

## MATHEMATICS

41. The Municipality of a town increases water tax by 20% and water consumption decreased by 20%. Then the percentage of increase or decrease in the monthly expenditure is:
- (A) 4% increase (B) 4% decrease  
(C) 5% increase (D) 5% decrease
42. A child was born on 13<sup>th</sup> January 1976 which was a Tuesday. What day of the week will be the child's birth day in the year 1986?
- (A) Sunday (B) Friday  
(C) Saturday (D) Monday
43. The perimeter of a rectangle is 60 cms. If its length is twice its breadth, then its area is:
- (A) 200 cm<sup>2</sup> (B) 180 cm<sup>2</sup>  
(C) 160 cm<sup>2</sup> (D) 220 cm<sup>2</sup>
44. A tree grows at the rate of  $\frac{1}{5}$ <sup>th</sup> of its height annually. By how much height will it grow after 2 years, if its present height is 75 cms?
- (A) 108 cms (B) 90 cms  
(C) 144 cms (D) 112 cms
45. A train 600 meters long is running at a speed of 90 kms/hr. If it crosses a tunnel in one minute, then the length of the tunnel is:
- (A) 500 meters (B) 550 meters  
(C) 600 meters (D) 900 meters
46. A book seller sold a box of 10 pencils for Rs. 80 and incurred a loss. Had he sold it for Rs. 98, his gain would have been twice the loss he incurred earlier. The cost price of the box of pencils is:
- (A) Rs. 84 (B) Rs. 86  
(C) Rs. 88 (D) Rs. 90
47. In a 100 meters race, A beats B by 20 meters B beats C by 5 meters. In the same race, A beats C by:
- (A) 26 meters (B) 25 meters  
(C) 24 meters (D) 22 meters

48. Beena got married 8 years ago. Today, her age is  $1\frac{1}{4}$  times her age at the time of marriage. If her daughter's age is  $\frac{1}{10}$  times her age, then her daughter's age is:
- (A) 3 years (B) 4 years  
(C) 5 years (D) 2 years
49. A clock gains 2 minutes every hour. Then the angle traversed by the second hand in one minute is:
- (A)  $360^\circ$  (B)  $370^\circ$   
(C)  $390^\circ$  (D)  $372^\circ$
50. 80% of students of a class took Statistics and 45% took Mathematics. If each student took Statistics or Mathematics and 40 took both, the total number of students in the class was:
- (A) 160 (B) 180  
(C) 200 (D) 225
51. Kiran's brother is 5 years older to her. Her father was 30 years old when Kiran's sister was born, while her mother was 28 years old when Kiran was born. If Kiran's sister was 2 years old when her brother was born, what was the age of their father when Kiran's brother was born?
- (A) 32 (B) 34  
(C) 37 (D) 30
52. If Second Saturday and Sunday of every month is a holiday, then the total number of working days in a month of 31 days beginning with a Wednesday will be
- (A) 23 (B) 24  
(C) 25 (D) 26
53. A mess contractor can either serve 450 students with the meal that he prepares or can cater to 270 cops with the same meal. If 300 students have already eaten in the mess, how many cops can be fed with the remaining meal?
- (A) 20 (B) 45  
(C) 90 (D) 180
54. A car driver increases the average speed of his car by 3 km/hr every hour. The total distance travelled in 7 hours if the distance covered in first hour was 30 km, is
- (A) 266 km (B) 273 km  
(C) 280 km (D) 287 km

55. A grocer mixes coffee powder of 2 types, one of which is priced at Rs. 60 and the other at Rs. 90. What should be the ratio of combining the two, to sell the blended mix coffee powder of the two types at Rs. 80?
- (A) 2:1 (B) 2:3  
(C) 1:2 (D) 3:2
56. The smallest number that should be subtracted from 2085, so that the new number is completely divisible by 23 is
- (A) 9 (B) 15  
(C) 20 (D) 19
57. A tank is connected to three pipes – Pipe A, B and C. Pipe A can fill the tank in 6 hours, B can fill the tank in 8 hours and Pipe C can empty the full tank in 12 hours. How much time will it take to fill the tank completely if all three pipes are working together?
- (A) 4 hours (B) 4 hours 48 minutes  
(C) 5 hours (D) 5 hours 20 minutes
58. Naresh bought a bicycle each for his two sons, each bicycle priced at Rs. 3500. If the first bicycle is sold at a profit of 5%, the how much should the other bicycle be sold for, to gain a total of 20% on both?
- (A) 15% (B) 10%  
(C) 25% (D) 35%
59. An employee of an organization invests a total of Rs 25,400 in two different schemes X and Y at a simple interest rate of 18% per annum and 10% per annum respectively. If a total of Rs. 6460 has been earned as simple interest in 2 years, what amount was invested in Scheme Y?
- (A) Rs. 8,625 (B) Rs. 16,775  
(C) Rs. 12,240 (D) Rs. 10,930
60. The difference between Simple Interest and Compound Interest on Rs. 500 for 1 year at 10% per annum, reckoned half yearly is
- (A) Rs. 1 (B) Rs. 1.25  
(C) Rs. 1.5 (D) Rs. 2

## LEGAL APTITUDE

This section consists of fifty (50) questions. Each question consists of legal principle(s) (hereinafter referred to as 'principle') and facts. Such proposition may or may not be true in the real and legal sense, yet you have to conclusively assume them to be true for the purposes of this section. Principles have to be applied to the given facts to arrive at the most reasonable conclusion. Only one of the alternatives, i.e., (A), (B), (C), or (D) is the most reasonable conclusion. In other words, in answering the following questions, you must not rely on any principle except the principles that are given herein below for every question. Further you must not assume any facts other than those stated in the question. The objective of this section is to test your ability in legal aptitude, study of law, research aptitude and problem solving ability even if the 'most reasonable conclusion' arrived at may be absurd or unacceptable for any other reason.

61. **Principle:**Acceptance of proposal must be the exact mirror image of the proposal.  
**Facts:** 'A' made a proposal to 'B' to sell a chair for Rs. 500. 'B' is desirous of buying the said chair for Rs. 400.
- (A) B has accepted the proposal of A.
  - (B) B has not accepted the proposal of A.
  - (C) It is not clear if B has accepted the proposal of A.
  - (D) It is not clear whether A made a proposal to B.
62. **Principle:**An agreement with a boy below the age of eighteen years is not enforceable by law.  
**Facts:** A man entered into an agreement with a girl of seventeen years of age.
- (A) The agreement is enforceable by law.
  - (B) The agreement is not enforceable by law.
  - (C) The agreement is enforceable by the girl.
  - (D) No inference can be drawn.
63. **Principle:**Sale of liquor is illegal. All agreements relating to prohibited items do not exist in the eyes of law.  
**Facts:** 'A' entered into an agreement with 'B' for the sale of liquor. 'A' failed to supply the agreed quantity of liquor to B.
- (A) B can bring a legal action against A.
  - (B) B cannot bring any legal action against A.
  - (C) A can bring a legal action against B.
  - (D) A and B can initiate appropriate legal proceeding against each other.