, Sunpreet is either niece or nephew of the lady.

43. c



From the above Venn diagram, we can conclude that both conclusions I and II follow.

44. a All of the given information can be tabulated as:

Name	Car	Place	H.No.
Vinod	BMW	Kannur/Nagpur	8 / 9
Sherlyn	Corolla	Kanpur	5
Aditi	Audi	Sholapur	1
Jyoti	CRV	Dhampur	4
Alok	Porche	Nagpur/Kannur	9 / 8

45. d Both the events are independent effects. The current time is not implicit and so we do not know whether Mossad still exists or will it be as successful in tackling cross-border terrorism. Also, Mossad cannot be equated to Israel. Hence, option (d) is the correct answer.

46. b

Floor	Friend
5th	A
4th	E
3rd	D
2nd	B
1st	
Ground	

47. b (I) does not follow because it will lead to contempt of court. (II) follows because it will help in resolving the issue of the public transport system as a result of the Supreme Court's decision.

48. d

28	40	60	90	132	188	(260)
↑	↑	↑	↑	↑	↑	↑
+12	+20	+30	+42	+56	+72	
↓	↓	↓	↓	↓	↓	↓
3×4	4×5	5×6	6×7	7×8	8×9	

Therefore, the required term is 260.

49. c Statement 1 is a Judgement (J) because it only states the opinion of the writer and cannot be verified. Statement 2 is clearly a Fact (F) as we can verify through experiments or discoveries that the brain consists of the stated four sections. In statement 3 the writer states that the brain functions effectively. No conclusion has been drawn by him. Thus statement 3 is a Fact (F). Statement 4 is also a Fact (F) because it can be verified.

50. a First letter of each term increases in alphabetic position number by 3 and the last letter of each term decreases in alphabetic position number by 3.  
The number between the two letters becomes twice in each successive term.  
∴ The required term is S128H.

51. a Option (a) gives the most clear and lucid narration and is the correct answer. "to be him" is grammatically incorrect and so options (c) and (d) are incorrect.

52. d In options (a) and (b) apostrophe after the word 'its' is grammatically incorrect as it renders the sentence meaningless. In option (c) an article is required before the word 'region'. Hence, option (d) is the correct choice.

53. a 'Smirch', which means a stain is the only word that fits correctly in the second blank. The word 'damn' is logically incorrect and the words 'demon' and 'devil' are grammatically incorrect in the given context due to their usage with the preposition 'on'. 'unmitigated' means something that is not dismissed or moderated in intensity or severity.

54. b 'perceive' means 'to see' or 'to understand'. 'conceived', 'deceived' and 'received' do not fit in the given context of the sentence. Hence, option (b) is the correct choice.
55. c CADENCE means *balanced* or *rhythmic flow* so the correct synonym is '*rhythm*'. 'languid' means weak or lacking energy and 'effluence' means the process of flowing out.
56. c HACKNEYED means *dull* or *lacking originality*. 'trite' means dull or worn out. Hence, hackneyed and trite are synonymous.
57. b EPHEMERAL means *short-lived* and so its opposite is 'eternal'. '*ethereal*' means exquisite, 'evanescent' means vanishing and 'exigent' means a crying or immediate need for something.
58. a PARSIMONIOUS means *frugal* or *excessively sparing*. The opposite of this is 'lavish'. 'prudent' means wise.
59. c A is the opening sentence as it introduces the discussion on biofuels usage and its environmental impact (in comparison to fossil fuels). This is followed by sentence B where the writer states the environmental impact in terms of bio-diversity loss and farmland destruction. E follows A and B because it states a solution to the problem of high costs and environmental impact i.e. environment-friendly fuels. Sentence C is the penultimate sentence as it continues to talk about biofuels. D is the trailing sentence because it introduces a new topic of discussion. Hence, the correct sequence is 'ABECD'.
60. b Sentence A is an elaboration of the *declining foreign trade* mentioned in C. Hence, 'CA' forms a mandatory pair. Also, 'this' in sentence D refers to the decline mentioned in CA. This gives us 'CAD'. Hence, we can eliminate options (a), (c) and (d). Thus, the correct sequence is 'CADEB'.
61. a 'BC' is a mandatory pair because sentence B talks about procurement of wheat and C gives further information on procurement price. D states fixing of MSP (maximum selling price) as a measure for containing food prices. Also, E states other measures undertaken by the government in order to contain food prices. Thus, 'DE' forms a mandatory pair. Hence, the correct sequence is 'BCDEA'.
62. c Sentence C states that biomass consumption had the highest growth (382 trillion Btu) and sentence A follows it by attributing the second largest growth to wind energy consumption. Hence, 'CA' forms a mandatory pair. Sentence D follows A because it talks of other forms of consumption (solar energy and geothermal energy) and their respective increase. Sentence E is the trailing sentence. Hence, the correct sequence is 'CADB'.
63. c The correct word is 'gauche' which means *crude* or *lacking social grace*.
64. b The correct spelling is 'emollient' which means to *mollify* or *soothe*.
65. d Options (a) and (c) are very general and broad based. Option (b) is a close one but loses out because it is more like a summary and also too broad based. The paragraph talks about the results of a research which reveal that when we know what we are eating is one of the last things at the end of a holiday, we tend to remember its taste and derive more pleasure out of it. This makes option (d) the correct choice since it is keeping with the theme and subject matter of the paragraph.
66. c Option (a) tells us the meaning of a word used at the beginning of the paragraph and so cannot be the line that completes the paragraph. Option (b) is one sided and option (d) cannot be inferred from the paragraph. Option (c) is correct because it places both sides of the story and says that putting a stop to allowances has both merits and demerits.
67. d Option (a) is merely a summary or paraphrase of the last sentence while option (c) is only defines introverts. Option (c) is a close one but option d works better because it carries the last sentence forward and also closes it.
68. c The passage talks about high housing cost, so the problem can be rectified if they move to cheaper areas. Option (b) is impractical in the given situation. Also, having one child cannot help in improving housing prospects for young couples.
69. d The author talks about cultural diversity and tells us why creation of a common ground is an important step to deal with cultural differences. This makes the passage analytical in tone. The passage is not descriptive, as the author does not describe or classify any facts. It is not critical as the author does not criticize cultural diversity but rather respects it. Also, there is no hint of optimism in the author's tone.
70. c Better is the enemy of good means that settling for a mediocre result discourages one from trying for an extraordinary result. This is completely opposite of what the author is saying (don't settle for anything less than your best). The author also advocates patience and hence would agree with option (a). Similarly, he would agree with option (b) where it is being said that we should not quit if we are unable to achieve something. Also, option (d) says that people should use their talent to the maximum potential but it

doesn't say anything about how they can better themselves. It says that if relative to others your talent is less, you should still use it. However, the author does not state this in the passage.

71. c Nothing has been stated in the passage about Chekhov and Kafka being authors. Hence, option (a) cannot be inferred. Additionally, the author states that writers should unite but there is nothing in the passage that implies that if they unite, the writers will be definitely successful. Thus, only option (c) directly follows from the given passage. Option (d) is untrue because the passage just says that the attempt of the politicians to curb freedom of speech is scary and doesn't indicate that the politicians per se are scary.

72. d The argument here is that military should be allowed to recruit in public schools because it is the best meeting ground for the two. Options (a) and (b) can be inferred from the first and last lines of the passage. Option (c) can be inferred from the lines "Without the benefit of the military these recruits . . . that the military utilizes." However, option (d) is untrue as per the passage because it talks about both schools and colleges, whereas the passage only talks about schools.

73. a The main points in the text are :  
(1) Environmentalists who opposed nuclear energy now support it as fossil fuel gets depleted.  
(2) Coal-fired power plant releases 100 times as much radio activity into the environment as a nuclear plant of the same capacity.  
Hence, option (a) is the best summary. Options (b), (c) and (d) err in the reason that they give for the change in the stand of environmentalists.

74. b Option (b) covers the major points of the given paragraph. The discomfort you felt with your school-fellows was because both sides knew little of each other. Avoid prejudice and negative thoughts till you encounter ill behaviour from others and eventually win them over (disarm their hostility) by shunning or avoiding the faults that you observe in them.

75. c Option (a) is too brief and does not give the gist of the paragraph. Option (b) only makes a comparison and does not touch upon the concern of the writer and option (d) completely distorts the meaning of the paragraph. Option (c) best summarizes the text and is the correct answer.

76. a 77. a 78. a 79. b 80. c 81. d

82. b 83. d 84. c 85. a 86. d 87. b

88. a 89. b 90. c 91. b 92. b 93. c

94. d 95. a 96. c 97. b 98. c 99. a

100. d