

# AFCAT

## Solved Paper

I/2014

**Directions** (Q. Nos. 1-4) *Read the following passage carefully and answer the questions given below.*

### Passage

And then Gandhi came. He was like a powerful current of fresh air that made us stretch ourselves and take deep breaths, like a beam of light that pierced the darkness and removed the scales from our eyes, like a whirlwind that upset many things but most of all the working of people's mind. He did not descend from the top; he seemed to emerge from the millions of India, speaking their language and incessantly drawing attention to them and their appalling condition. Get off the backs of these peasants and workers, he told us, all of you who live by their exploitation; get rid of the system that produces this poverty and misery

1. Gandhi came like a powerful current of fresh air and
  - (a) awakened us to the plight of the masses in the grip of oppressors
  - (b) made us patriotic
  - (c) emboldened us to attack and destroy the oppressors
  - (d) praised our culture
2. The rise of Gandhi
  - (a) shocked people
  - (b) made India powerful
  - (c) made the condemnation of the exploiter final
  - (d) made women feel secure
3. Gandhi fought the
  - (a) rich
  - (b) oppressor
  - (c) apathetic masses
  - (d) unjust system
4. The conspicuous role of Gandhi is that of a
  - (a) father
  - (b) reformer
  - (c) teacher
  - (d) liberator

**Directions** (Q. Nos. 5-10) *Select the most appropriate word from the options against each number.*

### Passage

Those living in the slums are (5) and tough because they are totally (6) to the vagaries and hardships of life. The rising Sun (7) the day and the setting Sun closes the day for them. It is like a drama where the curtain (8) up in the morning and comes down in the evening. They don't (9) hypertension and heart attacks because there is, after all (10) to worry about.

5. (a) poor (b) sick (c) hardy (d) weak
6. (a) dependent (b) independent (c) exposed (d) tried
7. (a) heralds (b) herald (c) bring (d) brings
8. (a) hangs (b) hand (c) goes (d) shines
9. (a) know (b) get (c) think (d) have
10. (a) everything (b) something (c) somewhere (d) nothing

**Directions** (Q. Nos. 11 and 12) *Choose the word which is nearest in meaning to the given word.*

11. Transgressor
  - (a) Passenger
  - (b) Law-breaker
  - (c) Protector
  - (d) Comrade
12. Egregious
  - (a) Common
  - (b) Social
  - (c) Plain
  - (d) Atrocious

**Directions** (Q. Nos. 13-15) *Choose the word which is nearly opposite in meaning to the given word.*

13. Predilection  
(a) Oblivion (b) Objectivity  
(c) Aversion (d) Defeat
14. Cacophonous  
(a) Tamed (b) Harmonious  
(c) Domestic (d) Silent
15. Calumny  
(a) Apology  
(b) Eulogy  
(c) Enjoyment  
(d) Reservation

**Directions** (Q.Nos. 16-20) *Choose the word that best defines the given phrase.*

16. Able to use both hands alike.  
(a) Dexterous (b) Ambidextrous  
(c) Skilful (d) Expert
17. A written account of the life of an individual.  
(a) Autobiography (b) Epigraph  
(c) Biography (d) Novel
18. The identification of a disease by its symptoms.  
(a) Prescription (b) Prognosis  
(c) Diagnosis (d) Biopsy
19. Prolonged inability to sleep.  
(a) Amnesia (b) Utopia  
(c) Nausea (d) Insomnia
20. A style in which a writer makes a display of his knowledge.  
(a) Verbose (b) Pedantic  
(c) Ornate (d) Pompous

**Directions** (Q.Nos. 21-25) *Choose the correctly spelt word.*

21. The school alumni gathering put us in a ..... mood.  
(a) reminisent (b) reminisent  
(c) reminiscent (d) reminicent
22. 'God is Dead' is a ..... statement.  
(a) blasphemus (b) blaphemous  
(c) blasphemous (d) blosphemos
23. The threat of an epidemic caused great alarm and ... .  
(a) trepidation (b) terpidation  
(c) trepidition (d) trepidattion
24. The din caused by the children howling is enough to .... the dead.  
(a) ressurect (b) resurrect  
(c) resurect (d) resurecct
25. Can you .... the car into that parking spot?  
(a) manuer (b) manever  
(c) manoeuvre (d) manuver

**Directions** (Q. Nos. 26-47) *Choose the most appropriate answer.*

26. Who was the Governor-General of India during the 'Sepoy Mutiny'?  
(a) Lord Dalhousie (b) Lord Harding  
(c) Lord Canning (d) Lord Lytton
27. Which of the following statements is incorrect?  
(a) Goa attained full statehood in 1987  
(b) Diu is an island in the Gulf of Khambhat  
(c) Daman & Diu were separated from Goa by the 56th Amendment of the Constitution of India  
(d) Dadar & Nagar Haveli were under French colonial rule till 1954
28. On which river is Washington DC situated?  
(a) Potomac (b) Irrawaddy  
(c) Mississippi (d) Hudson
29. When body is accelerated  
(a) its velocity never changes  
(b) its speed will always changes  
(c) its direction always changes  
(d) its speed may or may not change
30. Which of the following is not an agency of UN?  
(a) World Bank  
(b) International Atomic Energy Agency  
(c) Universal Postal Union  
(d) None of the above
31. Which kind of missile is BRAHMOS?  
(a) Medium range ballistic missile  
(b) Supersonic cruise missile  
(c) Short range tactical missile  
(d) Ultrasonic cruise missile
32. Which of the following is not a unit of energy?  
(a) Calorie (b) Joule  
(c) Electron volt (d) Watt
33. Who among the following has been called the 'Napoleon of India'?  
(a) Ashoka (b) Samudragupta  
(c) Chandragupta (d) Harshavardhana
34. Who is known as the 'Grand Old Man of India'?  
(a) Dadabhai Naoroji  
(b) Gopal Krishna Gokhale  
(c) Bal Gangadhar Tilak  
(d) A O Hume
35. Which amongst the following has the power to regulate the right of citizenship in India?  
(a) Union Cabinet (b) Parliament  
(c) Supreme Court (d) Law Commission
36. The Baglihar Hydroelectric Power Project in J & K is built across the river.  
(a) Beas (b) Chenab  
(c) Jhelum (d) Sutlej

37. Which Indian sportsperson was appointed as 'Messenger of Peace' in 2001 by the UN?  
 (a) Prakash Padukone (b) Vishwanathan Anand  
 (c) Sachin Tendulkar (d) Vijay Amritraj
38. Indian women's hockey team secured which of the following position in Asian Champions Trophy 2013?  
 (a) First (b) Second (c) Third (d) Fourth
39. Which is the longest bone in the human body?  
 (a) Fibula (b) Radius (c) Stapes (d) Femur
40. A US team of scientists has found that the mechanism responsible for the ageing process is located  
 (a) inside the face (b) inside the skin  
 (c) inside the brain (d) inside the heart
41. The outermost layer of the Sun is known as  
 (a) corona (b) photosphere  
 (c) chromosphere (d) granule
42. Indian Institute of Science, Bangalore was founded by  
 (a) CV Raman (b) Jamsheji Tata  
 (c) Vikram Sarabhai (d) None of these
43. Which among the following is not a gallantry medal?  
 (a) Ashok Chakra (b) Arjuna Award  
 (c) Param Vir Chakra (d) Shaurya Chakra
44. Which one of the following pairs of water bodies are connected by the Suez Canal?  
 (a) Indian Ocean – Pacific Ocean  
 (b) Mediterranean Sea – Black Sea  
 (c) Mediterranean Sea – Red Sea  
 (d) Atlantic Ocean – Pacific Ocean
45. Kalhana's 'Rajatarangini' is a history of  
 (a) Kashmir  
 (b) Harsha's reign  
 (c) Rajasthan  
 (d) Chandragupta's reign
46. The Constitution of India was promulgated on January 26, 1950 because  
 (a) this day was being celebrated as the Independence Day since 1929  
 (b) this was desired by the farmers of India  
 (c) the British did not want to leave India earlier than this date  
 (d) it was an auspicious day
47. Which of the following is not correctly matched?  
 (a) Indonesia – Jakarta  
 (b) Maldives – Male  
 (c) North Korea – Seoul  
 (d) Zimbabwe – Harare

**Directions (Q. Nos. 48-50) In the following questions complete the series.**

48. A, B, D, G, ?, P  
 (a) I (b) J (c) K (d) L
49. Z, S, W, O, T, K, Q, G, ?, ?  
 (a) N, D (b) N, C (c) O, C (d) O, D

50. BCD, RQP, LMN, TS?

- (a) U (b) V (c) R (d) T

51. If A = C, B = D, C = E and so on, code the following.

STUDENT

- (a) VVWFGPV (b) UUVWFGPV  
 (c) UVWFGPV (d) UWVFGPV

52. If A = Z, B = Y and so on, code the following.

EDITOR

- (a) VWRGLI (b) VWRGVI (c) VVWGLI (d) VWRLLI

**Directions (Q.Nos. 53-55) Choose the most appropriate word.**

53. 'Rustle' is to 'Leaves' as 'Patter' is to.....

- (a) Snow (b) Wind  
 (c) Rain (d) Storm

54. 'Indiscreet' is to 'Imprudent' as 'Indisposed' is to .....

- (a) Concerned (b) Reluctant  
 (c) Crucial (d) Clear

55. 'Accident' is to 'Carefulness' as 'Disease' is to .....

- (a) Sanitation (b) Treatment  
 (c) Medicine (d) Doctor

**Directions (Q.Nos. 56-58) Each of the following questions has four statements. Three are logically correct. Some of which may look factually absurd. Ignore this absurdity and look to the logical corrections. Choose the statement which is wrong or doubtful.**

56. (a) Birds fly in the air. Trees are birds. Therefore, trees fly in the air.  
 (b) Some boys steal. All who steal are naughty. All naughty are honest. Therefore, some boys are honest.  
 (c) All girls like dance. Some girls are Indian. All Indians are artists. Therefore, some artists like dance.  
 (d) All liars are not thieves. All thieves are criminals. Therefore, all liars are criminals.
57. (a) Ramesh is tall. Ramesh is a boy. Therefore, boys are tall.  
 (b) All who can fly are animals. Some birds can fly. Therefore, some birds are animals.  
 (c) Men live in houses. Houses grow on trees. Trees float in water. Therefore, men float in water.  
 (d) All living things are mobile. Some non-living things are mobile. Therefore, some mobile are living and some non-living.
58. (a) All books can read. Some pencils are books. All pencils are clever. Therefore, all clever cannot read.  
 (b) Some who fail are stupid. Some criminals are stupid. Therefore, all criminals fail.  
 (c) Some liar are thieves. All thieves are criminals. Therefore, some liars are criminals.  
 (d) All that is given is black. Trees are green. Therefore, trees are black.

**Directions** (Q.Nos. 59 and 60) Consider the statement and assumptions that follow. Which of these assumptions is/are implicit in the statement?

**59. Statement** "You won't get sweets at any cost. I will not let you eat things that are not good for your teeth", a mother tells her child.

**Assumptions**

- I. The mother cares for her child.
- II. Sweets are not good for her child.
- III. The mother has the authority to decide what her child is to eat.

- (a) I and II are implicit
- (b) II and III are implicit
- (c) I and III are implicit
- (d) All are implicit

**60. Statement** "Clearly, the judiciary cannot provide all answers. But it seems the public, weary of an inactive Executive, is turning to the Supreme Court as a last resort", an article.

**Assumptions**

- I. The Supreme Court is above the Executive.
- II. The Supreme Court is more active than the Executive.
- III. The Executive does not have sufficient powers.

- (a) I and II are implicit
- (b) II and III are implicit
- (c) I and III are implicit
- (d) Only II is implicit

**Directions** (Q.Nos. 61 and 62) Choose the word which is least like the other words in the group.

- 61.** (a) Tsangpo (b) Hazaribagh (c) Kanha (d) Bandipur
- 62.** (a) Wheat (b) Rice (c) Mustard (d) Gram

**Directions** (Q.Nos. 63-67) The following questions consist of two words that have a certain relationship to each other, followed by four alternatives. Select the best alternative that has same relationship as the original pair of words.

**63. Creche : Infants :: ?**

- (a) School : Pupils
- (b) Deck : Sailors
- (c) Cottage : Guests
- (d) Aircraft : Crew

**64. Pesticide : Plant :: ?**

- (a) Injection : Disease
- (b) Vaccination : Body
- (c) Medicine : Cure
- (d) Teacher : Student

**65. Stare : Glance :: ?**

- (a) Gulp : Sip
- (b) Confide : Tell
- (c) Hunt : Stalk
- (d) Step : Walk

**66. Ecstasy : Pleasure :: ?**

- (a) Hatred : Affection
- (b) Rage : Anger
- (c) Joy : Grief
- (d) Mumble : Speak

**67. Necromancy : Ghosts :: ?**

- (a) Romance : Stories
- (b) Magic : Amulets
- (c) Alchemy : Gold
- (d) Sorcery : Spirit

**Directions** (Q.Nos. 68-70) There is certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same relation with this word as the given pair has. Select the best alternatives/relationship.

**68. Firm : Flabby :: Piquant : ?**

- (a) Salty
- (b) Pleasant
- (c) Bland
- (d) Smell

**69. Funk : Vitamins :: Curie : ?**

- (a) Uranium
- (b) Radioactivity
- (c) Photography
- (d) Radium

**70. Contamination : Food :: Infection : ?**

- (a) Diseases
- (b) Body
- (c) Germs
- (d) Microbes

**Directions** (Q.Nos. 71-85) In the following questions choose the most appropriate answer.

**71. An article costs ₹ 50 presently. The rate of inflation is 300%. What will be cost of this article after 2 yr?**

- (a) ₹ 200
- (b) ₹ 600
- (c) ₹ 800
- (d) ₹ 1000

**72. A dishonest shopkeeper professes to sell his groceries at his cost price but uses a false weight of 900 g for each kilogram. Find his gain percentage.**

- (a) 91/9
- (b) 100/9
- (c) 100/11
- (d) 95/9

73. A man purchased a bullock and a cart for ₹ 1800. He sold the bullock at a profit of 20% and the cart at a profit of 30%. His total profit was 155/6%. Find the cost price of bullock.

- (a) ₹ 650 (b) ₹ 750 (c) ₹ 900 (d) ₹ 800

74. There were 35 students in a hostel. If the number of students be increased by 7, the expenditure on food increases by ₹ 42 per day while the average expenditure of students is reduced by ₹ 1. What was the initial expenditure on food per day?

- (a) ₹ 432 (b) ₹ 442 (c) ₹ 420 (d) ₹ 400

75. There were 24 students in a class. One of them, who was 18 yr old, left the class and his place was filled up by a new comer. If the average of the class was thereby lowered by 1 month, the age of new comer is

- (a) 14 yr (b) 15 yr (c) 16 yr (d) 17 yr

76. Find two natural numbers whose sum is 85 and the least common multiple is 102.

- (a) 30, 55 (b) 17, 68 (c) 35, 55 (d) 51, 34

77. In a fort there was sufficient food for 200 soldiers for 31 days. After 27 days, 120 soldiers left the fort. For how many extra days will the rest of the food last for the remaining soldiers?

- (a) 12 (b) 10 (c) 8 (d) 6

78. 10 is added to a certain number, the sum is multiplied by 7, the product is divided by 5 and 5 is subtracted from the quotient. The remainder left is half of 88. What is the number?

- (a) 21 (b) 20 (c) 25 (d) 30

79. 19 persons went to a hotel for a combined dinner party. 13 of them spent ₹ 79 each on their dinner and the rest spent ₹ 4 more than the average expenditure of all the ₹ 19. What was the total money spent by them?

- (a) ₹ 1628.4 (b) ₹ 1534  
(c) ₹ 1492 (d) None of these

80. Two typists of varying skills can do a typing job in 6 min, if they work together. If the first typist typed alone for 4 min and then the second typist typed alone for 6 min, they would be left with 1/5 of the whole work. How many minutes would it take the slower typist to complete the typing job working alone?

- (a) 10 (b) 15  
(c) 12 (d) 20

81. A bag contains 25 paise, 50 paise and ₹ 1 coins. There are 220 coins in all and the total amount in the bag is ₹ 160. If there are thrice as many ₹ 1 coins as there are 25 paise coins, then what is the number of 50 paise coins?

- (a) 60 (b) 40  
(c) 120 (d) 80

82. The sum of two numbers is equal to thrice their difference. If the smaller of the numbers is 10, find the other number.

- (a) 15 (b) 30  
(c) 40 (d) None of these

83. If a person repaid ₹ 22500 after 10 yr of borrowing a loan, at 10% per annum simple interest, find out what amount did he take as a loan?

- (a) ₹ 11225 (b) ₹ 11250  
(c) ₹ 10000 (d) ₹ 7500

84. A sum of money invested at simple interest triples itself in 8 yr. How many times will it become in 20 yr time?

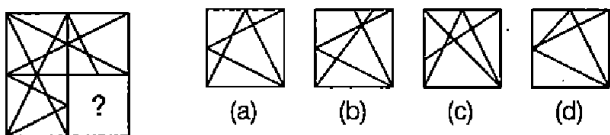
- (a) 8 (b) 7  
(c) 6 (d) 9

85. Simplify  $\frac{69 \times 69 \times 69 - 65 \times 65 \times 65}{69 \times 69 + 69 \times 65 + 65 \times 65}$

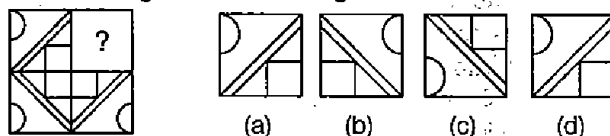
- (a) 1 (b) 4  
(c) 0.216 (d) 0.164

**Directions (Q. Nos. 86-89)** In these tests you will find an question figure and four answer figures. You have to select one diagram from the answer figures which fits into the blank column in question figure in order to complete it.

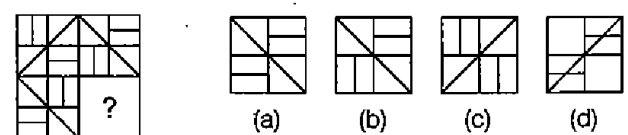
86. Question Figure Answer Figures



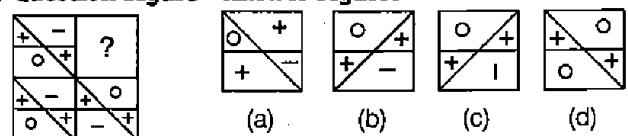
87. Question Figure Answer Figures



88. Question Figure Answer Figures



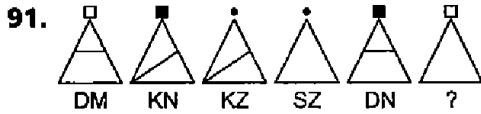
89. Question Figure Answer Figures



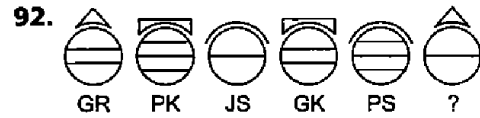
**Directions (Q.Nos. 90-93)** In these tests find which code matches the shape or pattern given at the end of each question.



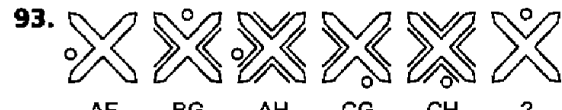
- (a) LS (b) RQ  
(c) LM (d) LQ



- (a) SN (b) DZ  
(c) SM (d) SZ

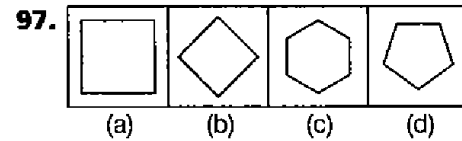
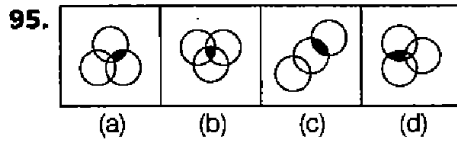
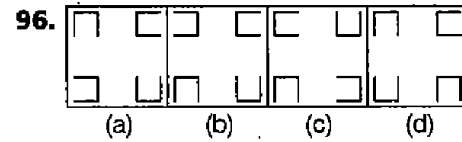
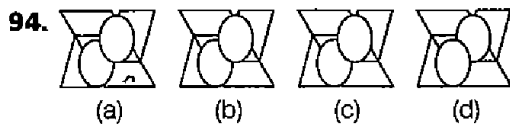


- (a) PR (b) JR (c) GS (d) JK



- (a) BF (b) GB (c) BG (d) CG

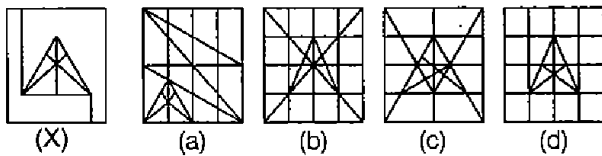
**Directions (Q. Nos. 94-97)** In these tests find the odd figure out.



**Directions (Q. Nos. 98-100)** In these tests figure X is hidden in the option figures. Find the correct option.

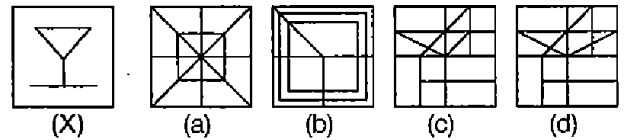
98. Question Figure

Answer Figures



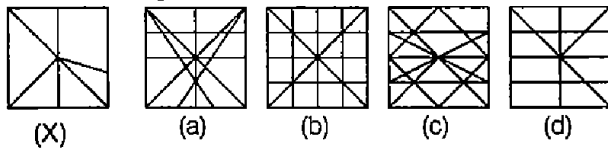
100. Question Figure

Answer Figure



99. Question Figure

Answer Figures

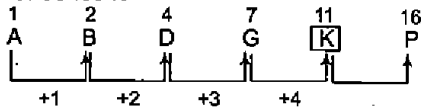


## Answers

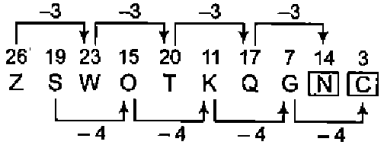
- |         |         |         |         |         |         |         |         |         |          |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1. (a)  | 2. (c)  | 3. (d)  | 4. (b)  | 5. (a)  | 6. (c)  | 7. (d)  | 8. (c)  | 9. (d)  | 10.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

# Hints and Solutions

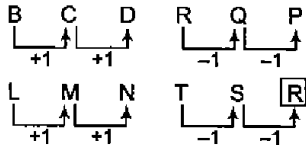
48. The pattern of series is



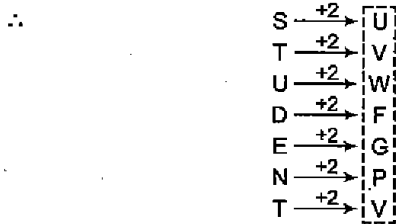
49. The pattern of series is



50. The pattern of series is



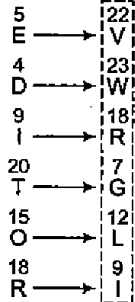
51. Given, A  $\xrightarrow{+2}$  C, B  $\xrightarrow{+2}$  D and C  $\xrightarrow{+2}$  E and so on



52. Given, A=Z, B=Y and so on

**Note** Letters are written in opposite sequence.

Similarly,



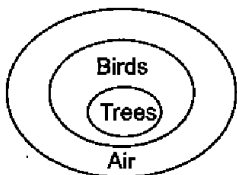
When two letters sum is 27, then it becomes opposite letter to each other.

53. As, 'Rustle' is the sound of 'Leaves'. Similarly, 'Patter' is the sound of 'Rain'.

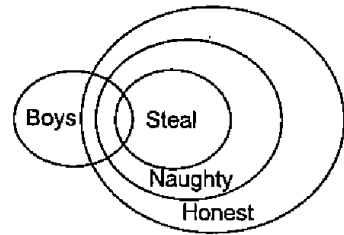
54. As, 'Indiscreet' is the synonym of 'Imprudent'. Similarly, 'Indisposed' is the synonym of 'Reluctant'.

55. As, 'Accident' occur due to 'Carefulness'. Similarly, 'Disease' occur due to 'Sanitation'.

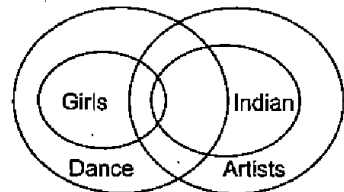
56. (a) So, trees fly in the air.



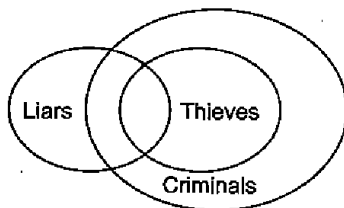
(b) So, some boys are honest.



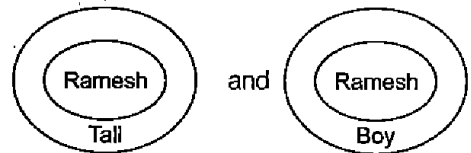
(c) So, some artists like dance.



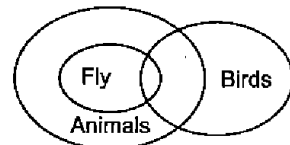
(d) So, all liars are not criminals.



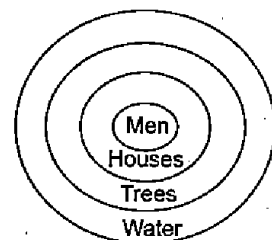
57. (a) So, boys are tall is doubtful because here only Ramesh boy information is given.



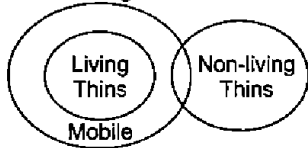
(b) So, some birds are animals.



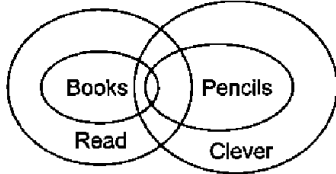
(c) So, men float in water.



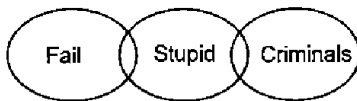
(d) So, some mobile are living and some non-living.



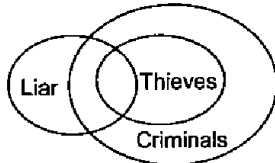
58. (a) So, all clever cannot read.



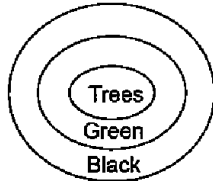
(b) So, all criminals fail is wrong.



(c) So, some liars are criminals.



(d) That is given means - Trees.



So, trees are black.

59. From the statement it is clear that the mother cares for her child and also sweets are not good for her child. So, assumptions (i) and (ii) are implicit in the statement.
60. From the statement is clear that the Supreme Court is above the executive and the Supreme Court is more active than the executive. So, assumptions (i) and (ii) are implicit in the statement.
61. Except 'Tsangpo', all others are wild life sanctuary of Indian but 'Tsangpo' is a river.
62. Except 'Mustard', all others are food grains while 'Mustard' is an oil seed.
63. As, 'Creche' is the place where 'Infants' are kept. Similarly, 'Cottage' is the place where 'Guests' are kept.
64. As, 'Pesticide' is used for safety of 'Plant'. Similarly, 'Vaccination' is used for safety of 'Body'.
65. As, 'Stare' and 'Glance' is the synonym to each other. Similarly, 'Step' and 'Walk' is the synonym to each other.
66. As 'Ecstasy' and 'Pleasure' is the synonym to each other. Similarly, 'Rage' and 'Anger' is the synonym to each other.
67. As, 'Necromany' is the evil thing performed by 'Ghosts'. Similarly, 'Sorcery' is the evil things performed by 'Spirit'.
68. As, 'Firm' and 'Flabby' is the antonym to each other. Similarly, 'Piquant' and 'Bland' is the antonym to each other.
69. As, 'vitamins' is discovered by 'Funk'. Similarly, 'Radioactivity' is discovered by 'Curie'.

70. As, 'Contamination' affected 'Food'. Similarly, 'Infection' affected 'Body'.

71. Present cost of article = ₹ 50

$$\therefore \text{After two years the cost of article} \\ = 50 \times \frac{(100 + 300)}{100} \times \frac{(100 + 300)}{100} = 50 \times \frac{400}{100} \times \frac{400}{100} = ₹ 800$$

72. True weight = 1000 g, Selling weight = 900 g

$$\text{Error weight} = (1000 - 900)g = 100g$$

$$\therefore \text{Gain percentage} = \frac{\text{Error weight}}{\text{Selling weight}} \times 100 \\ = \frac{100}{900} \times 100 = \frac{100}{9} \%$$

73. Suppose cost price of bullock = ₹ x

and cost price of cart = ₹ (1800 - x)

$$\text{Then, } x \times \frac{120}{100} + (1800 - x) \times \frac{130}{100} = 1800 \times \frac{\left(100 + \frac{155}{6}\right)}{100} \\ \Rightarrow x \times \frac{120}{100} + (1800 - x) \times \frac{130}{100} = 1800 \times \frac{755}{6 \times 100} \\ \Rightarrow \frac{120x}{100} + \frac{234000 - 130x}{100} = 3 \times 755 \\ \Rightarrow \frac{120x + 234000 - 130x}{100} = 2265 \Rightarrow 10x = 234000 - 226500 \\ \Rightarrow 10x = 7500 \Rightarrow x = \frac{7500}{10} = ₹ 750$$

74. Suppose initial expenditure on food per day = ₹ x

$$\text{Then, } \frac{x}{35} - \frac{(x + 42)}{42} = 1 \\ \Rightarrow \frac{42x - 35x - 35 \times 42}{35 \times 42} = 1 \Rightarrow 7x - 1470 = 1470 \\ \Rightarrow 7x = 2940 \Rightarrow x = \frac{2940}{7} = ₹ 420$$

75. Age of new comer =  $18 - \left(24 \times \frac{1}{12}\right) = (18 - 2) \text{ yr} = 16 \text{ yr}$

76. From option (d),  $51 + 34 = 85$  and  $51 \times 2 = 102$

$$34 \times 3 = 102$$

77. Suppose rest of food remaining for x days.

$$\text{Then } 200 \times 31 = 200 \times 27 + (200 - 120) \times x \\ \Rightarrow 6200 = 5400 + 200x - 120x \Rightarrow 80x = 800 \\ x = \frac{800}{80} = 10 \text{ days}$$

78. Suppose number = x

$$\text{Then, } \frac{(x + 10) \times 7}{5} - 5 = 88 + 2 \\ \Rightarrow 7x + 70 - 25 = 44 \times 5 \Rightarrow 7x + 45 = 220 \\ \Rightarrow 7x = 220 - 45 = 175 \Rightarrow x = \frac{175}{7} = 25$$

79. Suppose average money spent by 19 persons = ₹ x

$$\text{Then, } 19 \times x = 13 \times 79 + (19 - 13) \times (x + 4) \\ \Rightarrow 19x = 1027 + 6x + 24 \\ \Rightarrow 13x = 1051 \Rightarrow x = ₹ \frac{1051}{13} \\ \therefore \text{Total money spent by them} = 19 \times \frac{1051}{13} = ₹ 1536.077$$



**80.** Suppose A's do whole work =  $x$  min  
and B's do whole work =  $y$  min  
 $\therefore$  A's 4 min work =  $\frac{4}{x}$   
and B's 6 min work =  $\frac{6}{y} \therefore \frac{4}{x} + \frac{6}{y} = \frac{4}{5}$   
 $\Rightarrow \frac{4y + 6x}{xy} = \frac{4}{5}$

$\Rightarrow 20y + 30x = 4xy$  ... (i)

According to the question,  $\frac{1}{x} + \frac{1}{y} = \frac{1}{6}$

$\Rightarrow \frac{x+y}{xy} = \frac{1}{6} \Rightarrow \frac{xy}{x+y} = 6$

$\Rightarrow xy = 6(x+y)$  ... (ii)

On putting value  $xy$  in Eq. (i), we get

$20y + 30x = 24x + 24y$

$\Rightarrow 4y = 6x$

$\Rightarrow 2y = 3x \Rightarrow y = \frac{3}{2}x$

Again from Eq. (ii), we get  $x \times \frac{3}{2}x = 6(x + \frac{3}{2}x)$

$\Rightarrow x^2 = 4\left(\frac{5x}{2}\right) \Rightarrow x = 10$  min

From Eq. (ii), we get  $10 \times y = 6(16 + y)$

$\Rightarrow 10y = 60 + 6y$

$\Rightarrow 4y = 60$

$\Rightarrow y = 15$  min

Hence, slower typist take 15 min to complete the typing job.

**81.** Suppose 25 paise coins =  $x$

Then, ₹ 1 coins =  $3x$

and 50 paise coins =  $y$

$\therefore x + y + 3x = 220$

$\Rightarrow 4x + y = 220$  ... (i)

and  $\frac{x}{4} + \frac{y}{2} + 3x = 160 = \frac{x + 2y + 12x}{4} = 160$

$\Rightarrow 13x + 2y = 640$  ... (ii)

On solving Eqs. (i) and (ii), we get

$4x + y = 220$  ... (i)

$13x + 2y = 640$  ... (ii)

$8x + 2y = 440$

$13x + 2y = 640$

$5x = 200$

$x = 40$

From Eq. (i), we get  $y = 220 - 4 \times 40 = 220 - 160 = 60$

**82.** Let the numbers be  $x$  and  $y$  respectively.

Then,  $(x + y) = 3(x - y) \therefore 2x = 4y$

$\Rightarrow x = 2y$

$\therefore$  Smaller number ( $y$ ) = 10

$\therefore$  Larger number =  $2 \times 10 = 20$

**83.** Suppose loan amount = ₹  $x$

Then,  $x + \frac{x \times 10 \times 10}{100} = 22500 \Rightarrow 2x = 22500$

$\Rightarrow x = ₹ 11250$

**84.** Suppose principal amount = ₹  $P$

Then,  $3P - P = \frac{P \times r \times 8}{100} \Rightarrow 2P = \frac{P \times r \times 8}{100}$

$\Rightarrow r = \frac{2 \times 100}{8} = 25\%$

$\therefore$  After 20 yr =  $P + \left\{ \frac{P \times 25 \times 20}{100} \right\} = P + 5P = 6P$

**85.** Let  $a = 69$  and  $b = 65$




So,  $\frac{69 \times 69 \times 69 - 65 \times 65 \times 65}{69 \times 69 + 69 \times 65 + 65 \times 65} = \frac{a^3 - b^3}{a^2 + ab + b^2}$   
 $= \frac{(a-b)(a^2 + b^2 + ab)}{a^2 + ab + b^2} = a - b = 69 - 65 = 4$




**86.** Answer figure (b) will complete the question figure.




**87.** Answer figure (b) will complete the question figure.




**88.** Answer figure (c) will complete the question figure.

**89.** Answer figure (a) will complete the question figure.

**90.** From figure (3), L  $\Rightarrow$    
and figure (4), Q  $\Rightarrow$    
 $\therefore$    $\Rightarrow$  LQ

**91.** From figure (4), S  $\Rightarrow$    
and figure (1), M =   
 $\therefore$    $\Rightarrow$  SM

**92.** From figure (3) J  $\Rightarrow$    
and figure (1) R  $\Rightarrow$    
  $\Rightarrow$  JR

**93.** From figure (2) B  $\Rightarrow$    
and figure (1) F  $\Rightarrow$    
 $\therefore$    $\Rightarrow$  BF

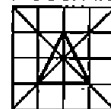
**94.** Except figure (d), all others lower circle is put on upper circle but in figure (d) upper circle is put on lower circle.

**95.** Only figure (b), shaded portion is common in all three circles.

**96.** Except figure (d), all others two-two designs are opposite to each other but in figure (d) two designs in same directions.

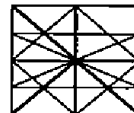
**97.** Except figure (d), all others are sum (four, six) lines geometrical figure but in figure (d) geometrical design has odd (five) lines.

**98.** Hence, question figure is hidden in answer figure (b).



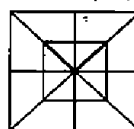
(b)

**99.** Hence, question figure is hidden in answer figure (c).



(c)

**100.** Hence, question figure is hidden in answer figure (a).



(a)