NMAT – 2007

SECTION – II

QUANTITATIVE SKILLS, DATA ANALYSIS AND SUFFICIENCY

Directions for questions 41 – 55: What should come in place of question mark (?) in the following questions?

41. $(193 - 87) \div (1.25 \times 2) = ?$
(1) 67.8 (2) 56.9 (3) 42.4 (4) 38.6 (5) None of these

42. $3870 \div ? = 516$
(1) 7.5 (2) 12.25 (3) 5.85 (4) 15.65 (5) None of these

43. $5389 + 4172 - 3868 - ? = 2456 + 1130$
(1) 2007 (2) 1897 (3) 1987 (4) 2117 (5) None of these

44. $88.8 + 8.08 + 0.08 + 88.08 + 0.80 + 888 = ?$
(1) 1037.14 (2) 1073.84 (3) 1370.24 (4) 1703.54 (5) None of these

45. $(88)^2 + (73)^2 = (?)^2 - (38)^2 - 859$
(1) 15876 (2) 15376 (3) 126 (4) 124 (5) None of these

46. $312 \times ? \times 14 = 157843 + 56189$
(1) 48 (2) 50 (3) 52 (4) 54 (5) None of these

47. $[(156)^2 \div 8 \times 36] \div ? = 117 \times 24$
(1) 37 (2) 39 (3) 41 (4) 43 (5) None of these

48. (8.83% of 228) – (2.65% of 104) = ?
(1) 17.3764 (2) 13.3467 (3) 17.3746 (4) 13.7746 (5) None of these

49. $(23)^{23} \times (23)^{-19} = ?$
(1) 529 (2) 23 (3) $\sqrt{12167}$ (4) $(529)^2$ (5) None of these

50. $8.496 - 1.384 + 3.462 + 2.801 = ?$
(1) 11.876 (2) 17.775 (3) 13.775 (4) 21.545 (5) None of these

51. $(25)^2 + \sqrt{?} - (19)^2 = 385$
(1) 121 (2) 1331 (3) 14641 (4) 11 (5) None of these

52. $4\frac{4}{13} \times 9\frac{1}{6} \div \frac{7}{78} = ?$
(1) 520 (2) 230 (3) 340 (4) 450 (5) None of these

53. $(78.34 + 96.68 - 14.44) \div 4 = ?$
(1) 40.145 (2) 43.875 (3) 48.965 (4) 51.235 (5) None of these

54. 22.4% of 668 + 15.75% of 194 = ?
(1) 198.187 (2) 180-187 (3) 173.187 (4) 165.187 (5) None of these

55. $1728 \div 48 \times 5 + 12 = \sqrt{?}$
(1) 36846 (2) 36486 (3) 36468 (4) 36864 (5) None of these

Directions for questions 56 – 60: In the following number series only one number is **wrong**. Find out the **wrong** number.

56. 202 102 55 36.5 34.25 42.125 57.625
(1) 55 (2) 202 (3) 36.5 (4) 57.625 (5) None of these

57. 12 18 26.25 40.5 60.75 91.125 136.6875
(1) 26.25 (2) 18 (3) 136.6875 (4) 60.75 (5) None of these

58. 3 7 16 32 57 96 142
(1) 57 (2) 96 (3) 142 (4) 16 (5) None of these

59. 12 11 24 72 280 1395 8376
(1) 12 (2) 24 (3) 72 (4) 1395 (5) None of these

60. 16 17 37 50 83 133 216
(1) 17 (2) 216 (3) 133 (4) 50 (5) None of these

Directions for questions 61 – 65: What **approximate** value should come in place of question mark (?) in the following questions? (You are not expected to calculate the exact value.)

61. $735.932 + 6.356 - 4.832 \times 34.991 = ?$
(1) 620 (2) 465 (3) 530 (4) 645 (5) 575

62. $\sqrt{1200000} = ?$
(1) 1000 (2) 1125 (3) 1095 (4) 1205 (5) 975

63. $415697 \times 54 = ? \times 99669$
(1) 225 (2) 201 (3) 173 (4) 256 (5) 278

64. $(538\% \text{ of } 748) \div 642 = ?$
(1) 10 (2) 6 (3) 13 (4) 17 (5) 21

65. $(8999 + 7654 + 1052) \div (738 + 601 + 553) = ?$
(1) 14 (2) 23 (3) 27 (4) 9 (5) 17

66. A sum of money is divided among A, B, C and D in the ratio of 3 : 7 : 11 : 15 respectively. If the share of D is Rs. 3,816/- more than the share of A, then what is the total amount of money of B and C together?
(1) Rs. 4,762/- (2) Rs. 7,562/- (3) Rs. 6,678/- (4) 5,724/- (5) None of these

67. If the numerator of a fraction is increased by 500% and the denominator is increased by 300%. The resultant fraction is $\frac{9}{13}$. What was the original fraction?
(1) $\frac{9}{11}$ (2) $\frac{7}{13}$ (3) $\frac{11}{26}$ (4) $\frac{9}{26}$ (5) None of these

68. What is 30% of 55% of $\frac{9}{11}$ th of 6200?
(1) 837 (2) 847 (3) 857 (4) 867 (5) None of these

69. In a class of 125 students, each student got sweets that are 20% of the total number of students. How many sweets were there?
(1) 3000 (2) 3125 (3) 2500
(4) cannot be determined (5) None of these

70. Which number should replace both the question marks in the following equation?
$\frac{?}{1083} = \frac{75}{?}$
(1) 255 (2) 295 (3) 285 (4) 235 (5) None of these

71. One-eighth of a number is 41.5. What will 69% of that number be?
(1) 229.08 (2) 225.76 (3) 219.12 (4) 232.4 (5) None of these

72. By how much is $\frac{2}{9}$ th of 279 lesser than $\frac{7}{8}$ th of 216?
(1) 131 (2) 139 (3) 119 (4) 127 (5) None of these

73. Samarth started a business investing Rs. 55,000/-. After 4 month Vishal joined him with a capital of Rs. 40,000/-. At the end of the year the total profit was Rs. 33,957/-. What is the difference between the share of profits of Samarth and Vishal?
(1) Rs. 11,088/- (2) Rs. 22,781/- (3) Rs. 11,781/- (4) Rs. 22,869/- (5) None of these

74. The compound interest accrued on an amount of Rs. 16,800/- at the end of two years of Rs. 5,418/-. What would be the simple interest accrued on the same amount at the same rate in the same period?
(1) Rs. 5,070/- (2) Rs. 5,140/- (3) Rs. 5,210/- (4) Rs. 5,280/- (5) None of these

75. The ages of Chinmay and Maulik are in the ratio of 5 : 2 respectively. After 7 years the ratio of their ages will be 4 : 3. What is age of Chinmay?
(1) 10 years (2) 5 years (3) 6 years (4) 12 years (5) None of these

Directions for questions 76 – 80: Study the table carefully to answer the questions that follow:

Year and Stream wise number of Students enrolled in Engineering Colleges

Streams → / Years ↓	Electrical	Electronics	Mechanical	Civil	Information Technology
2001	252	447	343	506	264
2002	260	470	369	590	241
2003	286	514	398	600	310
2004	332	545	447	678	340
2005	355	620	500	623	397
2006	421	646	485	640	416
2007	467	580	510	710	475

76. What is the difference between the average number of students enrolled in Mechanical Stream over the given years and the average number of students enrolled in Civil Stream over the given years?
(1) 282 (2) 185 (3) 272 (4) 75 (5) None of these

77. What is the difference between the total number of students enrolled in Electrical Stream over the given years and the total number of students enrolled in Information Technology Stream over the given years?
(1) 70 (2) 225 (3) 770 (4) 1379 (5) None of these

78. What is the respective ratio of number of students enrolled in Civil Stream to the number of students enrolled in Mechanical Stream in the year 2006?
(1) 4 : 3 (2) 127 : 98 (3) 37 : 43 (4) 128 : 97 (5) 97 : 128

79. What is the average number of students enrolled in the Electronics Streams over the given years?
(1) 339 (2) 359 (3) 546 (4) 436 (5) None of these

80. In 2001, the number of students enrolled in Electrical Streams is approximately what percent of the number of students enrolled in Electronics students?
(1) 29 (2) 38 (3) 67 (4) 44 (5) 56

Directions for questions 81 – 85: Study the information carefully to answer the following questions:
In a Sports Club consisting of 1250 Members, the ratio of Males to Females is 3 : 2 respectively. All the members are enrolled in five different Games viz. Boxing, Judo and Karate, Badminton, Table Tennis and Law Tennis. 18 percent of the Females are enrolled in Judo and Karate. 40 percent of Males are enrolled in Badminton. One-fifth of the females are enrolled in the table tennis. The ratio of enrolment of males to females in the Judo and Karate is 3 : 2 respectively. 20 percent of the total numbers of members are enrolled in boxing. Females enrolled in table tennis are 80 percent of the males enrolled in the same game. 12 percent of the males are enrolled in lawn tennis. The remaining males are enrolled in boxing. 25 percent of the females are enrolled in badminton and the remaining females are enrolled the lawn tennis.

81. What is the total number of members enrolled in the table tennis?
(1) 250 (2) 125 (3) 100 (4) 425 (5) None of these
82. What is the total number of females enrolled in boxing and judo and karate together?
(1) 250 (2) 185 (3) 240 (4) 275 (5) None of these
83. What is the number of females enrolled in the badminton?
(1) 90 (2) 300 (3) 150 (4) 125 (5) None of these
84. Number of males enrolled in Lawn Tennis forms approximately what percent of total number of the members in the sports club?
(1) 11 (2) 7 (3) 15 (4) 20 (5) 23
85. Number of males enrolled in boxing forms what percent of the number of females enrolled in the same game? (rounded off to two digits after decimal)
(1) 66.67 (2) 83.34 (3) 58.78 (4) 77.76 (5) 42.45

Directions for questions 86 – 90: Study the table carefully to answer the questions that follow:

Number of Pass and Fail Students, of five different classes, in a year from various schools

Schools	Classes									
	VI		VII		VIII		IX		X	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
A	64	12	56	12	82	09	60	14	66	10
B	55	18	64	16	88	07	64	11	73	12
C	53	16	80	10	58	12	63	09	63	18
D	62	11	62	14	64	13	61	07	53	17
E	70	15	76	17	78	10	52	13	79	09
F	58	08	72	13	72	14	45	12	75	11

86. What is the average number of fail students from class IX from all the schools together?
(1) 19 (2) 17 (3) 13 (4) 9 (5) 11

87. What is the respective ratio of the total number of pass students of class VI to that of class VIII from all the schools together?
(1) 9 : 11 (2) 181 : 221 (3) 81 : 123 (4) 21 : 32 (5) None of these

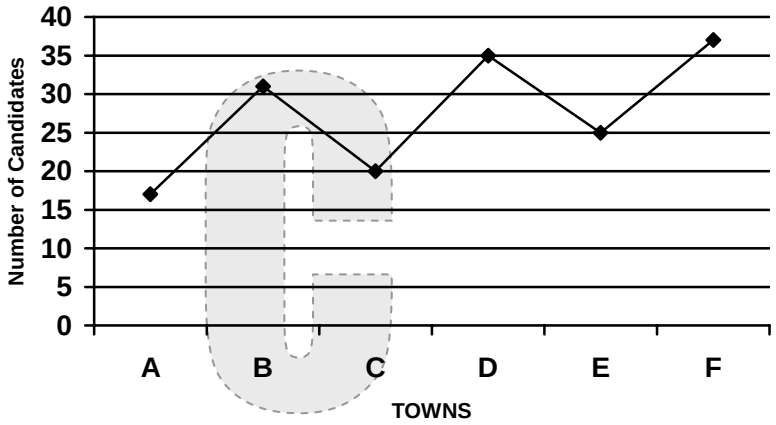
88. Which class has maximum number of pass students from all the schools together?
(1) VIII (2) VII (3) IX (4) X (5) None of these

89. What is the average number of pass students of all the classes together of school E?
(A) 80 (2) 74 (3) 71 (4) 65 (5) 63

90. What is the respective ratio of the total number of fail students of class IX to the total number of fail students of class X from all the schools together?
(1) 2 : 1 (2) 3 : 4 (3) 4 : 5 (4) 6 : 7 (5) None of these

Directions for questions 91 – 95: Study the following graph carefully to answer the questions.

Number of candidates Appearing for Management Aptitude Test (MAT) from various Towns (Number in thousands)



91. What is the respective ratio of the number of candidates appearing for the MAT from Town B to Town E?
(1) 11 : 8 (2) 13 : 10 (3) 6 : 5 (4) 23 : 27 (5) None of these

92. What is the approximate average number of candidates appearing for MAT from all the Towns together?
(1) 29950 (2) 28900 (3) 27920 (4) 26940 (5) 30930

93. The number of candidates appearing for MAT from Town A is approximately what percent of the number of candidates appearing for MAT from Town F?
(1) 53 (2) 67 (3) 39 (4) 71 (5) 47

94. What is the respective ratio of the number of students appearing for the MAT from Town A, B and C together to the number of students appearing for the MAT from Town D, E and F together?
(1) 28 : 39 (2) 3 : 2 (3) 9 : 10 (4) 14 : 13 (5) None of these

95. The number of candidates appearing for MAT from Town C is what percent of the total number of candidates appearing for MAT from all the Towns together (rounded off to two digits after decimal)?
(1) 13.58 (2) 17.78 (3) 21.86 (4) 11.94 (5) None of these

Directions for questions 96 – 100: Each question below is followed by two statements A and B. You are to determine whether the data given in the statement is sufficient for answering the question. You should use the data and your knowledge of mathematics to choose between the possible answers.

Give answer (1) If the statement (A) alone is sufficient to answer the question, but the statement B alone is not sufficient.

Give answer (2) If the statement (B) alone is sufficient to answer the question, but the statement A alone is not sufficient.

Give answer (3) If both statements (A) and (B) together are needed to answer the question.

Give answer (4) If either the statement (A) alone or statement (B) alone is sufficient to answer the question.

Given answer (5) If you cannot get the answer from the statement (A) and (B) together, but need even more data.

96. What is the rate of p.c.p.a. on an amount of Rs. 15,000/- deposited in a Bank?
    (A) The simple interest for two years is Rs. 3,600/-.
    (B) The difference between the simple interest and compound interest is Rs. 216/-.

97. What is the value of the two digit number?
    (A) The product of the digits is 28 and the difference between the digits is 3.
    (B) The digit at the unit place is smaller than the other.

98. The ages of Neera and Shalu are in the ratio of 2 : 1. What is the age of Shalu?
    (A) The ages of Shalu and Sugandha are in the ratio of 2 : 1.
    (B) After 4 years the ratio of Neera's and Shalu's ages will be 3 : 2.

99. What is the profit earned by Selling a chair for Rs. 250/-?
    (A) The cost price of 10 such chairs is equal to selling price of 8 such chairs.
    (B) 25% profit is earned by selling 4 such chairs.

100. What is the salary of A, in a group of A, C, E, G, H and J, whose average salary is Rs. 25,000/-?
    (A) Total of the salary of C and E is Rs. 54,000/-.
    (B) Total of the salary of G and H is Rs. 58,000/-.

ANSWERS

41. (3)	42. (1)	43. (5)	44. (2)	45. (4)	46. (5)	47. (2)	48. (1)
49. (4)	50. (3)	51. (3)	52. (5)	53. (1)	54. (2)	55. (4)	56. (4)
57. (1)	58. (2)	59. (3)	60. (1)	61. (5)	62. (3)	63. (1)	64. (2)
65. (4)	66. (4)	67. (5)	68. (1)	69. (2)	70. (3)	71. (1)	72. (4)
73. (3)	74. (5)	75. (2)	76. (2)	77. (1)	78. (4)	79. (3)	80. (5)
81. (4)	82. (3)	83. (4)	84. (2)	85. (1)	86. (5)	87. (2)	88. (1)
89. (3)	90. (4)	91. (2)	92. (3)	93. (5)	94. (1)	95. (4)	96. (1)
97. (3)	98. (2)	99. (4)	100. (5)