

AFCAT

Solved Paper

11/2012

Directions (Q.Nos. 1-3) *Read the following passage carefully and answer the questions given below.*

Passage

The development and widespread use of computer technology and the internet have transformed how we communicate, how business is conducted, how information is dispersed and how society is organised. Prior to 1980, in-depth information about any one subject-matter was attained through laborious research involving countless visits to libraries and via repeated interviews with persons of known reputation and reputable expertise. Now, a great deal of information is available at the click of a mouse button, all attainable from within the confines of one's own home or from the use of a computer in an office. Previous labour-intensive support jobs, such as loading and unpacking of trucks, luggage handling at airports and food manufacturing, once performed by a large middleclass workforce, are now performed routinely by robots which are monitored by computer-controlled systems. Our lives have been simplified but these benefits which have been ushered in by the technology revolution have had an adverse effect on the core of our interpersonal-relationships. Mere communication is no longer via postal mail or face-to-face contact, but rather via electronic email, personal internet message boards and by virtue of hand-held personal electronic assistants. Although computer technology has brought us to within a mouse-click of any sought-after piece of information, this technology boom has sequestered us to the confines of our computer desks and homes and has removed us away from those traditional settings where personal and communication skills are developed.

1. The author's attitude about the advent of computer technology can be best summarised as
(a) optimistic and thankful (b) appreciative but reserved
(c) candid and reverent (d) understanding and obsessive
2. The author would agree with which of the following statements?
(a) The advent of computer technology has decreased access to libraries
(b) Because of advancements in robotics, labour-intensive jobs are more plentiful
(c) Although heralded as a great leap forward, the widespread use of computer technology is not without its setbacks
(d) Of all the benefits ushered in by the use the internet, electronic email is the most beneficial
3. The author's primary purpose in writing this passage is most likely which of the following?
(a) To downplay the need for the internet
(b) To explain how robotics and the internet have had both a positive and negative influence on how we live
(c) To pave way for the next great technology revolution
(d) To showcase the wonders of recent technology advancements

Directions (Q.Nos. 4-6) *In each of the following, choose the word most similar in meaning to the word given in capitals.*

4. OSMOSIS
(a) Gradual acceptance (b) Slow recovery (c) Abrupt ending (d) Strength
5. OSTRACISE
(a) Take away (b) Cut off (c) Include (d) Expedite
6. ALACRITY
(a) Hesitatingly (b) Eagerness (c) Unwillingly (d) Laziness

Directions (Q.Nos. 7-10) *In each of the following, choose the word most nearly opposite in meaning to the word given in capitals.*

7. PROFUSION
(a) Travesty (b) Validity
(c) Scarcity (d) Agitated
8. ESCHEW
(a) Vicious (b) Invite
(c) Use (d) Emanate
9. ABSTAIN
(a) Refuse (b) Oppose
(c) Run away (d) Permit
10. INSOLENT
(a) Affable (b) Spotted
(c) Foolish (d) Mature

Directions (Q.Nos. 11-15) *In each of the following questions, find out which part has an error.*

11. If you will (a)/follow my instructions (b)/you will get (c)/a suitable reward for this. (d)
12. Harshad, along with (a)/his brother (b)/ Ashwani and six senior officials (c)/were arrested. (d)
13. He received timely support (a)/from his elder brother (b)/who is working abroad (c)/for the last six years. (d)
14. One of the drawbacks (a)/of modern education are (b)/that it does not (c)/encourage original thinking. (d)
15. Morphine and other (a)/narcotic drugs are valuable (b)/medically, if misused (c)/it can cause irreparable damage. (d)

Directions (Q.Nos. 16-20) *Pick up the most effective word from the given words to fill in the blanks to make the sentence meaningfully complete.*

16. His book was marked by many remarks which made us forget its main theme.
(a) irrelevant (b) objective
(c) slanted (d) digressive
17. Some people have the capacity for learning foreign languages but they have no to speak.
(a) interest (b) ability
(c) fondness (d) inclination
18. The dispute among the parties became so that there was every likelihood of a free exchange of blows.
(a) complicated (b) acrimonious
(c) bellicose (d) aggressive
19. The judge decided to resign, when he was for promotion to Chief Justice.
(a) passed by (b) passed out
(c) passed off (d) passed over

20. Questions will be answered by a of experts.
(a) staff (b) panel (c) bunch (d) band

Directions (Q.Nos. 21-60) *Choose the most effective answers.*

21. Who among the following had discovered the Brahmi Script in 1838?
(a) Sir William Jones (b) Dr. Rajendra Lal Mitra
(c) Dr. Bhaw Dagi (d) James Prinsep
22. Who was known as father of administration in medieval India?
(a) Akbar (b) Shershah Suri
(c) Humayun (d) Aurangzeb
23. Brahma Samaj was founded by
(a) Raja Rammohan Roy (b) Jawaharlal Nehru
(c) William Carey (d) Jonathan Duncan
24. Who discharges the function of the President when vacancy occur in the office of the President and Vice-President simultaneously, owing to removal, death, resignation or the incumbent or otherwise?
(a) Chief Justice of High Court
(b) Chief Justice of India
(c) Speaker of Lok Sabha
(d) Chairman of Rajya Sabha
25. With which sport is Lewis Hamilton associated?
(a) Golf (b) Hockey (c) Billiards (d) F-1
26. From which country does the top seeded tennis player Rafael Nadal hail from?
(a) France (b) Germany (c) Spain (d) Russia
27. Which Indian Boxer won the gold medal in 60 kg category in Asian games and became the youngest to win a boxing gold for India?
(a) Vijendra Singh (b) Vikas Krishan
(c) Ronjan Sodhi (d) Somdev
28. In 2010, Leander Paes in partnership with Cara Black won the mixed doubles title of
(a) Australian Open Tennis Championship
(b) Wimbledon Open Tennis Championship
(c) Both of the above
(d) None of the above
29. Term 'Prime Vertical' in astronomy is defined as
(a) the vertical circle which passes through the East and West points of the horizon and is at right angles to the meridian of the place
(b) the vertical circle which passes through the North and South points of the horizon and is at right angles to the meridian of the place
(c) the vertical circle which passes through the East and West points of the horizon and is parallel to the meridian of the place
(d) the vertical circle which passes through the North and South points of the horizon and is parallel to the meridian of the place

- 30. MNREGA stands for**
 (a) Mahatma Gandhi National Revenue Engagement Guarantee Association
 (b) Maharaja National Revenue Employment Guarantee Act
 (c) Mahanagar National Rural Employment Guarantee Act
 (d) Mahatma Gandhi National Rural Employment Guarantee Act
- 31. River Jhelum emerges from**
 (a) Northern slopes of the Kailash range
 (b) Spring at Verinag
 (c) Rakas Lake
 (d) Amarkantak plateau
- 32. Haematite ores is the ore of which metal?**
 (a) Iron (b) Aluminium
 (c) Zinc (d) Cobalt
- 33. Green revolution relates to which of the following?**
 (a) Self-dependence in foodgrains production
 (b) Self-dependence in milk production
 (c) Self-dependence in petroleum crude oil production
 (d) None of the above
- 34. Nuclear Submarine Akula has been handed over to India recently by**
 (a) France (b) Germany
 (c) USA (d) Russia
- 35. Who is the author of book 'The Fragrance of Forgotten Years'?**
 (a) David Omand (b) Bilkees Latif
 (c) Pranab Bardhan (d) Jagat S Mehta
- 36. Vertebrates have two endocrine glands associated with the brain, namely**
 (a) thyroid, thymus (b) pituitary, pancreas
 (c) pituitary, pineal (d) pancreas, pineal
- 37. The layer common to two adjacent plant cells called middle lamella is composed of**
 (a) calcium phosphate (b) calcium sulphate
 (c) calcium carbonate (d) calcium pectate
- 38. With the increase of the effective nuclear charge, the size of the atom or ion**
 (a) increases
 (b) decreases
 (c) remains the same, since it has no bearing on size
 (d) it will depend on period to period and group to group
- 39. On which of the following statements, is the kinetic theory of matter base?**
 (a) Matter is made up of molecules
 (b) Molecules are in rapid motion
 (c) Molecules experience forces of attraction between one another
 (d) All of the above
- 40. When heated with chloroform, secondary amines and tertiary amines**
 (a) gives isocyanides (b) gives cyanides
 (c) do not give isocyanides (d) (a) and (b)
- 41. The number whose square is equal to the difference of the squares of 40 and 32, is**
 (a) 45.09 (b) 24 (c) 25 (d) 28
- 42. 15 buckets of water fill a tank when the capacity of each bucket is 7 L. How many buckets will be needed to fill the same tank, if the capacity of the bucket is 5 L?**
 (a) 12 (b) 24 (c) 21 (d) 30
- 43. A vessel, full of water, weighs 27.5 kg, when the vessel is $\frac{1}{4}$ full, it weighs 12.26 kg. Find the weight of empty vessel.**
 (a) 7.18 kg (b) 6.54 kg (c) 2.75 kg (d) 2.5 kg
- 44. If $a + b = 10$ and $ab = 21$, find the value of $a^3 + b^3$.**
 (a) 370 (b) 210 (c) 730 (d) 598
- 45. If $\frac{a}{(a+b)} = \frac{17}{23}$, what is $\frac{(a+b)}{(a-b)}$ equal to?**
 (a) $\frac{13}{7}$ (b) $\frac{23}{11}$ (c) $\frac{14}{5}$ (d) $\frac{25}{9}$
- 46. $\frac{(598 + 479)^2 - (598 - 479)^2}{(598 \times 479)}$ is equal to**
 (a) 2 (b) 6 (c) 4 (d) 8
- 47. A man's average monthly expenditure for the first four months of the year was ₹ 225.25. For the next five months, the average monthly expenditure was ₹ 20.75 more than what it was during the first four months? If the person spent ₹ 700 in all during the remaining three months of the year find what percentage of his annual income of ₹ 3500 he saved in the year?**
 (a) 10 (b) 15 (c) 19.11 (d) 25
- 48. The ratio of the present age of P and Q is 2.3. The ratio of their age after 18 yr will be 4.5. What is the present age of Q?**
 (a) 26 yr (b) 25 yr (c) 24 yr (d) 27 yr
- 49. The mean temperature of Monday to Wednesday was 37°C and of Tuesday to Thursday was 34°C. If the temperature on Thursday was $\frac{4}{5}$ th that of Monday, the temperature on Thursday was**
 (a) 36.5°C (b) 36°C
 (c) 35.5°C (d) 34°C
- 50. Srinivasan invests two equal amounts in two banks giving 10% and 12% rate of interest respectively. At the end of year, the interest earned is ₹ 1650. Find the sum invested in each.**
 (a) ₹ 8500 (b) ₹ 15000
 (c) ₹ 7500 (d) ₹ 17000
- 51. The simple interest on a sum of money is $\frac{1}{9}$ of the sum. The number of years is numerically equal to the rate per cent per annum. The rate per cent per annum is**
 (a) 3.33 (b) 5 (c) 6.66 (d) 10

52. A sum of ₹ 10000 is lent partly at 8% and the remaining at 10% per annum, if the yearly interest on the average is 9.2%, the money lent at 10% is
 (a) ₹ 6000 (b) ₹ 5500
 (c) ₹ 5000 (d) ₹ 4500
53. In an election between two candidates, 60% of the voters cast their votes, out of which 4% of the votes were declared invalid. A candidate got 7344 votes which were 75% of the total valid votes. Find the total number of votes enrolled in that election.
 (a) 1700 (b) 17590
 (c) 17000 (d) 7344
54. If the price of kerosene be raised by 9%, find how much per cent a house-holder must reduce his consumption of kerosene so that not to increase his expenditure?
 (a) 8 (b) 8.25
 (c) 9 (d) 9.25
55. 65 pupils from a school entered for an examination and 80% of them passed. Another school entered 10 more pupils than the first school and four more pupils passed. The percentage of pass in the second school was
 (a) 75 (b) 84
 (c) 72 (d) 74.6
56. A jar contains black and white marbles. If there are ten marbles in the jar, then which of the following could not be the ratio of black to white marbles?
 (a) 9 : 1 (b) 7 : 3
 (c) 1 : 10 (d) 1 : 4
57. A sum of money is to be distributed among P, Q and R in the ratio of 6 : 19 : 7. If R gives ₹ 200 from his share to Q, the ratio of P, Q and R becomes 3 : 10 : 3, what is the total sum?
 (a) ₹ 3200 (b) ₹ 12800
 (c) ₹ 6400 (d) Data inadequate
58. In what ratio should tea worth ₹ 10 per kg be mixed with tea worth ₹ 14 per kg, so that the average price of the mixture may be ₹ 11 per kg?
 (a) 2 : 1 (b) 3 : 1
 (c) 3 : 2 (d) 4 : 3
59. Calculate the amount of ₹ 1250 for 2 yr at 4% per annum, compounded yearly.
 (a) ₹ 676 (b) ₹ 1352
 (c) ₹ 1778 (d) ₹ 255
60. A sum of ₹ 3200 is lent out into two parts, one at 6% and another at 4%. If the total annual income is ₹ 176, find the money lent at 6%.
 (a) ₹ 2400 (b) ₹ 800
 (c) ₹ 1600 (d) ₹ 3200

Directions (Q.Nos. 61-70) In the following questions, the words given bear a certain relationship. Find out from the choices the words with the same relationship.

61. Surgeon : Scalpel :: ?
 (a) Musician : Instrument (b) Sculptor : Chisel
 (c) Carpenter : Cabinet, (d) Baker : Oven
62. Creche : Infants :: ?
 (a) School : Pupils (b) Deck : Sailors
 (c) Cottage : Guests (d) Aircraft : Crew
63. Pesticide : Plant :: ?
 (a) Injection : Disease (b) Teacher : Student
 (c) Medicine : Cure (d) Vaccination : Body
64. Stare : Glance :: ?
 (a) Gulp : Sip (b) Story : tell
 (c) Hunt : Stalk (d) Step : Walk
65. Fish : Aquarium :: ?
 (a) Student : Hostel (b) Bird : Forest
 (c) Goods : Consignment (d) Bee : Apiary
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
68. Coin : Mint :: ?
 (a) Grain : Field (b) Hay : Stable
 (c) Wine : Brewery (d) Book : Publisher
69. Oak : Coniferous :: ?
 (a) Chimpanzee : Ape (b) Animals : Carnivore
 (c) Fish : Sea (d) Tree : Grove
70. Onam : Kerala :: ?
 (a) Christmas : Christians (b) Bhangra : Punjab
 (c) Kathak : Uttar Pradesh (d) Bihu : Asom

Directions (Q.Nos. 71-75) In each of the following questions, a group of three interrelated words is given. Choose a word from the given alternatives, that belongs to the same group.

71. Calendar : Dates :: Dictionary : ?
 (a) Vocabulary (b) Language
 (c) Words (d) Book
72. Heed : Neglect :: Pacify : ?
 (a) Incite (b) Allay
 (c) War (d) Victory
73. Malaria : Disease :: Sword : ?
 (a) Wound (b) Spear (c) Weapon (d) Rifle
74. Eye : Wink :: Heart : ?
 (a) Move (b) Throb (c) Pump (d) Quiver
75. Earth : Sun :: Moon : ?
 (a) Orbit (b) Sky (c) Star (d) Earth

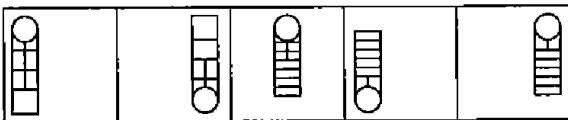
Directions (Q.Nos. 76-80) Choose the word which is least like the other words in the group.

76. (a) Rose (b) Lotus (c) Marigold (d) Tulip
 77. (a) Book (b) Sharpener (c) Pencil (d) Paper
 78. (a) Copper (b) Tin (c) Brass (d) Zinc

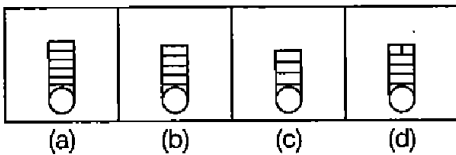
79. (a) Kiwi (b) Eagle (c) Emu (d) Penguin
 80. (a) Raniganj (b) Jharia (c) Bokaro (d) Baroda

Directions (Q.Nos. 81-85) There are two sets of figures namely the problem figures and answer figures (a), (b), (c) and (d). Select one figure from the answer figures which will continue the same series as given in the problem figures.

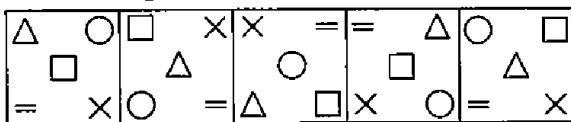
81. Problem Figures



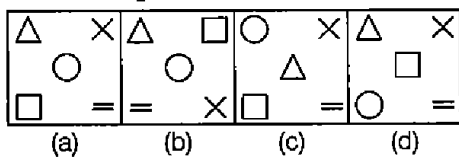
Answer Figures



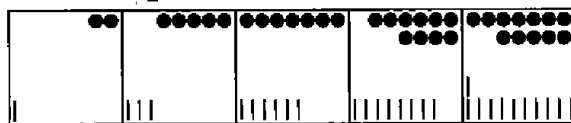
82. Problem Figures



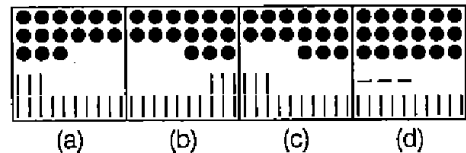
Answer Figures



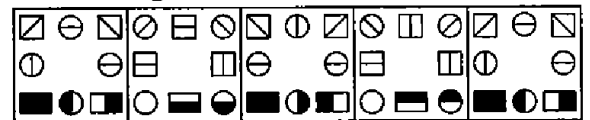
83. Problem Figures



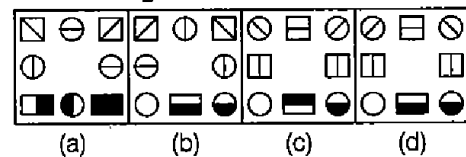
Answer Figures



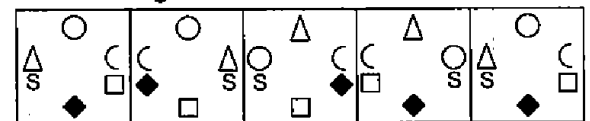
84. Problem Figures



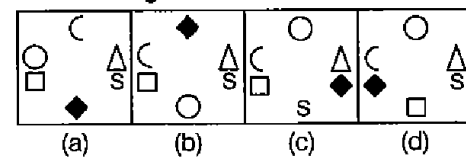
Answer Figures



85. Problem Figures

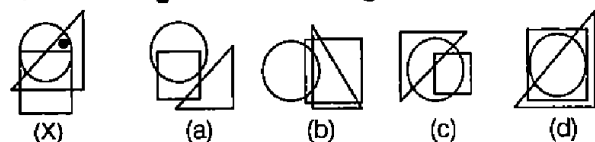


Answer Figures

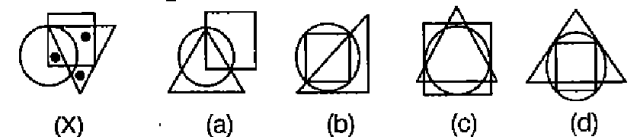


Directions (Q. Nos. 86-90) From amongst the figures marked namely (a), (b), (c) and (d), select the figure which satisfies the same conditions of placement of the dot as in figure (X).

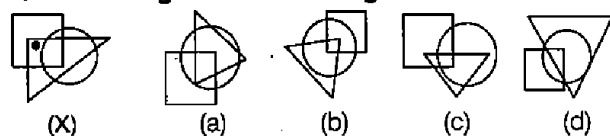
86. Question Figure Answer Figures



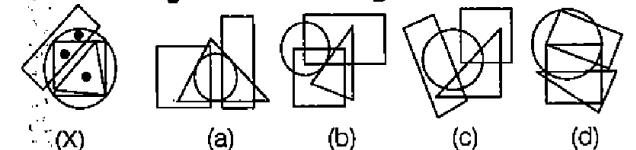
88. Question Figure Answer Figures



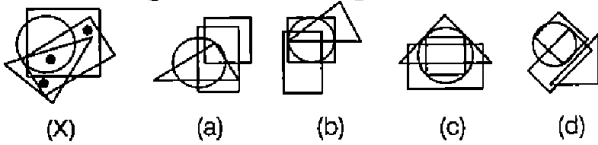
87. Question Figure Answer Figures



89. Question Figure Answer Figures

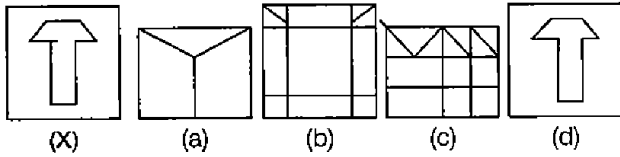


90. Question Figure Answer Figures

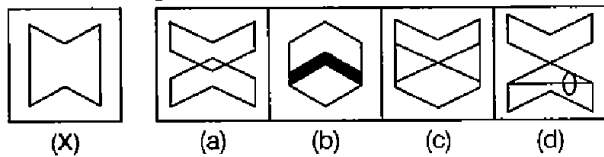


Directions (Q.Nos. 91-95) *The original figure is embedded or hidden in one of the answer figures (a), (b), (c) and (d). Select the alternative that carries the correct figure which clearly shows the embedded portion of the original figures.*

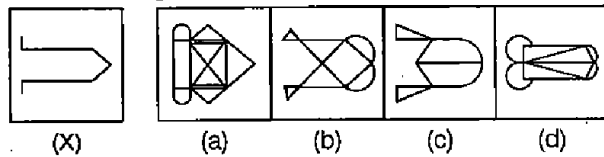
91. Question Figure Answer Figures



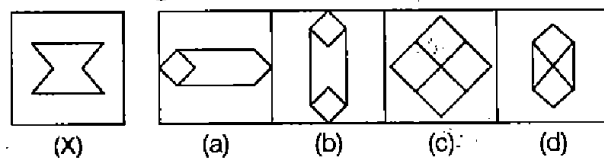
92. Question Figure Answer Figures



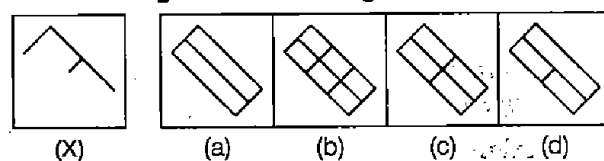
93. Question Figure Answer Figures



94. Question Figure Answer Figures

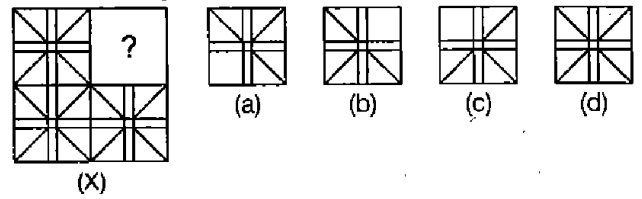


95. Question Figure Answer Figures

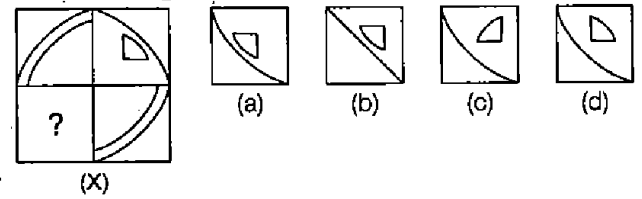


Directions (Q.Nos. 96-100) *Find out the given option (a), (b), (c) and (d) the right figure to fit in the missing figure.*

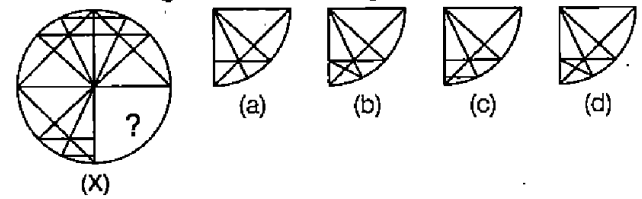
96. Question Figure Answer Figures



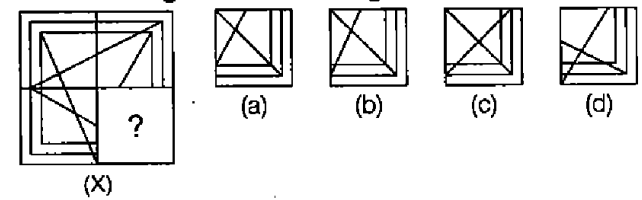
97. Question Figure Answer Figures



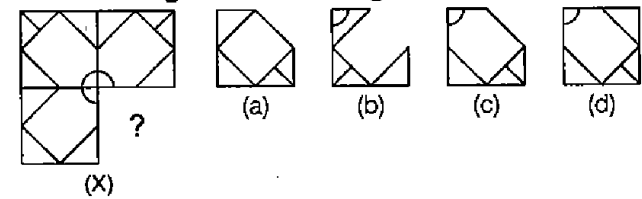
98. Question Figure Answer Figures



99. Question Figure Answer Figures



100. Question Figure Answer Figures



Answers

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

Hints and Solutions

- 22.** Shershah Suri was first medieval king who organised his administration—especially civil and land administration. Akbar was by and far influenced by his administration.
- 23.** Brahma Samaj was founded by Raja Rammohan Roy in 1828 in Bengal. It opposed sati system.
- 24.** When the offices of President and Vice-president are vacant simultaneously Chief Justice of India shall discharge the function of the President.
- 26.** Top seeded tennis player Rafael Nadal hails from Spain.
- 30.** MNREGA stands for Mahatma Gandhi National Rural Employment Guarantee Act. This act was implemented in 2006.
- 32.** Haematite is an ore of iron. It contains 60-70% of pure iron. It is reddish in colour and is known as red ore.
- 33.** Green Revolution is associated with agriculture. It was started in 1960s to make the country self-dependent in foodgrains production.
- 34.** Akula is a Russian nuclear submarine prepared for India.
- 35.** The book 'The Fragrance of Forgotten Years' is written by Bilkees Latif.
- 41.** $(40)^2 - (32)^2 = (40 + 32)(40 - 32) = 72 \times 8 = 576$
 $x^2 = 576$
 $x = 24$
 \therefore Number = 24
- 42.** Number of buckets = $\frac{15 \times 7}{5} = 21$
- 44.** We have, $a + b = 10$ and $ab = 21$
 $a^3 + b^3 = (a + b)^3 - 3ab(a + b) = (10)^3 - 3(21)(10)$
 $= 1000 - 630 = 370$
- 45.** $\frac{a}{a+b} = \frac{17}{23}$
 $1 - \frac{a}{a+b} = 1 - \frac{17}{23}$
 $\frac{a+b-a}{a+b} = \frac{6}{23}$
 $\frac{b}{a+b} = \frac{6}{23}$
 $\frac{a}{b} = \frac{17}{6}$
 $\frac{a}{a+b} - \frac{a}{a+b} = \frac{17}{23} - \frac{6}{23}$
 $\frac{a-b}{a+b} = \frac{11}{23}$
 $\frac{a+b}{a-b} = \frac{23}{11}$
- 46.** Let $598 = a$ and
 $479 = b \Rightarrow \frac{(a+b)^2 - (a-b)^2}{ab} = \frac{4ab}{ab} = 4$
- 47.** Total expenditure four months = $225.25 \times 4 = 901$
 Total expenditure five months = $(225.25 + 20.75) \times 5$
 $= 246 \times 5 = ₹ 1230$
 Total expenditure in 12 months = $901 + 1230 + 700 = ₹ 2831$
 Saving = $3500 - 2831 = ₹ 669$
 Percentage saving = $\frac{669}{3500} \times 100 = 19.11\%$
- 48.** Let present age of $P = 2x$ yr
 and present age of $Q = 3x$ yr
 $\frac{2x+18}{3x+18} = \frac{4}{5}$
 $12x + 72 = 10x + 90$
 $2x = 18$
 $x = 9$
 \therefore Present age of $Q = 3 \times 9 = 27$ yr
- 49.** $M + T + W = 37 \times 3 = 111^\circ\text{C}$
 $T + W + Th = 34 \times 3 = 102^\circ\text{C}$
 On subtracting Eqs. (i) and (ii),
 $M - Th = 9^\circ\text{C}$
 $M - \frac{4}{5}M = 9$
 $M = 45^\circ\text{C}$
 $Th = \frac{4}{5} \times 45 = 36^\circ\text{C}$
- 50.** Let sum invested = ₹ x
 $\frac{x \times 10 \times 1}{100} + \frac{x \times 12 \times 1}{100} = 1650$
 $22x = 1650 \times 100$
 $x = \frac{1650 \times 100}{22} = ₹ 7500$
- 51.** $SI = \frac{P}{q}, r = t$
 $SI = \frac{P \times r \times t}{100}$
 $\frac{P}{q} = \frac{P \times r \times r}{100}$
 $r^2 = \frac{100}{9}$
 $r = \frac{10}{3} = 3.33\%$
- 52.** Let $P_1 = x, P_2 = (10000 - x)$,
 $r_1 = 8\%, r_2 = 10\%$
 According to the question,
 $\frac{x \times 8 \times 1}{100} + \frac{(10000 - x) \times 10 \times 1}{100} = 920$
 $8x - 10x + 10000 = 920 \times 100$
 $2x = 8000$
 $x = ₹ 4000$
 Money lent at $10\% = 10000 - 4000 = ₹ 6000$
- 54.** Reduce the consumption = $\left(\frac{r}{100+r} \times 100 \right)$
 $\frac{9}{100+9} \times 100 = \frac{900}{109} = 8.25\%$
- 55.** Number of passed pupils = $\frac{80}{100} \times 65 = 52$
 $65 + 10 = 75, 52 + 4 = 56$ out of 75 passed 56 pupils
 Percentage passed = $\frac{56}{75} \times 100 = \frac{224}{3} = 74.6\%$

57. $P \quad Q \quad R$
 $6 : 19 : 7$
 $1200 : 3800 : 1400$
 R gives 200 to Q
 $1200 : 4000 : 1200$
 $3 : 10 : 3$
 \therefore Total amount of P, Q and
 $R = 1200 + 3800 + 1400 = ₹ 6400$

59. $A = P \left(1 + \frac{r}{100}\right)^t = 1250 \left(1 + \frac{4}{100}\right)^2$
 $= 1250 \times \frac{26}{25} \times \frac{26}{25} = 2 \times 676 = ₹ 1352$

60. $P = x \quad P = (3200 - x)$
 $r = 6\% \quad r = 4\%$
 According to the question,
 $\frac{x \times 6 \times 1}{100} + \frac{(3200 - x) \times 4 \times 1}{100} = 176$
 $6x - 4x + 12800 = 17600$
 $2x = 4800$
 $x = ₹ 2400$

Hence, the money lent at 6% = ₹ 2400

81. In every next image, symbol is rotated by 180° and position changes in the sequence of $90^\circ, 45^\circ, 45^\circ$.
 82. In the given question, symbols are changing their position in this pattern



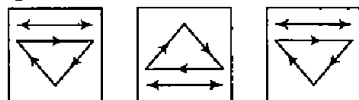
In next figure, rotation is like



Required answer pattern is



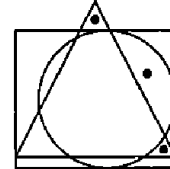
83. Arrangement of lines is left hand side arrangement and it is increasing in the pattern of 2, 3, 2, 3, 2, 3, ...
 While arrangement of points is along right hand side arrangement and it is increasing in the pattern of 3, 2, 3, 2, 3, 2, ...
 84. Symbols in the 1st row changes according to the following.
 $\square \ominus \square$; $\ominus \square \ominus$; $\square \ominus \square$; $\ominus \square \ominus$; $\square \ominus \square$
 So, required answer figure must contain first row as like $\ominus \square \ominus$.
 85. Symbols in the given figure changing their position according to the following



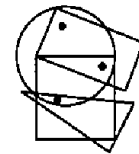
and so on Required answer figure pattern is



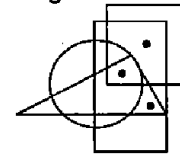
86. In figure (X) dot (.) is inside triangle and circle. In the given figures, only figure (c) can place dot (.) inside triangle and circle.
 87. One dot (.) is inside square and triangle while another dot (.) is inside triangle and circle. The required figure (c) can only contain these two points at required position.
 88. First dot (.) is inside square and circle. Second dot (.) is inside square and triangle while third dot (.) is inside triangle only. The required answer is figure (c).



89. First dot (.) is inside rectangle and circle. Second dot (.) is inside square, rectangle and circle. While third dot (.) is inside triangle, square and circle. The required answer is figure (c).



90. First dot (.) is inside square and rectangle. Second dot (.) is inside square, rectangle, circle and triangle. Third dot (.) is inside rectangle and triangle.



91. Option (d) figure is same as figure (X).
 92.



Figure (X) is embedded in the figure given in option (c).

- 93.

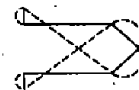


Figure (X) is embedded in the figure given in option (b).

- 94.



Figure (X) is embedded in the figure given in option (b).

- 95.

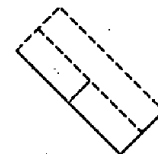


Figure (X) is embedded in the figure given in option (d).