Management Aptitude Test
December 2000
All India Management Aptitude Testing Service (AIMATS)
Section I : Language Comprehension

Directions (Qs. 1 to 5) : **Read the passage given below carefully and then answer these questions based on what is stated or implied in the passage.**

Anxiety and conscience are a pair of powerful dynamos. Of course, I can only speak for myself. Between them, they have ensured that one shall work hard, but they cannot ensure that one shall work at anything worthwhile. They are blind forces which drive but do not direct. Fortunately, I have also been moved by a third motive—the wish to see and understand. Curiosity is another motive for action. It is also one of the distinctive characteristics of human nature and contrasted with the natures of non-human animals. All human beings have curiosity in some degree and we also all have it about things which are of no practical use.

Curiosity may be focussed on anything in the universe, but the spiritual reality of the phenomena should be the ultimate objective of all curiosity for it to be fruitful. Thanks to my mother my approach to this ultimate objective is through the story of human affairs.

1. What is the main objective of this passage ?
(1) Distinguish between human beings and animals
(2) Project curiosity as a potent motivating factor
(3) Project anxiety and conscience as inadequate motivators
(4) Motivation and spiritual reality

2. A characteristic peculiar to human beings that is referred to is
(1) Superior intelligence
(2) Spirit of enquiry
(3) Capacity to rationalise and analyse
(4) Ability to sift the practical from the impractical

3. Which of the following statements is true according to the passage ?
(1) Animals are as curious as human beings
(2) Curiosity is the only motive for action
(3) People motivated by curiosity do not need other motives to guide them
(4) People motivated by anxiety and conscience alone can be misdirected

4. According to the author

(1) Those who have little curiosity are curious about unimportant things

(2) Apart from humans no other living beings have the gift of curiosity

(3) The highest form of curiosity can be satisfied by study of human affairs alone.

(4) Spiritual reality is the ultimate goal of humans through action

5. The author subscribes to the view

(1) One's curiosity should focus beyond the facade on the latent meaning of things

(2) Curiosity is an inherited family characteristic

(3) A study of human affairs is the most effective method of satisfying one's curiosity

(4) In order to motivate, curiosity must be coupled with anxiety and conscience

Directions (Qs. 6 to 10) : **Read the passage given below and then answer these questions which are based on what is stated or implied in the passage.**

Soft-bodied animals like caterpillars often fall a prey to voracious hunters like birds or reptiles. Despite having no means to 'actively' defend themselves, with weapons like claws or jaws, they have, nevertheless, evolved *other equally effective deterrents*. A particular species of the caterpillar lives at an altitude of over 2,500 metres in the Himalayas. It uses prominent colours to inform would-be predators of its inedibility. In the event that an inexperienced or adventurous bird did eat the caterpillar, it would probably vomit it out soon after, and subsequently desist from attacking similar species in the future. Though this would do the unfortunate victim no good, the species benefits. A rare example of the martyr among animals.

6. Caterpillars cannot defend themselves because they

(1) Are passive animals

(2) Are lazy

(3) Cannot acquire weapons

(4) Have no claws or jaws

7. The expression 'other equally effective deterrents' means

(1) Preventive weapons which have equal effect on others

(2) Mechanism which scares everyone equally well

(3) Preventive equipment which is as effective as something that has been already mentioned

(4) Deterrents that are as powerful as those the caterpillars have.

8. The Himalayan caterpillar uses prominent colours to

(1) Warn the predator

(2) Attack the predator

(3) Reveal itself

(4) Defend itself

9. Experienced birds do not attack the Himalayan caterpillar because they are

(1) Repulsive   (2) Inedible

(3) Aggressive   (4) Diseased

10. In the context of the passage, a martyr is one who dies

(1) Without putting up resistance

(2) Without any gain to oneself

(3) While defending one's homeland

(4) To save others

Directions (Qs. 11 to 16) : **In these questions, choose the word from the four alternatives (1), (2), (3) and (4) that is most nearly *similar* in meaning to the word given in CAPITAL letters.**

11. REVULSION

(1) Apathy   (2) Violence

(3) Disgust   (4) Avenge

12. GRIT

(1) Bold   (2) Courage

(3) Grease   (4) Level

13. SALACIOUS
(1) Obscene   (2) Wise
(3) Wholesome   (4) Confident

14. CLOUT
(1) Fear   (2) Claw
(3) Joke   (4) Power

15. FOMENT
(1) Instigate   (2) Shield
(3) Frustrate   (4) Waver

16. REPERCUSSION
(1) Reaction   (2) Acceptance
(3) Resistance   (4) Magnificence

Directions (Qs. 17 to 22) : **In these questions, choose the word from the four alternatives (1), (2), (3) and (4) that is most nearly** *opposite* **in meaning to the word given in CAPITAL letters.**

17. COMPASSIONATE
(1) Indecisive   (2) Unsympathetic
(3) Unlawful   (4) Untrustworthy

18. RESTIVE
(1) Buoyant   (2) Placid
(3) Resistant   (4) Insolent

19. GRADUAL
(1) Energetic   (2) Dynamic
(3) Rapid   (4) Enthusiastic

20. RUDIMENTARY
(1) Developed   (2) Polite
(3) Pale   (4) Weak

21. SALVAGE
(1) Burn   (2) Remove
(3) Confuse   (4) Lose

22. SEDENTARY
(1) Vivid   (2) Afraid
(3) Indolent   (4) Active

Directions (Qs. 23 to 28) : **In these questions, each sentence has a blank indicating that something has been omitted. Beneath each sentence, four alternatives (1), (2), (3) and (4) are given. Choose the word or set of words for each blank that best fits in the blank without changing the meaning of the sentence as a whole.**

23. If you do not ...., all your monthly expenses would exceed your income.
(1) Economise   (2) Spend
(3) Save   (4) Splurge

24. The magician .... the rabbit into a pigeon.
(1) Transformed   (2) Transfigured
(3) Converted   (4) Made

25. The cost of this operation has .... our small store of money.
(1) Destroyed   (2) Damaged
(3) Depleted   (4) Affected

26. He had taken the shocking news quietly, neither .... fate nor uttering any word of bitterness.
(1) Submitting to   (2) Railing against
(3) Conspiring with (4) Dissenting from

27. The greater..................... increase in population, the harder it is for people to find adequate housing.
(1) Of   (2) The
(3) Is the   (4) Is of the

28. Capitalist society .... profit as a valued goal.
(1) Which regards (2) Regarded
(3) Was regarded (4) Regards

Directions (Qs. 29 to 34) : **In these questions, each sentence has four underlined words or phrases marked A, B, C and D. Choose the one that must be changed to make the sentence correct.**

29. Many psychologists today suggest (A)/ that we interpret dreams by compare (B)/ the dreams with (C)/ the reality of each person's (D)/ life.
(1) A   (2) B   (3) C   (4) D

30. When (A)/ I came home, the (B)/ children still didn't finish (C)/ dinner. (D)
(1) A   (2) B   (3) C   (4) D

31. He would (A)/ never have taken the job if he had been knowing (B)/ what great demands (C)/ it would make (D)/ on his time.
(1) A   (2) B   (3) C   (4) D

32. Schools in India can be supported (A)/ either by government budgets (B)/ and (C)/ by private foundations. (D)

(1) A   (2) B
(3) C   (4) D

33. Delhi is definitely (A)/ one of the (B)/ most large (C)/ cities (D)/ in the world.

(1) A   (2) B
(3) C   (4) D

34. Both (A)/ personality and external looking (B)/ vary (C)/ greatly even among (D)/ brothers and sisters.

(1) A   (2) B
(3) C   (4) D

Directions (Qs. 35 to 40) : In each of these questions, a related pair of words is followed by four pairs of words (1), (2), (3) and (4). Choose the pair that best expresses a relationship similar to that expressed in the original pair.

35. Treasure : Chest : :
    (1) Money : Account
    (2) Coins : Mint
    (3) Finance : Exchequer
    (4) Cash : Vault

36. Wool : Warmth : :
    (1) Radio : Broadcast
    (2) Person : Success
    (3) Marketing : Advertising
    (4) Spring : Elasticity

37. Goose : Gander : :
    (1) Dog : Pup   (2) Sheep : Flock
    (3) Doe : Stag
    (4) Horse : Bridle

38. Torch : Liberty : :
    (1) Laws : Court
    (2) Scales : Justice
    (3) Balance : Equity
    (4) Weights : Measure

39. Greenhouse : Plant : :
    (1) Incubator : Infant
    (2) Hen house : Chicken
    (3) Hive : Bee
    (4) Archives : Document

40. Whisper : Speak : :
    (1) Listen : Bear
    (2) Request : Ask
    (3) Brush : Touch
    (4) Heat : Chill

ANSWERS

1. (4)	**2.** (2)	**3.** (4)	**4.** (4)
5. (4)	**6.** (4)	**7.** (3)	**8.** (4)
9. (2)	**10.** (4)	**11.** (3)	**12.** (2)
13. (1)	**14.** (4)	**15.** (1)	**16.** (1)
17. (2)	**18.** (1)	**19.** (3)	**20.** (1)
21. (1)	**22.** (4)	**23.** (3)	**24.** (1)
25. (3)	**26.** (2)	**27.** (3)	**28.** (4)

29. (2) : It should be 'comparing'.
30. (3) : It should be 'hadn't finished'
31. (2) : It should be 'known'.
32. (3) : It should be 'or'.
33. (3) : It should be 'largest'.
34. (4) : It should be 'between'.

35. (4)	**36.** (4)	**37.** (3)	**38.** (2)
39. (1)	**40.** (2)		

Section II : Mathematical Skills

41. Father's age is 4 times that of his son. 5 years back, it was 7 times. His age now is

(1) 30   (2) 35   (3) 40   (4) 45

42. A salesman averages Rs. 240 during a normal 40-hour week. During a sale, his rates are increased by 50%. What is his commission if he puts in 60 hours during the sale ?

(1) 390   (2) 540   (3) 600   (4) 640

43. What is the next number in the series given below ?

      2, 5, 9, 14, 20

(1) 25   (2) 26   (3) 27   (4) 28

44. If two numbers are in the ratio 6 : 13 and their least common multiple is 312, then the sum of the numbers is
(1) 75   (2) 57   (3) 76   (4) 67

45. If $\dfrac{5a + 3b}{2a - 3b} = \dfrac{23}{5}$, then the value of a : b is
(1) 2 : 1   (2) 1 : 4
(3) 1 : 2   (4) 4 : 1

46. Two dice are tossed. The probability that the total score is a prime number is
(1) $\dfrac{1}{6}$ (2) $\dfrac{5}{12}$ (3) $\dfrac{1}{2}$ (4) $\dfrac{7}{9}$

47. In how many ways can six different rings be worn on four fingers of one hand ?
(1) 10   (2) 12
(3) 15   (4) 16

48. What is the next number in the series given below ?
      53, 48, 50, 50, 47
(1) 51   (2) 46
(3) 53   (4) 52

49. A travels from B to C a distance of 250 miles in 5.5 hours. He returns to B in 4 hours 40 minutes. His average speed is
(1) 44   (2) 46
(3) 48   (4) 50

50. A machine is sold at a profit of 10%. Had it been sold for Rs. 40 less, there would have been a loss of 10%. What was the cost price ?
(1) Rs. 175   (2) Rs. 200
(3) Rs. 225   (4) Rs. 250

51. I derive an annual income of Rs. 688.25 from Rs. 10,000 invested partly at 8% p.a. and partly at 5% p.a. simple interest. How much of my money is invested at 5% ?
(1) Rs. 3,725   (2) Rs. 4,225
(3) Rs. 4,800   (4) Rs. 5,000

52. A right-angled triangle has a hypotenuse of 13 cm and one side of 12 cm. Its area is
(1) 30   (2) 39   (3) 80   (4) 78

53. A circular park of 20-metre diameter has a circular path just inside the boundary of width 1 metre. The area of the path is
(1) 15π (2) 17π
(3) 19π (4) 25π

54. An inspector rejects .08% of the meters as defective. How many will he examine to reject 2 ?
(1) 200   (2) 250
(3) 2500   (4) 3000

55. In a survey, it was found that 65% of the people watched news on TV, 40% read in newspaper, 25% read newspaper and watched TV. What percentage of people neither watched TV nor read newspaper ?
(1) 0%   (2) 5%
(3) 10%   (4) 20%

56. x% of y is y% of
(1) x   (2) $\dfrac{y}{100}$ (3) $\dfrac{x}{100}$ (4) 100x

57. A can do a work in 18 days, B in 9 days and C in 6 days. A and B start working together and after 2 days C joins them. What is the total number of days taken to finish the work ?
(1) 4.33   (2) 4.5
(3) 4.66   (4) 5.33

58. The surface area of a cube is 150 sq cm. What is the length of its diagonal in cm ?
(1) 5   (2) $\dfrac{5\sqrt{3}}{2}$ (3) $5\sqrt{3}$ (4) $5\sqrt{2}$

59. What is the missing figure in the expression given below ?
$$\frac{16}{7} \times \frac{16}{7} - \frac{*}{7} \times \frac{9}{7} + \frac{9}{7} \times \frac{9}{7} = 1$$
(1) 1   (2) 7   (3) 4.57   (4) 32

60. If the circumference and the area of a circle are numerically equal, then what is the numerical value of the diameter ?

(1) 1   (2) 2   (3) 4   (4) π

61. In a house, there are six 40-watt lamps which are on for 5 hours a day and three 80-watt fans which are on for 10 hours a day. If electricity costs Rs. 2 per kilowatt hour, what is the monthly electricity bill ?

(1) Rs. 216   (2) Rs. 280
(3) Rs. 315   (4) Rs. 400

62. A driver's income consists of his salary and tips. During one week his tips were 5/4 of his salary. What fraction of his income came from tips ?

(1) 4/9   (2) 5/9
(3) 5/8   (4) 5/4

63. A house costs C rupees. Later it was sold for a profit of 25%. What is the capital gains tax if it is 50% of the profit?

(1) C/24   (2) C/8
(3) C/4   (4) C/2

64. What is the value of the following expression ?

$(1 + x) (1 + x^2) (1 + x^4) (1 + x^8) (1 - x)$

(1) $1 + x^{16}$ (2) $1 - x^{16}$
(3) $x^{16} - 1$ (4) $x^8 + 1$

65. In a triangle ABC, ∠A = 90° and D is mid-point of AC. The value of $BC^2 - BD^2$ is equal to

(1) AD^2 (2) $2AD^2$
(3) $3AD^2$ (4) $4AD^2$

66. If an angle is its own complementary angle, then its measure is

(1) 30   (2) 45
(3) 60   (4) 90°

67. Which of the following equations has real roots ?

(1) $3x^2 + 4x + 5 = 0$
(2) $x^2 + x + 4 = 0$
(3) $(x - 1) (2x - 5) = 0$
(4) $2x^2 - 3x + 4 = 0$

68. A wire is in the form of a circle of radius 35 cm. If it is bent into the shape of a rhombus, what is the side of the rhombus ?

(1) 32 cm   (2) 70 cm
(3) 55 cm   (4) 17 cm

69. In a G.P., the first term is 5 and the common ratio is 2. The eighth term is

(1) 640   (2) 1280
(3) 256   (4) 160

70. How much water must be added to 100 cc of 80% solution of boric acid to reduce it to a 50% solution ?

(1) 30   (2) 40
(3) 50   (4) 60

71. What is the value of $\dfrac{P + Q}{P - Q}$ if $\dfrac{P}{Q} = 7$?

(1) $\dfrac{4}{3}$ (2) $\dfrac{2}{3}$ (3) $\dfrac{2}{6}$ (4) $\dfrac{7}{8}$

72. If the arithmetic mean of two numbers is 5 and geometric mean is 4, then the numbers are

(1) 4, 6   (2) 4, 7
(3) 3, 8   (4) 2, 8

73. X is what percent of 4/5th of X ?

(1) 75   (2) 80
(3) 120   (4) 125

74. Square root of 117649 is

(1) 347   (2) 343
(3) 353   (4) 357

75. Cube root of 658503 is

(1) 83   (2) 77
(3) 87   (4) 97

76. Two rockets approach each other, one at 42,000 mph and the other at 18,000 mph. They start 3256 miles apart. How far are they apart (in miles) 1 minute before impact ?

(1) 1628   (2) 1000
(3) 826   (4) 1200

77. A bought 4 bottles of beer and B bought one bottle of lager, lager per bottle costing twice that of the beer. C bought nothing but paid Rs. 50 for his share of the drink which they mixed together and shared equally. If C's Rs. 50 covered his share, then what is the cost of the lager ?

(1) 50 (2) 75 (3) 30 (4) 46

78. In a class, 20 opted for Physics, 17 for Maths, 5 for both and 10 for other subjects. The class contains how many students ?

(1) 35   (2) 42
(3) 52   (4) 60

79. In a community of 175 persons, 40 read the *Times*, 50 read the *Samachar* and 100 do not read any. How many persons read both the papers ?

(1) 10   (2) 15
(3) 20   (4) 25

80. A worker is paid Rs. 56 for 35-hour week. Upto 40 hours, he is paid at the normal rate and on overtime, 1.5 times the normal. How many hours did he work to get Rs. 88 ?

(1) 48   (2) 52
(3) 58   (4) 55

ANSWERS

41. (3) : F = 4S, (F − 5) = 7 (S − 5)
$\Rightarrow$ F = 40, S = 10

42. (2) : Rate is increased from Rs. 6 per hour to Rs. 9 per hour.

43. (3) : The sequence in the given series is + 3, + 4, + 5, + 6, + 7.

44. (3) : Let the numbers be 6k and 13k.
L.C.M. = 312
L.C.M. of 6k and 13k
$= 6 \times 13 \times k$
$\therefore 6 \times 13 \times k = 312$
$\Rightarrow$ k = 4.

$\therefore$ Numbers are 24 and 52.
$\therefore$ Sum = 24 + 52 = 76

45. (4) : $\dfrac{5a + 3b}{2a - 3b} = \dfrac{23}{5}$
$\Rightarrow 25a + 15b = 46a - 69b$
$\Rightarrow 21a = 84b \Rightarrow a = 4b$
$\Rightarrow \dfrac{a}{b} = \dfrac{4}{1}$

46. (2) : The event "Total score is a prime number when two dice are tossed" occurs in the following 15 ways : (1, 1), (1, 2), (1, 4), (1, 6), (2, 1), (2, 3), (2, 5), (3, 2), (3, 4), (4, 1), (4, 3), (5, 2), (5, 6), (6, 1), (6, 5).
$\therefore$ Required probability
$= \dfrac{15}{36} = \dfrac{5}{12}$

47. (3) : $^6C_4$ ways, i.e. $^6C_2$ ways, i.e.
$\dfrac{6 \times 5}{2 \times 1} = 15$ ways

48. (4) : The numbers at even places form an A.P., e.g. 48, 50, 52, ...

49. (4) : A travels 500 miles in 10 hours 10 minutes, i.e. $10\dfrac{1}{6}$ hours.
$\therefore$ Average Speed
$= \dfrac{500}{10\,\frac{1}{6}} = \dfrac{500 \times 6}{61}$
$= \dfrac{3000}{61} = 49.18 \approx 50$

50. (2) : Let the C.P. be Rs. k.
$\therefore$ S.P. = k + 10% of k $= \dfrac{11k}{10}$
$\therefore$ k − 10% of k $= \dfrac{11k}{10} - 40$

$$\Rightarrow \frac{9k}{10} = \frac{11k}{10} - 40$$

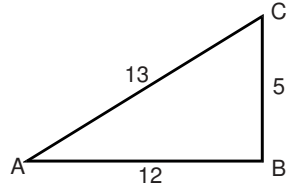$$\Rightarrow \frac{2k}{10} = 40$$

$$\Rightarrow k = 200$$

51. (1) : Let money invested at 5% be Rs. k.

$$\therefore \frac{k \times 1 \times 5}{100} + \frac{(10000 - k) \times 1 \times 8}{100}$$
$$= 688.25$$
$$\Rightarrow 5k - 8k + 80000 = 68825$$
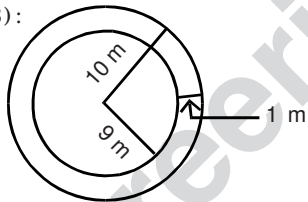$$\Rightarrow 3k = 11175 \Rightarrow k = 3725$$

52. (1) :

For a right-angled triangle ABC given above,
$BC^2 = AC^2 - AB^2 \Rightarrow BC = 5$
∴ Area of ΔABC

$$= \frac{1}{2} \times AB \times BC = 30$$

53. (3) :

Area of the path
$= \pi \times 10^2 - \pi \times 9^2$
$= \pi(100 - 81) = 19\pi$

54. (3) : .08% of k = 2, say

$$\Rightarrow \frac{.08}{100}k = 2 \Rightarrow k = \frac{200}{.08}$$

$$\Rightarrow k = \frac{200 \times 100}{8} = 2500$$

55. (4) :
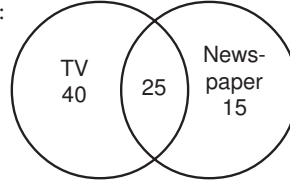
80% of the people either watched TV or read newspaper.
∴ 20% neither watched TV nor read newspaper.

56. (1) : x% of y = y% of k, say

$$\therefore \frac{xy}{100} = \frac{yk}{100} \Rightarrow k = x$$

57. (None) : (A + B + C)'s one day's work

$$= \frac{1}{18} + \frac{1}{9} + \frac{1}{6} = \frac{1 + 2 + 3}{18}$$

$$= \frac{1}{3}$$

(A + B)'s one day's work

$$= \frac{1}{18} + \frac{1}{9} = \frac{1 + 2}{18} = \frac{1}{6}$$

(A + B)'s 2 days' work $= \frac{1}{3}$

Remaining ⅔ of the work is finished by A, B and C together in 2 days.
∴ Total number of days taken to finish the work = 4

58. (3) : Let a be the side of the cube.
∴ $6a^2 = 150 \Rightarrow a = 5$
∴ Length of the diagonal of the cube

$= \sqrt{a^2 + (\text{Diagonal of the face of the cube})^2}$

$$= \sqrt{a^2 + a^2 + a^2}$$

$$= \sqrt{3}a = 5\sqrt{3}$$

59. (4) : $-\dfrac{*}{7} \times \dfrac{9}{7} = -\dfrac{256}{49} - \dfrac{81}{49} + 1$

$\Rightarrow - * \times 9 = -256 - 81 + 49$

$\Rightarrow * = 32$

60. (3) : Let r be the radius of the circle.

$\therefore 2\pi r \approx r^2 \Rightarrow 2r \approx r^2$

$\Rightarrow r \approx 2 \Rightarrow 2r \approx 4$

$\Rightarrow$ Diameter ≈ 4

61. (1) : Consumption per day

$= 6 \times 40 \times 5 + 3 \times 80 \times 10$

$= 1200 + 2400 = 3600$ watt

$= 3.6$ kilowatt

Consumption in a month

$= 3.6 \times 30 = 108$ kilowatt

$\therefore$ Monthly bill $= 108 \times 2$

$= $ Rs. 216

62. (2) : Let salary of the driver be Rs. k. Therefore, income from

tips $= $ Rs. $\dfrac{5}{4} k$

Therefore, total income

$= k + \dfrac{5}{4} k = \dfrac{9k}{4}$

$\Rightarrow \dfrac{5}{9}$ of $\dfrac{9k}{4} = \dfrac{5}{4} k$

$\Rightarrow \dfrac{5}{9}$ of total income

$= $ Income from tips

63. (2) : C.P. = Rs. C

Profit $= 25\%$ of $C = \dfrac{C}{4}$

S.P. $= C + \dfrac{C}{4} = \dfrac{5C}{4}$

If $\dfrac{C}{4} = 50\%$ profit, then

Capital Gains Tax

$= 50\%$ of $\dfrac{C}{4} = \dfrac{C}{8}$

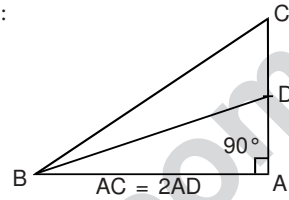**64.** (2) : Given expression

$= (1 - x) (1 + x) (1 + x^2)$
$\qquad (1 + x^4) (1 + x^8)$

$= (1 - x^2) (1 + x^2)$
$\qquad (1 + x^4) (1 + x^8)$

$= (1 - x^4) (1 + x^4) (1 + x^8)$

$= (1 - x^8) (1 + x^8) = 1 - x^{16}$

65. (3) :

$BC^2 - BD^2$

$= (AB^2 + AC^2) - (AB^2 + AD^2)$

$= AC^2 - AD^2$

$= (AC + AD) (AC - AD)$

$= (2AD + AD) (2AD - AD)$

$= 3AD^2$

66. (2) : Let x be the angle.

$\therefore x = 90 - x \Rightarrow x = 45°$

67. (3) : If the equation $ax^2 + bx + c = 0$ has real roots, then
$b^2 - 4ac > 0$.

$(1) \Rightarrow b^2 - 4ac = 16 - 60 < 0$

$(2) \Rightarrow b^2 - 4ac = 1 - 16 < 0$

$(3) \Rightarrow 2x^2 - 7x + 5 = 0$

$\Rightarrow b^2 - 4ac = 49 - 40 = 9 > 0$

$(4) \Rightarrow b^2 - 4ac = 9 - 32 < 0$

68. (3) : Perimeter of the circle

$= 2 \times \dfrac{22}{7} \times 35 = 220$ cm

$\therefore$ Side of the Rhombus
$= 55$ cm

69. (1) : nth term of a G.P. $= ar^{n-1}$ where a = first term and r is the common ratio.

$\therefore$ 8th term $= 5 \times (2)^7$
$$= 5 \times 128 = 640$$

70. (4) : In 100 cc solution, quantity of baric acid = 80 cc and quantity of water = 20 cc. Suppose x litres of water be added to make the solution 50%.

$\therefore$ 50%(100 + x) = 80
$\Rightarrow$ x = 60

71. (1) : $\dfrac{P + Q}{P - Q} = \dfrac{\dfrac{P}{Q} + 1}{\dfrac{P}{Q} - 1} = \dfrac{7 + 1}{7 - 1}$

$$= \dfrac{8}{6} = \dfrac{4}{3}$$

72. (4) : Let x, y be the numbers.

$\therefore$ $\dfrac{x + y}{2} = 5$

and $\sqrt{xy} = 4 \Rightarrow xy = 16$

$\therefore$ x + y = 10, xy = 16
$\Rightarrow (x - y)^2 = (x + y)^2 - 4xy$
$$= 100 - 64 = 36$$
$\Rightarrow$ x − y = 6
$\therefore$ x = 8, y = 2

73. (4) : Suppose X = k% of $\dfrac{4}{5}$ X

$\Rightarrow$ X $= \dfrac{k}{100} \times \dfrac{4}{5}$ X $\Rightarrow$ k = 125

74. (2) : 117649 $= 7 \times 7 \times 7 \times 7$
$\times 7 \times 7$

$\therefore \sqrt{117649} = 7 \times 7 \times 7 = 343$

75. (3) : 658503
$= 3 \times 3 \times 3 \times 24389$
$= 3 \times 3 \times 3 \times 29 \times 29 \times 29$
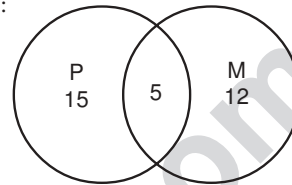
$\therefore \sqrt[3]{658503} = 3 \times 29 = 87$

76. (2) : Because they cover 60000 miles in 60 minutes, i.e. 1000 miles in one minute, therefore, they should be 1000 miles apart, 1 minute before impact.

77. (1) : Let cost of beer = Rs. x/bottle
$\therefore$ cost of lager = Rs. 2x/bottle
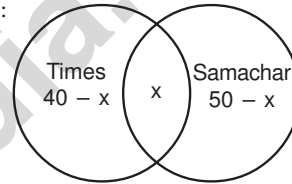$\therefore$ A spent Rs. 4x and B spent Rs. 2x. C paid Rs. 50.
$\therefore$ Cost of Lager
= Rs. 50 per bottle
Cost of beer
= Rs. 12.50 per bottle

78. (2) :

$\therefore$ Total number of students in the class
= 15 + 5 + 12 + 10 = 42

79. (2) :

$\therefore$ (40 − x) + x + (50 − x) = 75
$\Rightarrow$ x = 15

80. (None) : Let the worker worked for x hours.

$\therefore \dfrac{56}{35} \times 40 + (x - 40)$

$\times \dfrac{56}{35} \times \dfrac{3}{2} = 88$

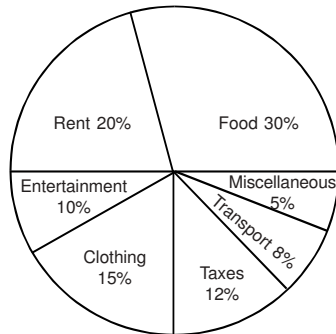$\Rightarrow \dfrac{56}{35} \left[40 + \dfrac{3}{2} x - 60 \right] = 88$

$\Rightarrow \dfrac{3}{2} x = \dfrac{88 \times 35}{56} + 20 = 75$

$\Rightarrow$ x = 50

Section III : Data Analysis And Data Sufficiency

Directions (Qs. 81 to 84) : These questions refer to the following circle graph showing the expenditure distribution of a certain family :

EXPENDITURE DISTRIBUTION OF A CERTAIN FAMILY

81. If the family spends Rs. 6,500 per month, how much are its annual taxes ?

(1) Rs. 7,800   (2) Rs. 9,360

(3) Rs. 9,800   (4) Rs. 10,080

82. How many degrees should there be in the central angle showing clothing, taxes and transportation combined ?

(1) 100   (2) 110

(3) 120   (4) 126

83. How much more money per month is spent by the family on food as compared to the rent ?

(1) Rs. 650   (2) Rs. 700

(3) Rs. 750   (4) Rs. 800

84. If the expenditure budget of the family is raised to Rs. 8,000 per month and distribution on various items remain the same, then the monthly expenses on both, the entertainment and the transport, will be

(1) Rs. 1,800   (2) Rs. 1,600

(3) Rs. 1,440   (4) Rs. 1,220

Directions (Qs. 85 to 88) : Study the table given below and answer these questions :

INVESTMENTS IN PUBLIC SECTOR
(Rs. crores)

Name of the Enterprise	Investments as on 31-3-98	Investments as on 31-3-99
1. Steel Authority of India (SAIL)	5,933	6,305
2. Coal India	4,730	5,541
3. National Thermal Power Commission (NTPC)	3,119	4,520
4. Oil & Natural Gas Commission (ONGC)	2,432	2,860
5. Rural Electrification Corporation (REC)	1,522	1,830
6. National Textile Corporation (NTC)	933	1,050
	18,669	22,108

85. Comparatively, the percentage increase in investment in the year ending 31st March '99, was the least in the case of

(1) NTC   (2) REC

(3) SAIL   (4) ONGC

86. The percentage increase in investment was nearly equal in the case of

(1) Coal India & ONGC

(2) Coal India & SAIL
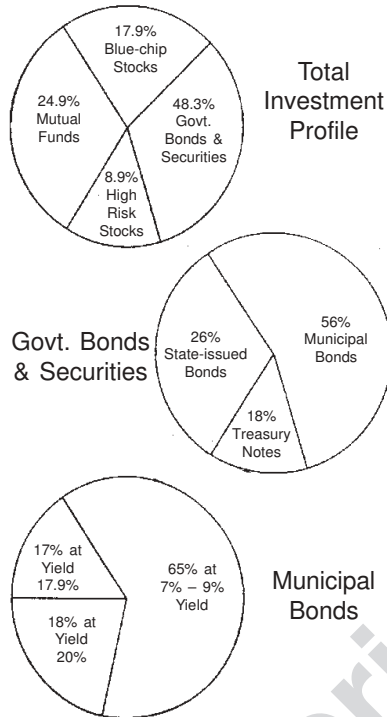
(3) SAIL & NTC

(4) ONGC & NTPC

87. The increase in investment in NTPC was more than twice to that in

(1) NTC   (2) Coal India

(3) REC   (4) ONGC

88. As compared to the investments for the year ending 31st March, 1998, the total investments in all the six enterprises for the year ending 31st March, 1999 exceeded approximately by

(1) 10%   (2) 15%

(3) 18%   (4) 20%

Directions (Qs. 89 to 92) : These questions are based on the following graphs :

17.9% Blue-chip Stocks
24.9% Mutual Funds
48.3% Govt. Bonds & Securities
8.9% High Risk Stocks

Total Investment Profile

56% Municipal Bonds
26% State-issued Bonds
18% Treasury Notes

Govt. Bonds & Securities

17% at Yield 17.9%
65% at 7% – 9% Yield
18% at Yield 20%

Municipal Bonds

Total Investment Funds = Rs. 11 crore 5 lakh

89. According to these graphs, approximately, how much money from the investment portfolio was invested in high-risk stocks ?
(1) 9,00,000   (2) 10,10,000
(3) 98,000   (4) 6,00,000

90. Approximately, how much money belonging to the investment portfolio was invested in State-issued bonds ?
(1) 2,87,30,000

(2) 3,39,50,000
(3) 4,50,00,000
(4) None of these

91. Which of the following earned the least amount of money for the investment portfolio ?
(1) Municipal Bonds
(2) State-issued Bonds
(3) Government Bonds & Securities
(4) Cannot be determined from the given information

92. Which of the following was the greatest ?
(1) The amount of money invested in Municipal Bonds which yielded between 7% and 9%
(2) The amount of money invested in State-issued Bonds.
(3) The amount of money invested in High Risk Stock
(4) The amount of money invested in Municipal Bonds which yielded over 9%

Directions (Qs. 93 to 96) : Study the following table to answer these questions.

PLAN-WISE PUBLIC SECTOR OUTLAYS AND EXPENDITURE (1974-79 TO 1985-90)

(in Rs. Crores)

Five-Year Plans	Period	Approved Outlay	Actual Expenditure
Fifth Plan	1974-79	39,303	39,426
Sixth Plan	1980-85	97,500	1,09,292
Seventh Plan	1985-90	1,80,000	—

93. Actual expenditure in the sixth Plan exceeded the outlay by about
(1) 10%   (2) 17%
(3) 23%   (4) 30%

**94.** Sixth Plan outlay exceeded the Fifth Plan outlay by almost
(1) 50%   (2) 100%
(3) 150%   (4) 200%

95. In the Fifth Plan, the expenditure exceeded the outlay by

(1) 1%

(2) 2%

(3) Less than 0.5%

(4) Did not exceed

96. From the given table we can infer that the actual expenditure in the Seventh Plan will exceed the outlay by almost

(1) 40%   (2) 60%

(3) 80%   (4) Cannot infer

Directions (Qs. 97 to 104) : Study the data presented in the following graph to answer these questions.

MONTHLY EXPENDITURE OF A FIRM FROM JANUARY TO JULY DURING THE YEARS 1993, 1994 & 1995
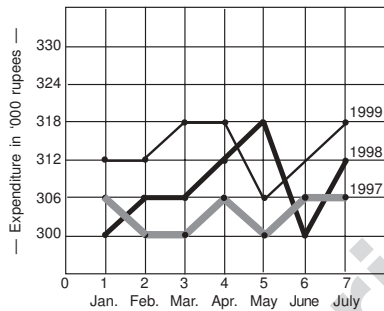
97. What is the total expenditure during the period under review (7 months) in 1997 ?

(1) Rs. 21,07,000

(2) Rs. 21,96,000

(3) Rs. 21,54,000

(4) Rs. 2,12,4000

98. What total expenditure has been made during the year 1997 and 1998 in the period covered in the graph ?

(1) Rs. 42,87,000

(2) Rs. 2,70,000

(3) Rs. 48,27,000

(4) Rs. 42,78,000

99. What is the average monthly expenditure during the year 1999 covering the period shown in the graph ?

(1) Rs. 2,75,000

(2) Rs. 2,70,000

(3) Rs. 3,14,000

(4) Rs. 2,47,000

100. Which month has been the least expensive during 1999 ?

(1) June   (2) April

(3) May   (4) July

101. The expenditure in April 1999 was .... higher than that of corresponding period in 1998.

(1) 1.5%   (2) 2%

(3) 2.5%   (4) 0.94%

102. The expenditure in May 1997 was .... less than that of the corresponding period in 1999.

(1) 3%   (2) 2.5%

(3) 1.5%   (4) 2%

103. The expenditure of May/ June 1998 was .... higher than that of the corres-ponding period during 1985.

(1) 3%   (2) 3.5%

(3) 2%   (4) Zero

104. Which of the following statements is correct ?

(1) In 1997, the expenditure was more in March than in January.

(2) The expenditure in January 1999 was equivalent to the expenditure in July 1998.

(3) In 1999, the expenditure was less than that of 1998.

(4) The total expenditure in January 1997 and 1999 was more than that in April 1997 and 1999.

Directions (Qs. 105 to 112) : **Study the following chart to answer these questions.**

Slum Population in Metropolis : 1991
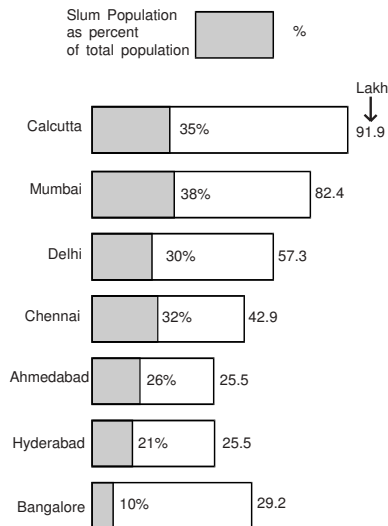
105. The total slum population of Calcutta in 1991 was approximately
(1) 30 lakh   (2) 31 lakh
(3) 32 lakh   (4) 33 lakh

106. The difference in the slum populations of Bangalore and Hyderabad was
(1) 4.1 lakh   (2) 3.71 lakh
(3) 2.43 lakh   (4) 2 lakh

107. The city with the highest slum population was
(1) Mumbai   (2) Calcutta
(3) Delhi   (4) Chennai

108. Two cities with nearly equal slum population were
(1) Ahmedabad & Hyderabad
(2) Delhi & Chennai
(3) Hyderabad & Bangalore
(4) Mumbai & Calcutta

109. The slum population of Delhi was more than 3 times the slum population of
(1) Hyderabad   (2) Ahmedabad
(3) Bangalore   (4) Chennai

110. The slum population of all the seven cities nearly equalled the total population of
(1) Calcutta and Bangalore
(2) Delhi and Chennai
(3) Delhi and Hyderabad
(4) Mumbai and Ahmedabad

111. The ratio of slum population to total population in Calcutta is .... times the same ratio in Bangalore.
(1) 3   (2) 3.5   (3) 4   (4) 5

112. In terms of slum population, the second city with the least population was
(1) Delhi   (2) Bangalore
(3) Ahmedabad   (4) Hyderabad

Directions (Qs. 113 to 120) : **These questions are followed by two statements A and B. Choose (1) if the statement A alone is sufficient to answer the question asked, but the statement B by itself is not sufficient to answer the question. Choose (2) if the statement B alone by itself is sufficient to answer the given question, but statement A alone is not sufficient to answer the question. Choose (3) if both the statements A and B together are sufficient to answer the given question but neither statement by itself is sufficient to answer the question. Choose (4) if the two statements A and B, even when taken together, are not sufficient to answer the question.**

113. Is y larger than 1 ?
    A : y is greater than 0
    B : $y^2 - 4 = 0$

114. Is the integer x divisible by 3 ?
    A : The last digit in x is 3
    B : x + 5 is divisible by 6.

115. How much is Mohan's weekly salary ?

    A : Mohan's weekly salary is twice as much as Sohan's weekly salary.

    B : Sohan's weekly salary is 40% of the total of Ram's and Mohan's weekly salaries.

116. What is the percentage of defective items produced in a factory ?

    A : The total number of defective items produced is 1,234.

    B : The ratio of defective items to non-defective is 32 to 5,678.

117. How long will it take to travel from A to B ? It takes 4 hours to travel from A to B and back to A.

    A : It takes 25% more time to travel from A to B than it takes to travel from B to A.

    B : C is midway between A and B and it takes 2 hours to travel from A to C and back to A.

118. How many square tiles with sides 5 inches long will be needed to cover the rectangular floor of a room ?

    A : The floor is 10 feet long.

    B : The floor is 5 feet wide.

119. A group of 49 consumers were offered a chance to subscribe to 3 magazines : A, B and C. 38 of the consumers subscribed to atleast one of the magazines. How many of the 49 consumers subscribed to exactly two of the magazines ?

    A : 12 of the 49 consumers subscribed to all the three magazines.

    B : 20 of the 49 consumers subscribed to magazine A.

120. What is the two-digit number whose first digit is 'a' and the second digit is 'b' ? The number is greater than 9.

    A : The number is a multiple of 51.

    B : The sum of the digits 'a' and 'b' is 6.

ANSWERS

81. (2) : Taxes = 12% of Rs. 6500
             = Rs. 780 per month
             = Rs. 9360 per month

82. (4) : Clothing, taxes and transportation combined are 35%. Now 100% = 360°

$$\Rightarrow 35\% = \frac{360}{100} \times 35 = 126$$

83. (1) : 10% of Rs. 6500
            = Rs. 650 per month

84. (3) : 18% of Rs. 8000 = Rs. 1440

85. (3) : Percent increase in investment :

For SAIL $= \frac{372}{5933} \times 100 = 6.27\%$

For Coal India $= \frac{811}{4730} \times 100$
                    $= 17.15\%$

For NTPC $= \frac{1401}{3119} \times 100$
                    $= 44.92\%$

For ONGC $= \frac{428}{2432} \times 100$
                    $= 17.60\%$

For REC $= \frac{308}{1522} \times 100$
                    $= 20.24\%$

For NTC $= \frac{117}{933} \times 100 = 12.54\%$

86. (1)   **87.** (3)

88. (3) : Investment in 1998-99 increased from 1997-98 by $22108 - 18669 = $ Rs. 3439 crore

$$= \frac{3439}{18669} \times 100 = 18.42\% \approx 18\%$$

89. (None) : 8.9% of 11.05 crore
= 0.98345 crore
= Rs. 9834500

90. (4) : Investment in Government
Bonds & Securities
= 48.3% of 11.05 crore
= 5.33715 crore
= Rs. 53371500
∴ Investment in State-issued
Bonds
= 26% of Rs. 53371500
= Rs. 13876590

91. (2) : In (1), Rs. 2.988804 crore
In (2), Rs. 1.387659 crore
In (3), Rs. 5.33715 crore

92. (1) : Investment in Municipal Bonds
= 56% of 53371500 (Q. 90)
= 29888040
(1) Investment in Municipal
Bonds (7% − 9%)
= 65% of 29888040
= 19427226
(2) Investment in State-issued
Bonds = 13876590 (Q. 90)
(3) Investment in High Risk
Stock = 9834500 (Q. 89)
(4) Investment in Municipal
Bonds (above 9%)
= 35% of 29888040
= 10460814

93. (1) : $\dfrac{109292 - 97500}{97500} \times 100$
= 12% ≈ 10%

94. (3) : $\dfrac{97500 - 39303}{39303} \times 100$
= 148% ≈ 150%

95. (3) : $\dfrac{39426 - 39303}{39303} \times 100$
= .31% < 0.5%

96. (4) : Actual Expenditure not given.

97. (4) : 306 + 300 + 300 + 306
+ 300 + 306 + 306
= Rs. 2124 thousands

98. (4) : 2124 + 300 + 306 + 306
+ 312 + 318 + 300 + 312
= Rs. 4278 thousands

99. (3) : $\dfrac{\begin{array}{c}312 + 312 + 318 + 318 \\ + 306 + 312 + 318\end{array}}{7}$
= $\dfrac{2196}{7}$ = 313714
≈ Rs. 314000

100. (3)

101. (2) : $\dfrac{6}{312} \times 100$ = 1.92% ≈ 2%

102. (4) : $\dfrac{6}{306} \times 100$ = $\dfrac{100}{51}$ ≈ 2%

103. (4)   **104.** (2)

105. (3) : 35% of 91.9 = 32.165
≈ 32 lakh

106. (3) : 21% of 25.5 − 10% of 29.2
= 5.355 − 2.920
= 2.435 lakh

107. (2) : Slum Population in
Calcutta   = 32.165 lakh
Mumbai   = 31.312 lakh
Delhi   = 17.190 lakh
Chennai   = 13.728 lakh
Ahmedabad = 6.630 lakh
Hyderabad = 5.355 lakh
Bangalore = 2.920 lakh

108. (4)   **109.** (1)

110. (4) : Slum Population (Total)
= 109.3 lakh
Mumbai + Ahmedabad
= 107.9 lakh

111. (2) : Let $\dfrac{32.165}{91.9}$ = k $\times \dfrac{2.92}{29.2}$
⇒ k = 3.5

112. (4)

113. (3) : A $\Rightarrow$ y > 0

B $\Rightarrow$ y > 2 (y = –2 is ruled out by A)

114. (3) : 23 is not divisible by 3.

If x + 5 is divisible by 6, then x is not divisible by 3, e.g. 36 is divisible by 6, but 31 is not divisible by 3.

115. (4) : Mohan = 2 Sohan

Sohan = 40% of (Ram + Mohan)

$= \dfrac{2}{5}$ of (Ram + Mohan)

$= \dfrac{2}{5}$ Ram $+ \dfrac{2}{5}$ Mohan

$= \dfrac{2}{5}$ Ram $+ \dfrac{4}{5}$ Sohan

$\Rightarrow \dfrac{1}{5}$ Sohan $= \dfrac{2}{5}$ Ram

$\Rightarrow$ Sohan = 2 × Ram

$\therefore$ Mohan = 4 × Ram

116. (2)

117. (1) : $1\dfrac{7}{9}$ hours from A to B and

$2\dfrac{2}{9}$ hours from B to A.

118. (3)

119. (4) : 11 consumers did not subscribe to any magazine.

120. (3) : 51 itself is the number.

Section IV : Intelligence & Critical Reasoning

Directions (Qs. 121 to 127) : Read the following statements to answer these questions :

Group Captain Malhotra is choosing the last part of his crew for the spaceship COSMOS, with which he plans to land on the moon. He needs 4 more crew members of whom at least two must be pilots, the others being engineers. The candidates for Pilots are Dalbir, Eric and Farid. The candidates for Engineers are Lal, Monty, Naveen and Paul. Eric will not crew with Lal. Dalbir will not crew with Naveen.

121. If Naveen is chosen, which of the following must be other members of the crew ?

(1) Farid, Lal and Monty

(2) Dalbir, Eric and Monty

(3) Eric, Farid and Monty

(4) Eric, Farid and Paul

122. If Paul is chosen, which candidates will NOT be chosen to be on the crew ?

(1) Dalbir, Eric and Monty

(2) Dalbir, Eric and Farid

(3) Dalbir, Farid and Lal

(4) Eric, Farid and Lal

123. Given the above statements about the relationships among the potential crew members, which of the following must be true ?

A : If Dalbir is rejected, then Monty must be chosen.

B : If Dalbir is rejected, then Farid must be chosen.

C : If Dalbir is chosen, then Paul must also be chosen.

(1) B only   (2) C only

(3) A and B only (4) A and C only

124. If Lal is chosen as an engineer, which of the following could be the other members of the crew ?

A : Dalbir, Farid and Monty

B : Dalbir, Farid and Naveen

C : Dalbir, Farid and Paul

(1) A only   (2) B only

(3) C only   (4) A and C only

125. Which of the following statements must be true ?

A : If Group Captain Malhotra chooses Lal, then Farid also must be chosen.

B : If Group Captain Malhotra chooses Monty, then Naveen must also be chosen.

C : Lal and Naveen never crew together.

(1) A only
(2) A and B only
(3) A and C only
(4) B and C only

126. If Paul is chosen to be the part of the COSMOS' crew and Dalbir is not, who must be the other members of the crew ?

(1) Eric, Farid and Lal
(2) Eric, Farid and Monty
(3) Eric, Farid and Naveen
(4) Farid, Lal and Monty

127. If Eric makes the crew and Farid does not, which of the following statements must be true ?

A : Paul will be a member of the crew.

B : Monty will be a member of the crew.

(1) Both A and B (2) Neither A nor B
(3) A only   (4) B only

Directions (Qs. 128 to 132) : There is a blank space in each of these questions in which only one of the four alternatives given under each question satisfies the same relationship as is found between the two terms on the other side of the sign : : . Find the correct alternative to fill in the blank space.

128. Telephone : Ring : :

_____ : _____

(1) Door : knock
(2) Gate : open
(3) Door : wood
(4) Lock : key

129. Deterioration : Rust : :

_____ : _____

(1) Recession : Inefficiency
(2) Depression : Unemployment
(3) Promulgation : Legislation
(4) Iron : Water

130. Dinosaur : Dragon : :

_____ : _____

(1) Evolution : Revelation
(2) Gorilla : Soldier
(3) Snow : Ice
(4) Primeval : Medieval

131. Condone : Offence : :

_____ : _____

(1) Overlook : Aberration
(2) Error : Omission
(3) Mitigate : Penitence
(4) Conviction : Criminal

132. Shoe : Leather : :

_____ : _____

(1) Bus : Conductor
(2) Train : Wagon
(3) Highway : Asphalt
(4) Medicine : Doctor

133. Find the odd one out :
(1) Grams   (2) Litres
(3) Tonnes   (4) Quintals

134. Find the odd one out :
(1) 25631   (2) 52163
(3) 33442   (4) 34424

135. Complete the series :
    10, 18, 34, ??, 130, 258
(1) 32   (2) 60
(3) 68   (4) 66

136. Find out the right letters for the question marks :

A M B N E I F J C O D P G K ? ?
(1) M N   (2) L M
(3) I E   (4) G H

Directions (Qs. 137 to 141) : Mehta is the Director of investments for a mutual fund. He believes that blue-chip stocks and government securities will generally not do as well as corporate bonds in

the coming year, but government regulations require that at least one-third of the fund's capital be in blue-chip stocks and another third in government securities.

137. Under current regulations, what seems to be the best way for Mehta to invest in the mutual fund ?

(1) Two-thirds government securities, one-third blue chip stocks.

(2) Two-thirds government securities, one-third corporate bonds.

(3) One-third government securities, two-thirds corporate bonds.

(4) One-third each government securities, blue-chip stocks and corporate bonds.

138. If the mutual fund has Rs. 60 crore in assets, then what is the maximum that Mehta could invest in blue-chip stocks ?

(1) 20 crore   (2) 30 crore

(3) 40 crore   (4) 50 crore

139. If the government regulations are changed to require only one-quarter whereas one-third was previously required, Mehta will probably

(1) Increase the fund's holdings of government securities.

(2) Increase the fund's holdings of corporate bonds.

(3) Increase the fund's holdings of blue-chip stocks.

(4) Hold more cash.

140. If the return on government securities suddenly goes up by five percentage points, Mehta will probably

(1) Sell blue-chip stocks to buy government securities.

(2) Sell corporate bonds to buy govern-ment securities.

(3) Sell both corporate bonds and blue-chip stocks to buy government securities

(4) His action cannot be predicted

141. In the middle of the year, the fund is invested equally in corporate bonds, blue-chip stocks and government securities. Due to some rumours about the credibility of the fund, investors have started redemption and withdrawals resulting in cash shortage for the fund. Mehta might do any one of the following EXCEPT

(1) Sell two times more corporate bonds than blue-chip stocks

(2) Sell only government securities and blue-chip stocks.

(3) Sell only corporate bonds and blue-chip stocks.

(4) Sell only government securities and corporate bonds.

Directions (Qs. 142 to 144) : **Farmer Batuk Singh has a larger square field divided into nine smaller squares, all equal, arranged in three rows of three fields each. One side of the field runs exactly east-west. The middle square must be planted with rice because it is wet. The wheat and barley should be contiguous so that they can be harvested all at once by the mechanical harvester. Two of the fields should be planted with soyabeans. The north-westernmost field should be planted with peanuts and the southern third of the field is suitable only for vegetables.**

Questions 142 to 144 refer to the following squares :

(1) The square immediately north of the rice.

(2) The square immediately east of the rice.

(3) The square immediately west of the rice.

(4) The square immediately north-east of the rice.

142. Which square cannot be planted with soyabeans ?

143. Which square cannot be planted with wheat ?

144. If Batuk Singh decides to plant the wheat next to the peanuts, in which square will the barley be ?

Directions (Qs. 145 to 148) : **In a defence message, 'GET AWAY, FIRE BACK-WARDS, MOVE SLOW is coded as 'BEN CDCI, QHOEFCTL DCOXU, ZMWE VFMD'**

Based on this coding scheme, spot the codes for the words given in Questions 145 to 148 :

145. GREAT
   (1) BOENC   (2) BOEQN
   (3) BOECN   (4) BOEHC

146. REWARD
   (1) OEDNXE   (2) OTDCOX
   (3) OEDCOX   (4) OEDCOU

147. DEADLY
   (1) XECXEI   (2) XENXFI
   (3) XECXEI   (4) XECXFI

148. OVER
   (1) MWOE   (2) MWZO
   (3) MWEO   (4) MWED

Directions (Qs. 149 to 152) : **A goldsmith has five gold rings, each having a different weight. They are labelled as D, E, F, G and H. Their peculiarities are given in the following 5 statements :**

Statement 1 : Ring D weighs twice as much as ring E.

Statement 2 : Ring E weighs four and a half times as much as ring F.

Statement 3 : Ring F weighs half as much as ring G.

Statement 4 : Ring G weighs half as much as ring H.

Statement 5 : Ring H weighs less than ring D but more than ring F.

149. If these rings are sold according to their weights, which ring will fetch the highest value in rupees ?
   (1) D   (2) G   (3) F   (4) H

150. Ring H is heavier to which of the following two rings ?
   (1) GE   (2) GF   (3) DF   (4) DE

151. Which of the following is the lightest in weight ?
   (1) D   (2) E   (3) F   (4) G

152. Which of the following represents the descending order of the weights of the rings ?
   (1) D, E, H, G and F
   (2) F, D, G, E and H
   (3) H, F, G, D and E
   (4) E, G, H, D and F

Directions (Qs. 153 to 159) : **A management institute organises six once-a-month lecture series for young entrepreneurs as per the following schedule, with no dates conflicting :**

Marketing Management	— August through January
Economics	— April through October
Business Law	— January through September
Financial Management	— March through June
Accounting	— October through April
Personnel Management	— October through December

153. During which month are the fewest lectures given ?
   (1) January   (2) February
   (3) June   (4) September

154. Which is the largest number of lectures that can be attended in a single month ?
   (1) 7   (2) 6
   (3) 5   (4) 4

155. Which two series taken together fill the year without overlap ?
- (1) Marketing and Financial Management
- (2) Personnel Management and Economics
- (3) Business Law and Personnel Management
- (4) Business Law and Accounting

156. During how many months of the year must a student attend to hear all the lectures on Marketing, Economics and Financial Management ?
- (1) 11
- (2) 10
- (3) 9
- (4) 8

157. How many lecture series last more than 6 months ?
- (1) 1
- (2) 2
- (3) 3
- (4) 4

158. How many different series can be attended in September, October and November ?
- (1) 2
- (2) 3
- (3) 4
- (4) 5

159. How many different lectures can be attended in January, February and March ?
- (1) 12
- (2) 10
- (3) 8
- (4) 6

160. If SMOOTH is coded as 135579, ROUGH as 975531 and HARD as 9498, then SOFT will be coded as
- (1) 1527
- (2) 1347
- (3) 4998
- (4) 8949

ANSWERS

121. (3) : Since Naveen is chosen, Dalbir and Paul cannot be chosen. Therefore, Pilots chosen are *Eric and Farid.*
Since Ial cannot be chosen because of Eric, therefore, Monty should be chosen as the 2nd Engineer.

122. (4) : Eric and Ial cannot be chosen together.

123. (3) : If Dalbir is rejected, either (Navin or Paul) and Monty must be chosen. Also Farid must be chosen.
If Dalbir is chosen, then Farid, Ial and Monty can be chosen.
∴ A and B are true and C is not true.

124. (4) : If Ial is chosen, Eric cannot be chosen. Therefore, Dalbir and Farid must be chosen and so Naveen cannot be chosen.
∴ B is not true.

125. (3) : If Ial is chosen, Eric cannot be chosen and so Farid will definitely be chosen. Therefore, A is true.
If Monty is chosen, then it is not necessary that Naveen must be chosen. Dalbir, Eric and Farid can be chosen with Monty. Therefore, B is not true. C is also true because one out of Dalbir and Eric will definitely be chosen. And so, if Dalbir is chosen, Naveen cannot be chosen and if Eric is chosen, Ial cannot be chosen.

126. (2) : If Paul is chosen and Dalbir is not chosen, Naveen cannot be chosen. (3) is ruled out. Because, Dalbir is chosen
⇒ Eric and Farid will definitely be chosen.
⇒ Ial cannot be chosen.
⇒ (1) and (4) are ruled out.

127. (1) : In this case, Dalbir and Eric will definitely be chosen
⇒ Ial and Navin cannot be chosen.

128. (1) **129.** (2) **130.** (3) **131.** (1)
132. (3) **133.** (2)

134. (3) : 2 + 5 + 6 + 3 + 1 = 17,
5 + 2 + 1 + 6 + 3 = 17
3 + 4 + 4 + 2 + 4 = 17,
3 + 3 + 4 + 4 + 2 = 16

135. (4): The sequence in the given series is + 8, + 16, + 32, + 64, + 128

136. (None): Consider four groups of letters : (A B C D), (E F G H), (I J K L) and (M N O P) : In each group, there is one letter between 1st and 2nd letters as well as 3rd and 4th letters. Also there are five letters between 2nd and 3rd letters. Therefore, last two letters must be H L

137. (4) **138.** (1) **139.** (2) **140.** (4)

141. (1)

142. (4)

F1	Peanunts	Wheat	Barley
F2		Rice	
F3	Soyabeans		Vegetables

143. (3)   **144.** (4)

145. (3): G → B, R → O, E → E, A → C, T → N

146. (3): R → O, E → E, W → D, A → C, R → O, D → X

147. (4): D → X, E → E, A → C, D → X, L → F, Y → I

148. (3): O → M, V → W, E → E, R → O

149. (1): $D = 2E \Rightarrow E < D$

$$E = 4\frac{1}{2}F$$

$$F = \frac{1}{2}G \Rightarrow G > F$$

$$G = \frac{1}{2}H \Rightarrow H > G$$

$H < D, H > F$

$\therefore F < G < H < D \ (E < D)$

150. (2)   **151.** (3)   **152.** (1)

153. (2)

J	F	M	A	M	J	J	A	S	O	N	D
MM							MM	MM	MM	MM	MM
BL	BL	BL	BL	BL	BL	BL	BL	BL			
A	A	A	A						A	A	A
	FM	FM	FM	FM							
	E	E	E	E	E	E	E				
									PM	PM	PM

154. (4) **155.** (3) **156.** (1) **157.** (3)

158. (4) **159.** (3)

160. (1): S → 1, O → 5, T → 7

Section V : Indian & Global Environment

161. The present Pope went on a historic tour of which of the following regions in March 2000 ?

(1) Russia   (2) Greece

(3) Israel and Jordan   (4) Turkey

162. Recently Microsoft tied up with which of the following Indian companies to work towards the next generation software packages ?

(1) Infosys   (2) Wipro

(3) Pentasoft   (4) Mind Tree

163. Who was the Man of the Match in the finals of the recently concluded ICC Knock-Out tournament held in Kenya ?

(1) Zaheer Khan   (2) Roger Twose

(3) Saurav Ganguly

(4) Chris Cairns

164. Who was the Republican candidate for the recently concluded US Presidential elections ?

(1) George W. Bush (2) Al Gore

(3) Ralph Nader   (4) Dick Cheney

165. For which of the following products advertisements does Hrithik Roshan appear ?

(1) Pepsi   (2) Coca Cola

(3) MRF   (4) Maruti

166. Name the small car launched by Maruti in September 2000.

(1) Alfa   (2) Alto

(3) Matiz   (4) Golf

167. Bill Clinton was the fourth US President to visit India. Who was the last US President to visit India before Clinton ?

(1) D. Eisenhower (2) John F. Kennedy

(3) Richard Nixon (4) Jimmy Carter

168. Who is the Union Minister for Power in the present NDA government ?

(1) Suresh Prabhu

(2) Ram Naik

(3) Pramod Mahajan

(4) Ram Vilas Paswan

169. At present, which of the following is NOT a member of the OPEC ?

(1) Saudi Arabia (2) Kuwait

(3) Venezuela (4) Iraq

170. Which of the following private banks was taken over by the HDFC last year ?

(1) Times Bank (2) Indian Bank

(3) Commerical Bank of India

(4) Federal Bank

171. When was the last time that India won the Gold medal in Hockey at the Olympics ?

(1) 1992 (2) 1980 (3) 1964 (4) 1972

172. Who is the President of Pakistan ?

(1) Pervez Musharraf

(2) Rafiq Tarar

(3) Abdus Sattar

(4) Farooq Leghari

173. Name the director who is working on a film on the life and times of Nelson Mandela ?

(1) Shekhar Kapoor

(2) Steven Speilberg

(3) John Wu (4) Martin Scorcese

174. What key button is found on the top left corner of a standard computer keyboard ?

(1) Tab (2) Caps Lock

(3) Delete (4) Escape

175. Who collaborated with the rock group U2 to write the lyrics for the song *The Ground Beneath Her Feat* ?

(1) Vikram Seth

(2) Arundhati Roy

(3) Salman Rushdie

(4) Shashi Tharoor

176. Which Indian boxer narrowly missed a medal at the recently concluded Sydney Olympics ?

(1) Gurcharan Singh

(2) N. G. Dingko Singh

(3) Shakti Singh

(4) M. P. Singh

177. Name the State carved out of Madhya Pradesh after the Parliament passed the legislation earlier in the year 2000.

(1) Uttaranchal (2) Vananchal

(3) Vidarbha (4) Chhattisgarh

178. The control of which city was the cause of the breakdown of talks between Israel and the Palestinians in October 2000 ?

(1) Nazareth (2) Gaza

(3) Amman (4) Jerusalem

179. To which country did the nuclear submarine *Kursk* belong which sank recently killing all the sailors on board ?

(1) Russia (2) Finland

(3) Sweden (4) Norway

180. How many overs were allowed *per side* in the inaugural 1975 Cricket World Cup ?

(1) 50 (2) 60

(3) 25 (4) 40

181. To which State does Dr. Rajkumar, the film actor who was kidnapped by Veerappan, belong ?

(1) Tamil Nadu (2) Karnataka

(3) Kerala

(4) Andhra Pradesh

182. Who was awarded the Dada Saheb Phalke Award in the year 2000 ?

(1) Shyam Benegal

(2) Mrinal Sen

(3) Hrishikesh Mukherjee

(4) Subhash Ghai

183. What does IRA stand for ?
(1) Irish Republican Army
(2) Irish Republican Association
(3) Independent Republic's Army
(4) Inshue Republican Army

184. Slobodan Milosevic, the Yugoslav leader who was forced to step down in October 2000, was the President of which Republic ?
(1) Croatia   (2) Bosnia
(3) Slovenia   (4) Serbia

185. On October 1, 2000 the Government announced the formation of a new body with the corporatisation of the Department of Telecom Operations (DTO) and Department of Telecom Services (DTS). What is the name of this new organisation ?
(1) Videsh Sanchar Nigam Limited
(2) Bharat Sanchar Nigam Limited
(3) Mahanagar Telephones Nigam Limited
(4) Bharat Telephones Nigam Limited

186. Which of the following is NOT a member of SAARC ?
(1) Pakistan   (2) Nepal
(3) Bangladesh   (4) Afghanistan

187. The Republican Party of the United States is also sometimes referred to as the GOP. What does GOP stand for ?
(1) Grand Old Party
(2) Government Opposition Party
(3) Grant's Old Party
(4) Great Oregon Party

188. Who is credited with the idea of linking each page of information on the net to another that went onto create the world wide web (www) ?
(1) Tim Berners-Lee   (2) Bill Gates
(3) Al Gore   (4) Steve Jobs

189. Who replaced Ram Prakash Gupta as the Chief Minister of UP in the year 2000 ?
(1) Rajnath Singh(2) Kalraj Mishra
(3) Kalyan Singh (4) Amar Singh

190. Who is the director of the film *Mission Kashmir* ?
(1) Ram Gopal Verma
(2) Vidhu Vinod Chopra
(3) E. Niwas
(4) Subhash Ghai

191. The recent Supreme Court judgement on the Sardar Sarovar Dam project on the Narmada river has allowed construction of the dam upto what height ?
(1) 70 metres   (2) 90 metres
(3) 110 metres   (4) 138.6 metres

192. Name the former Congress Party president who passed away in the year 2000.
(1) Sitaram Kesri   (2) Rajesh Pilot
(3) Rangarajan Kumaramangalam
(4) Ram Niwas Mirdha

193. Which State did the Americans buy from the Russians in 1867 ?
(1) Washington   (2) Hawaii
(3) Alaska   (4) California

194. Arun Bajoria, a Calcutta-based businessman, tried to take over which high profile company in the year 2000 ?
(1) Bombay Dyeing (2) Telco
(3) Infosys   (4) Wipro

195. Name the film directed by Manoj Shyamalan that was nominated for the Oscars in 2000.
(1) Elizabeth   (2) The Sixth Sense
(3) Bombay Boys (4) The Cell

196. How many squares are there on a standard chess board ?
(1) 48   (2) 64   (3) 100   (4) 96

197. How many times has Atal Bihari Vajpayee been sworn in as the Prime Minister of India ?
(1) One (2) Two (3) Three (4) Four

198. What does ISP stand for ?
(1) International Service Provider
(2) Indian Service Provider
(3) Internet Service Provider
(4) Internet Start-up Provider

199. A killer super cyclone destroyed large parts of which eastern State of India in the year 1999 ?
(1) Assam   (2) West Bengal
(3) Orissa   (4) Tamil Nadu

200. Name the web site which broke the Cricket match-fixing story earlier this year ?
(1) bazee.com   (2) tehelka.com
(3) tazaakhabar.com
(4) goforcricket.com

ANSWERS

161. (3)   **162.** (1)
163. (4) : New Zealand won the 11-Nation ICC Knock-out Trophy defeating India by four wickets in Nairobi on October 15, 2000.
164. (1)   **165.** (2)   **166.** (2)
167. (4) : Other three Presidents to visit India were Dwight D. Eisenhower (December 1959), Richard M. Nixon (July 1969) and Jimmy Carter (January 1978).
168. (1)
169. ( ) : Organisation of Petroleum Exporting Countries was formed on November 14, 1960 to control production and pricing of crude oil. Its headquarters are at Vienna, Austria.
170. (1)
171. (2) : 1980 Olympics were held in Moscow. India won Gold medals in 1928, 1932, 1936, 1948, 1952, 1956, 1964 & 1980.
172. (2) **173.** (1) **174.** (4) **175.** (3)
176. (1)
177. (4) : Chhattisgarh became India's 26th State on November 1, 2000 with its capital at Raipur.

High Court of Chhattisgarh is at Bilaspur. It has 16 districts, 11 Lok Sabha seats, 5 Rajya Sabha seats, 90 Vidhan Sabha seats.
178. (4)
179. (1) : This submarine met with an accident on August 12, 2000, during military exercises and sank in the Barents Sea about 180 km North-East of Murmansk (Arctic Region).
180. (2)   **181.** (2)
182. (3) : Hrishikesh Mukherjee pioneered the genre of light-hearted socially relevant cinema with films like *Chupke Chupke, Gol Maal, Khubsoorat* and serious films like *Anand, Anuradha, Anupama, Namak Haram, Abhiman* etc. He was selected for Dada Saheb Phalke Award for 1999.
183. (1)   **184.** (4)   **185.** (2)
186. (4) : South Asian Association for Regional Cooperation (SAARC) has seven members—Sri Lanka, Bhutan, Maldives, India, Pakistan, Nepal and Bangladesh.
187. (1) **188.** (1) **189.** (1) **190.** (2)
191. (2) : Supreme Court gave the nod on October 18, 2000 for the construction of the controversial dam on the Narmada river immediately upto a height of 90 metres and thereafter upto 138 metres in stages subject to the proper sanction from the authorities concerned.
192. (1) : Sitaram Kesri died at the age of 84. He was elected party president in 1997.
193. (3) **194.** (1) **195.** (2) **196.** (2)
197. (3) **198.** (3) **199.** (3) **200.** (2)