SIX PHRASE – QUANTITATIVE APTITUDE

1. How many 4 digit numbers can be made using 1, 2, 3, 4, 5, 6 and 7 with none of the digits being repeated?

(a) 7! (b) 840 (c) 4! (d) 42

2. What is the least number which should be added to 1330 to make it a perfect square?

(a) 56 (b) 1 (c) 41 (d) 30

(e) 39

3. If a number is divisible by 63, then it is also divisible by

(a) 7 (b) 11 (c) 13 (d) 17

4. Write 528/7 as a mixed fraction.

(a) $75^2/7$ (b) $75^3/7$ (c) $74^3/7$ (d) $70^2/7$

5. Which number should be subtracted from 876905 so that it can be divisible by 8?

(a) 1 (b) 2 (c) 3 (d) 4

6. Solve: $4/5 \times 61/80 \times 10/9$

(a) 61/90 (b) 90/61

(c) 60/91 (d) None of the above

7. The population of a town three years ago was 'b' and the population of the town three years from now will be 'c'. What is the current population of the town, if it grows at the same rate?

(a) $\sqrt{(bc)}$ (b) $b\sqrt{(c)}$ (c) $c\sqrt{(b)}$

(d) $b\sqrt{(b/c)}$ (e) $\sqrt{(b/c)}$

8. In a scheme, a pack of three soaps with MRP Rs.45 is available for Rs.42. If it still gives a profit of 5% to the shopkeeper, then the cost price of the pack is

(a) Rs.40 (b) Rs.37 (c) Rs.41 (d) Rs.35

9. A man sells 12 candles for Rs.12 & loses Rs.2.40. If he sells 12 candies for Rs.16, how much does he gain or lose?

(a) Gain Rs.4 (b) Loses Rs.6 (c) Gains Rs.6.40

(d) Loses Rs.1.60 (e) Gains Rs.1.60

10. Shobhit bought 300 litres of milk at Rs.19 per litre. He added 200 litres of water to it and sold 400 litres of this milk at Rs.20 per litre. To the rest, he added 10 litres more water and then sold it for Rs.15 per litre. If he used mineral water that costs Rs.10 per litre, then the total money earned by Shobhit is

(a) Rs.4,000 (b) Rs.4,150 (c) Rs.1,800 (d) Rs.1,850

11. A car is 250 metres behind the bus. The car and bus are moving with the speed of 60 km/hr and 35 km/hr respectively. The car will be ahead of bus by 250 metres in

(a) 37 seconds (b) 48 seconds (c) 72 seconds

(d) 68 seconds (e) None of the above

12. Rahul can finish one-fifth of his homework in one hour. Neha can finish three-seventh of her homework in one hour thirty minutes and Riya can finish three fourth of her homework in three hours thirty minutes. If all of them start their homework at 12.00 p.m. and can go to play as soon as they all finish their homework, when can they start to play, if they take a break at 3.30 p.m. for thirty minutes?

(a) 5.00 p.m. (b) 5.30 p.m. (c) 4.40 p.m.

(d) 6.30 p.m. (e) 3.30 p.m.

13. 49 pumps can empty a reservoir in $6^{1/2}$ days, working 8 hours a day. If 196 pumps are used for 5 hours a day, then the same work will be completed in how many days?

(a) 2.6 days (b) 3 days (c) 2.5 days (d) 2 days

14. In an annual sale, there was a flat discount of 40% on all items. Komal bought a pair of jeans for Rs.480. What is the labeled price of the pair of jeans?

(a) Rs.799 (b) Rs.899 (c) Rs.699 (d) Rs.720

15. A detergent powder company is having a contest. Each pack of 1 kg contains one of the letters B, A, M and O. If in every 20 packs, there are four Bs, five As, ten Ms and one O what is the probability that a pack will have a B?

(a) 1/4 (b) 1/2 (c) 1/5 (d) 1/20

16. Which number should be multiplied by 43 so that it will have 3 prime factors?

(a) 2 (b) 3 (c) 6 (d) 8

17. How many litres of a 90% solution of concentrated acid needs to be mixed with a 75% solution of concentrated acid to get a 30 L solution of 78% concentrated acid?

(a) 24 L (b) 22.5 L (c) 6 L (d) 17.5 L

18. What is the value of $^{15}C_{13}$?

(a) 30 (b) 15 (c) 210 (d) 105

19. –3.4 is a number on the real number line. If we subtract 1 from this number then the new number will be

(a) Farther from the origin than – 3.4

(b) Closer to the origin than – 3.4

(c) Equally farther from the origin, as – 3.4 is

(d) None of the above

20. The number of 5-digit odd numbers be made from number 12345 are

(a) 24 (b) 32 (c) 64 (d) 72

21. Find the largest two digit number that divides 673 and 865, leaving remainder 1 in each.

(a) 91 (b) 93 (c) 96 (d) 98

22. 4 men car repair a road in 7 hours. How many men are required to repair the road in 2 hours?

(a) 7 (b) 14 (c) 17 (d) 10

23. If $x = 1 + 2^{1/2}$ and $y = 1 - 2^{1/2}$, then $x^2 + y^2$ is

(a) 2 (b) 3 (c) 6 (d) 0

24. Arrange 2/15, 18/29, 7/18 and 10/87 in ascending order.

(a) 7/18, 2/15, 10/87 and 18/29

(b) 2/15, 7/18, 10/87 and 18/29

(c) 10/87, 18/29, 2/15 and 7/18

(d) 10/87, 2/15, 7/18 and 18/29

25. An investment earns 4 paisa per rupee invested. If at the end of the year, the interest earned by an investment is Rs.100, then the investment is equal to

(a) Rs.2,000 (b) Rs.2,200 (c) Rs.1,000

(d) Rs.2,500 (e) Rs.4,000

26. Rahul purchased 7 Dvds each of which costs Rs.17. He gave a five hundred rupee note to the shopkeeper. The amount returned to him is divisible by

(a) 3 (b) 7 (c) 9 (d) 11

27. Simplify: $[\{(1/8)^{-1}\}^{-4}]^{-1}$

(a) 4906 (b) 4096 (c) 4960 (d) 4690

28. In a game show there are 5 prize cards and 20 blank cards. A contestant is asked to choose a card at random. What is the probability that he won a prize?

(a) 3/5 (b) 2/5 (c) 1/5 (d) 4/5

29. Which of the following numbers is the smallest number?

(a) 1/12 (b) 1/6 (c) 1/4 (d) 1/3

30. Sara has 400 marbles. If she gives $(1/5)^{th}$ of her marbles to Sam and Sam gives $(3/4)^{th}$ of his marbles to David, then how many marbles does Sam have left?

(a) 80 (b) 20 (c) 60 (d) 200

31. Among the following options, which one does not lie in the given range : $1/6 < X < 17/12$

(a) 2/7 (b) 1/2 (c) 4/3 (d) 13/11

(e) 20/13

32. The correct relationship after eliminating x, y and z from $x + y = a$, $y + z = b$, $z + x = c$ and $x + y + z = m$, is

(a) $m = x + y + z$ (b) $2m = a + b + c$ (c) $m = x - y - z$

(d) $2m = x - y - z$ (e) None of these

33. Atul bought a machine for Rs.4,50,000 and sold it to Irrfan who later sold the machine to Danish at a loss of 10% for Rs.4,95,000. The profit earned by Atul is

(a) 23% (b) 21% (c) 25% (d) 22.22%

34. An air conditioner can cool the hall in 40 minutes while another takes 45 minutes to cool under similar conditions. If both air conditioners are switched on at same instance, then how long will it take to cool the room?

(a) About 22 minutes (b) About 20 minutes

(c) About 30 minutes (d) About 25 minutes

35. If the price of rice increases by 30%, then by what percent should its consumption be decreased so that the total expenditure remains same?

(a) 76.92% (b) 23.07% (c) 30%

(d) 25% (e) 42.85%

36. If $2^{2n-1} = (1/8^{n-3})$ then the value of n is

(a) 3 (b) 2 (c) 0 (d) –2

37. Ram is five years elder to his youngest sibling Shreya. Shreya is two years younger than her brother Ritesh. Ritesh is 13 years old and is Ram's brother. How old will Ram be in two years from now?

(a) 16 (b) 17 (c) 20 (d) 15 (e) 18

38. What is unit digit of the following sum: $1 + 2^2 + 3^3 + 4^4 + 5^5 + 6^6$?

(a) 0 (b) 4 (c) 7 (d) 9

39. What is the value of $(a^3)^5/(a^2)^4$?

(a) 7a (b) a7

(c) a^{-7} (d) None of the above

40. Which of the following numbers is divisible by 11?

(a) 1042 (b) 1045 (c) 1047 (d) 1048

41. The total combinations of picking 3 balloons from a packet of 25 balloons are

(a) 2100 (b) 2200 (c) 2300 (d) 2400

42. A book store offers a 10% discount on all the books sold plus an additional discount of 5% on the total bill, if the total bill after the initial discount is more than or equal to Rs.1000. Dilshan bought 3 books worth Rs.450, Rs.520 and Rs.250 respectively. How much money was Dilshan able to save as a result of the various discounts offered by the store?

(a) Rs.102 (b) Rs.176.90 (c) Rs.61

(d) Rs.183 (e) None of the above

43. Simplify $(144^{-3/2})^{-1/6}$.

(a) $2\sqrt{3}$ (b) 6 (c) $3\sqrt{2}$ (d) 4

44. What is the value of $(5^{-2} \times 10^{-4})/(2^{-5} \times 5^{-6})$?

(a) 0 (b) 2 (c) 5 (d) 10

45. Jagdish can build a wall in 10 days. Narender can build the same wall in 12 days while Sumit takes 15 days to do the same job. Which two of them should be employed to finish the job in 6 days?

(a) Jagdish and Narender (b) Jagdish and Sumit

(c) Sumit and Narender (d) None of these

46. Express the fraction 26/17 as a number upto 3 decimal points.

(a) 1.429 (b) 1.535 (c) 1.321 (d) 1.529

47. In an election, the winning candidate won by 15% votes. If a total of 5,000 votes were cast of which only 86% were eligible, then how many votes did the winning candidate get?

(a) 2,000 (b) 1,800 (c) 4,000

(d) 4,300 (e) 2,300

48. The largest measuring cylinder that can accurately fill 3 tanks of capacity 98, 182 and 266 litres each, is of capacity

(a) 2 litres (b) 7 litres (c) 14 litres (d) 98 litres

49. A manufacturing plant produces a batch of 10 containers out of which 4 are defective. In a quality inspection test, 3 containers are chosen at random. What is the probability that at least one would be defective?

(a) 1/4 (b) 3/10 (c) 5/6 (d) 3/4

50. Eight teams are playing in a cricket match. If a team loses, it is out of the tournament. How many games are needed to determine the winner?

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

51. Find the smallest three digit number that divides 229 and 568 leaving remainder 3 in each case.

(a) 111 (b) 113 (c) 117 (d) 119

52. A box contains 5 red, 4 white and 3 green balls. In how many ways can 3 balls be drawn from the box, without replacement, so that at least 2 of them are green?

(a) 18 (b) 28 (c) 27 (d) 9 (e) 30

53. The largest 6-digit number which is exactly divisible by 29 is

(a) 9,99,972 (b) 9,99,974 (c) 9,99,976 (d) 9,99,978

54. If abc4d is divisible by 4, what cannot be the value of d?

(a) 0 (b) 4 (c) 8 (d) 2

55. If log10 3 = 0.477, then the value of log10 9 is

(a) 1 (b) 0.477 (c) 0.954 (d) 0.523

56. Which of the following is the least number exactly divisible by 15, 25, 30 and 45?

(a) 425 (b) 450 (c) 475 (d) 490

57. If LCM of two prime numbers p and q (where p<q) is 323, then the value of 2p – q is

(a) 11 (b) 13 (c) 15 (d) 17

58. The average of 7 numbers is 50. The average of first three of them is 40, while the average of the last three is 60. What must be the remaining number?

(a) 65 (b) 55 (c) 50 (d) 45

59. A train runs at a speed of 42 m/s and takes 35 seconds to pass a tunnel. After travelling some distance, it takes 15 seconds to pass a pole. What is the length of the tunnel?

(a) 162 m (b) 630 m (c) 840 m (d) 240 m

60. What is the smallest number, which when divided by 7, 18, 56 and 36, leaves a remainder zero?

(a) 504 (b) 392 (c) 390 (d) 1012

61. How many 4-digit numbers can be formed from the digits 2, 3, 5, 6 and 8, which are divisible by 2 if none of the digits is repeated?

(a) 24 (b) 60 (c) 72 (d) 120

62. If $m^n = 2401$, then $m/n =$

(a) 4/7 (b) 7/4 (c) 11/3 (d) 4/11

63. The number 98181*6 is completely divisble by 9. Smallest whole digit number in place of * can be

(a) 0 (b) 1 (c) 2 (d) 3

64. Parul is one-fifth the age her mother was 15 years ago and Parul's brother is three-fifth the age his mother was 10 years ago. If the sum of Parul and her brother's ages is 31, then how old is Parul's mother? (in years)

(a) 50 (b) 40 (c) 35 (d) 60

65. A vendor purchases binder clips at 12 for Rs.60. How many clips should he sell for Rs.60 to earn a profit of 20%?

(a) 5 (b) 8 (c) 6 (d) 10

End of Session - 1

Thank You….

Quants Modules
Session 2

66. What is the unit digit in 27^{20}?

(a) 1 (b) 5 (c) 12 (d) 20

67. Recycling 900 kg of paper saves 17 trees. How many trees are saved when 1200 kg of paper are recycled?

(a) 19 (b) 25 (c) 20 (d) 22

68. Out of every 100 people in police department, 10 are women. Out of every 100 people in military forces, 3 are women. In a batch of 180 police personnel and 200 army personnel, how many of them would be women?

(a) 24 (b) 30 (c) 18 (d) 6

69. The reciprocal of the HCF and LCM of two numbers are 1/12 and 1/312 respectively. If one of the numbers is 24, find the other number.

(a) 126 (b) 136 (c) 146 (d) 156

70. What is the difference between the LCM and HCF of the numbers 20, 30, and 40?

(a) 100 (b) 110 (c) 120 (d) 130

71. If the price of rice increases by 30%, then by what percent should its consumption be decreased so that the total expenditure remains same?

(a) 76.92% (b) 23.07% (c) 30%

(d) 25% (e) 42.85%

72. $(2/7)^{-8} \times (7/2)^{-2} = (2/7)^{2x}$. Find x.

(a) 3 (b) – 3 (c) – 6 (d) 2

73. In how many different ways can the letters of the word 'HARDWARE' be arranged such that the vowels always come together?

(a) 120 (b) 1080 (c) 1440

(d) 4320 (e) 720

74. Which of the following is greatest among the four given values of x?

(a) $x = \sqrt{15}$ (b) $x = \sqrt[3]{25}$

(c) $x = \sqrt[4]{125}$ (d) $x = \sqrt{(12\&625)}$

75. A cistern has three taps in all. Two taps are used for filling the cistern and the third one is used to empty the cistern. The first two taps fill the cistern in 13 minutes and 11 minutes respectively. When all the three taps are open, the empty cistern is filled in 30 minutes. How long will the third tap (waste pipe) take to empty the cistern completely?

(a) 6.28 minutes (b) 6.43 minutes

(c) 7.63 minutes (d) 7.43 minutes

76. The value of $(8^{-25} - 8^{-26})$ is

(a) $7 * 8^{-25}$ (b) $7 * 8^{-26}$

(c) $8 * 8^{-26}$ (d) None of the above

77. If $2^{x+y} = 2 * (2)^{1/2}$ and $2^{x-y} = 2^{1/2}$, then the value of x is

(a) 1 (b) 2 (c) 3

(d) 4 (e) None of these

78. In a town of 2,00,000 citizens, if the population increases at the rate of 4% per annum, then what will be the population of the town in 2 years from now?

(a) 2,10,000 (b) 3,55,555 (c) 1,84,320

(d) 2,16,000 (e) 2,16,320

79. In how many ways can the letters of the word 'ELEPHANT' be arranged?

(a) 5,760 (b) 6,720 (c) 20,160 (d) 40,320

80. When a local train travels at a speed of 60 kmph, it reaches the destination on time. When the same train travels at a speed of 50 kmph, it reaches its destination 15 minutes late. What is the length of the journey?

(a) 75 km (b) 50 km (c) 60 km (d) 85 km

81. The number of ways in which the letters of the word 'RESULT' can be arranged without repetition is

(a) 720 (b) 120 (c) 60 (d) 840

82. 4522 is not divisible by

(a) 7 (b) 17 (c) 19 (d) 21

83. Which of the following numbers is divisible by 3 X 4?

(a) 946 (b) 947 (c) 948 (d) 949

84. Find the number to be multiplied by $(-6)^{-1}$, so as to get $(-8)^{-1}$ as the product?

(a) 3/4 (b) – (3/4) (c) 4/3 (d) – (4/3)

85. In a miniature wonderland, three countries Austria, America and Germany are on display. If Austria and America occupied 3/7 and 4/9 of the display area respectively, what is the display area occupied by Germany?

(a) 3/21 (b) 5/63 (c) 8/63 (d) 1/21

86. Abu company provides taxi for call center employees. The company has 7 Taveras, 5 Qualis, 6 Innovas and few small cars. If Tavera makes one fourth of the total fleet, how many small cars are there in the company?

(a) 12 (b) 7 (c) 6 (d) 10

87. To fill a storage tank of wheat, 20 containers full of wheat are required. How many containers of wheat will be required to fill the same tank if the capacity of the containers is reduced to two-fifth of the present capacity?

(a) 30 (b) 25 (c) 50 (d) 60

88. What is the value of the expression?

$4^{23} * 5^{20} * 6^{-2} * 3^{2} * 5^{-5} * 2^{-46} * 5^{-10} * 11^{0} * 5^{-5}$?

(a) 510/4 (b) 1/4 (c) 4 (d) 510

89. What are the number of ways of selecting 7 files out of

14 distinct files if one is always selected?

(a) ${}^{14}C_7$ (b) ${}^{13}C_6$ (c) 1

(d) ${}^{14}P_7$ (e) ${}^{13}P6$

90. A seller buys 10 phone chargers for Rs.800 and sells them at the rate of Rs.100 per charger. His gain percent is

(a) 0.25 (b) 0.2 (c) 0.3 (d)

91. An aeroplane flies along the sides of an equilateral triangle with speed of 300 km/hr, 200 km/hr, 240 km/hr. The average speed of the plane while flying around the triangle is

(a) 250 km/hr (b) 275 km/hr

(c) 200 km/hr (d) 240 km/hr

92. 6 interns and 2 managers working together can do five times the work that an intern and a manager can do. Calculate the ratio of the working capacities of an intern and a manger?

(a) 3:1 (b) 1:3 (c) 2:3 (d) 3:2 (e) 2:5

93. A home security system provides a security code for the door, which consists of five buttons. Code may be generated by pressing any one button, any two, any three, any four, or all five buttons. How many such codes are possible?

(a) 32 (b) 5 (c) 31 (d) 10

94. The number of 6-digit numbers that can be formed from 0, 1, 5, 6, 7 and 8 in which the first digit is not 0 are

(a) 120 (b) 600 (c) 720 (d) 800

95. A box contains 10 balls numbered 1 through 10. Anuj, Anisha and Amit pick a ball each, one after the other, each time replacing the ball. What is the probability that Anuj picks a ball numbered less than that picked by Anisha, who in turn picks a lesser numbered ball than Amit?

(a) 3/25 (b) 1/6 (c) 4/25 (d) 81/400

96. There are two pipes, an inlet pipe which completely fills a tank at 6 litre/min and an outlet pipe which empties the tank at 4 litre/min. The pipes function alternately for 1 minute and the inlet pipe is the first to function. Considering the capacity of the tank as 50 litres, how much time (in minutes) will it take to completely fill the tank?

(a) 45 (b) 50 (c) 49 (d) 10

97. $(8m^4n^5)/(2m^3n2)$ =

(a) $4mn^3$ (b) $4m^3n$ (c) $3mn^4$ (d) $3m^4n$

98. Which of the following numbers is divisible by 6?

(a) 4322 (b) 3142 (c) 2256 (d) 1640

99. Pulse rate of a teenager is 12 beats in 10 sec. At this rate, would his pulse rate be more than, equal to, or less than 100 beats per minute?

(a) Less than (b) Greater than

(c) Equal to (d) Data insufficient

100. Find the greatest 5 digit number that is exactly divisible by 3, 4, 5 and 7.

(a) 99940 (b) 99960 (c) 99970 (d) 99990

101. If the sum of squares of two numbers is 164 and their HCF and LCM are 2 and 40 respectively, then the numbers are

(a) 4, 8 (b) 4, 10 (c) 8, 10 (d) 10, 12

102. On dividing a number by 999, the quotient is 366 and the remainder is 103. The number is

(a) 364724 (b) 365387 (c) 365737 (d) 366757

103. In a mall, 20% area is occupied by eateries, 60% area is open. In the remaining area of 1600 sq meter, there are different showrooms. What is the total area occupied by the mall?

(a) 10,000 sq m (b) 5,000 sq m

(c) 8,000 sq m (d) 4,800 sq m

104. A car engine is half filled and holds 15 litres of petrol. What fraction of the engine is full if it contains 18 litres of petrol?

(a) ¼ (b) 2/3 (c) 2/5 (d) 3/5

105. In a quiz competition, the host asked a question and provided three possible answers. What is the probability that the answer choice which Rohit selects for a question is wrong?

(a) 1/3 (b) 1/2 (c) ${}^{3}C_{1}$ x 3/2 (d) 2/3

106. Ram buys 7 novels from a book fair. Shyam buys 8 novels from another book fair, none of which is common with those bought by Ram. They decide to exchange their books one for one. In how many ways can they exchange their books for the first time?

(a) 7! * 8! (b) 7 * 8! (c) 7! * 8 (d) 56

107. What is the loss percentage incurred by a company when it buys an asset for Rs.1,50,000 and sells it for Rs.75,500?

(a) 49.67% (b) 49.34% (c) 98.68% (d) 98.34%

108. Probability of one of the power plants over heating is 0.15 per day and the probability of failure of back cooling system is 0.11. If these events are independent, what is the probability of 'big trouble' (i.e. both events taking place)?

(a) 0.35 (b) 0.0185 (c) 0.0165 (d) 0.26

109. A dividend of Rs.504 lakhs for shares was announced by a company. 100 employees cum share holders get Rs.3.60 lakhs each and the share holder who is not the employee gets Rs.2.40 lakhs each. How many shareholders are there who are not employees?

(a) 80 (b) 60 (c) 70 (d) 50

110. A bag contains 10-paisa, 20-paisa and 25-paisa coins in the ratio 7:4:3. If the total value is Rs.90, then what is the number of 25- paisa coins in the bag?

(a) 120 (b) 160 (c) 280 (d) 300

111. What is the least number by which 16,800 must be divided to get a number which is a perfect square?

(a) 42 (b) 24 (c) 21 (d) 40

112. A teacher was trying to form the groups of students in such a way that every group has equal number of students and that number should be a prime number. She tried for first 5 prime numbers, but on each occasion exactly one student was left behind. If the number of students is in 4 digits, then how many different values can the total no. of students take?

(a) 0 (b) 2 (c) 3 (d) 4

113. ABCD is a square. PQRS is a rhombus lying inside the square such that P, Q, R and S are the mid-points of AB, BC, CD and DA respectively. A point is selected at random in the square. Find the probability that it lies in the rhombus.

(a) 1/3 (b) 2/3 (c) 1/2 (d) 1/4

114. If $(x^{1/2})/(441^{1/2}) = 0.02$, then the value of x is

(a) 0.1764 (b) 1.764 (c) 1.64 (d) 2.64

115. What number should be divided by $(0.81)^{1/2}$ to give the result as 81?

(a) 9 (b) 81 (c) 72.9 (d) 0.9

116. Five students have not been absent for the entire first semester. They are asked to draw one pass each from a bag that has 5 movie passes and 5 meal passes. Parul and Mini are the first two students to draw the pass simultaneously. What is the probability that they both draw movie passes?

(a) 5/6 (b) 1/2 (c) 2/9 (d) 4/5

117. A single letter is drawn at random from the word, "ASPIRATION", the probability that it is a vowel is?

(a) 1/2 (b) 1/3 (c) 3/5 (d) 2/5

118. Riya sold her car for Rs.50,000 less than what she bought it for and lost 8%. At what price should she have sold the car, if she wanted to gain as much as she lost in the first transaction?

(a) Rs.6,25,000 (b) Rs.6,50,000 (c) Rs.6,75,000

(d) Rs.6,37,500 (e) Rs.7,00,000

119. Ritu has 3 shirts in shades of red, 4 in yellow shades and 5 in green shades. Three shirts are picked at random. The probability that all of these are in red shades is

(a) (1/12) (b) (1/220) (c) (1/66) (d) (1/4)

120. Mehak was in a whimsical mood and to reach her home from her office she took the following steps- 4 steps towards North, 3 steps towards East, 8 steps towards South, 6 steps towards West, 7 steps towards North, 5 steps towards East, 6 steps towards South, 4 steps towards West and finally reached her home taking 3 steps towards North. The location of Mehak's home with respect to her office is

(a) 3 steps to the East

(b) 3 steps to the West

(c) 0 steps

(d) 2 steps towards the East

(e) 2 steps to the West

121. Three successive discounts of 6%, 10%, 15% are equal to a single discount of

(a) 25% (b) 28.90% (c) 30% (d) 31% (e) 28.09%

122. A certain sum of money amounts to Rs.2,500 in a span of 5 years and further to Rs.3000 in a span of 7 years at simple interest. The sum is

(a) Rs.1,000 (b) Rs.1,200 (c) Rs.1,050 (d) Rs.1,250

123. If a coin with both heads is tossed, then the probability of obtaining a tail is

(a) 0 (b) ½ (c) 1/3 (d) 1

124. A water pump takes 6 hours to fill an over head tank. Standby pump takes 10 hours to fill the same over head tank. If the first pump fails after 2 hours of running, then how long will the standby pump take to fill the overhead tank?

(a) 6 hours (b) $8^{2/3}$ hours

(c) 8 hours (d) $6^{2/3}$ hours

125. Mumbai Rajdhani express takes 16 hours to reach Mumbai from Delhi while Swaraj express takes 20 hours. The ratio of the speeds of both the trains is

(a) 1:4 (b) 4:5 (c) 5:4 (d) 3:2

126. The printed price on a book is Rs.400, a bookseller offers a 10% discount on it. If he still earns a profit of 12%, then the cost price of the book is

(a) Rs.280 (b) Rs.352 (c) Rs.360 (d) Rs.300

127. A show room offers a 10% discount on a microwave, whose marked price is Rs.8,000 and also gives a blender worth Rs.1,200 as a complimentary gift with it. Even then, the showroom earns a profit of 20%. The cost price per microwave is

(a) Rs.7,200 (b) Rs.6,000 (c) Rs.5,000 (d) Rs.4,000

128. A baby crawls 12 feet towards East and then 4 feet towards South. He then crawls 9 feet towards West. Ho far is he from his initial position?

(a) 2 feet (b) 9 feet (c) 5 feet (d) 16 feet

129. A baby crawls 8 feet towards West and then 8 feet towards North. It then moves 14 feet towards East. How far and in which direction is the baby from the starting point?

(a) 8 feet towards East (b) 10 feet towards North-East

(c) 6 feet towards East (d) 10 feet towards South-East

130. X walks 6 km towards East from a point A and from the same point A, Y walks 8 km towards South. How far are the two friends from each other now?

(a) 14 km (b) 2 km (c) 10 km (d) 5 km

End of Session - 2

Thank You….

Quants Modules
Session 3

131. Find the chance of throwing more than 9 in one throw with 2 dice.

(a) 2/3 (b) 5/36 (c) 5/18
(d) 1/6

132. In how many different ways can the letters of the word 'PASSENGER' be arranged such that the two 'S' never occur together?

(a) 10!/3! × 2! (b) 8!/2! (c) 9!/(2! × 2!)
(d) 7! × 8!
(e) (8! × 7)/4

133. Replace the symbols * and # in 9586*4# so that it is divisible by both 8 and 5.

(a) 0, 0 (b) 1, 0 (c) 0, 5 (d) 1, 5

134. There are 5 clients and 5 consultants in round table meeting. In how many ways can the clients be seated such that no consultant is next to the other consultant?

(a) 5! 6! (b) 4! 4! (c) 4! 5! (d) 9!

(e) $^{10}C5$ 5! 4!

135. In an interview, there are 6 candidates who have been shortlisted for the content team- 4 PhDs and 2 MBAs. If 2 candidates If 2 candidates are chosen at random for the final round, what is the probability that both will be MBAs?

(a) 1/3 (b) ½ (c) 1/15 (d) 2/3

136. Evaluate: $\log_{5^3} 17^6$

(a) 2 log5 17 (b) log5 17 (c) log5 17^{18}

(d) 0.5 log17 5 (e) 2 log125 17

137. If $\log_{32}x + \log_{32}(1/8) = 1/5$, then the value of x is equal to

(a) 8 (b) 5 (c) 16 (d) 32

138. A multiplex conducted a random survey of the movie-goers to determine their preference in movies. Of the 50 people surveyed, 35 preferred comedies. What is the probability that any given movie-goer will buy a ticket of the comedy movie?

(a) 7/10 (b) 3/10 (c) Cannot be determined

139. If A varies jointly as B and the cube of C when A = 200 when B = 5 and C = 2. Find A when B = 6 and C = 3?

(a) 810 (b) 950 (c) 1070 (d) 1160

140. What is the value of $(10101)_2$ in decimal number system?

(a) 42 (b) 18 (c) 20 (d) 21

141. What is X if $8^{-1} * X = (-4)^{-1}$?

(a) 2 (b) 1 (c) – 2 (d) – 1

142. A rectangle's length is four times its breadth. It has an area of 2500 square yards. What is the length of the rectangle?

(a) 25 yards (b) 100 yards

(c) 625 25 yards (d) 5 yards

143. If the difference of two numbers is 8 and the difference of their squares is 160, then the numbers are

(a) 18, 10 (b) 8, 16

(c) 6, 14 (d) None of the above

144. Find the value of log1 + log2 + log3.

(a) 1 (b) 2 (c) 3 (d) None of these

145. A bag contains orange flavoured candies only. Malini takes out one candy without looking into the bag. What is the probability that she takes out an orange flavoured candy?

(a) 0 (b) 1/2 (c) 1/3 (d) 1

146. If I have kept six different books on a shelf, in how many different ways can I arrange them?

(a) 6 (b) 24 (c) 120 (d) 720

147. Find the smallest number that should be multiplied with 54000 to make it a perfect cube.

(a) 4 (b) 27 (c) 5 (d) 3

148. What is the remainder of 82^5 is divided by 7?

(a) 25 (b) 8 (c) 1 (d) 0

149. If a ball is drawn at random from a box containing 6 red, 4 blue and 5 white balls. What is the probability that the ball drawn is red or blue?

(a) 1/3 (b) 2/3 (c) 7/15 (d) 2/5

150. A bag contains 6 yellow balls, 3 red balls and 2 green balls. In how many ways can 5 balls be drawn from the bag if at least one yellow ball is to be included in the draw?

(a) 464 (b) 463 (c) 462 (d) 461

151. $2^8 \times 2^2 =$

(a) 4^{10} (b) 2^{10} (c) 2^{16} (d) 4^{16}

152. A boat takes a circular route to travel a total distance of 24 km to reach its initial position. The speed of the boat in still water is 5 km/hr and the speed of the stream is 3 km/hr. How much time(in hours) does the boat travel upstream and downstream respectively?

(a) 12, 3 (b) 3, 12 (c) 5, 3 (d) 3, 5

153. An unbiased coin is tossed 5 times. If tail appears on first four tosses, then probability of tail appearing on the fifth toss is

(a) 1/2 (b) 1 (c) 0 (d) 4/5

154. In a non-leap year, what is the probability that the last day of the year stars with a 'T'?

(a) 4/7 (b) 1 (c) 0 (d) 2/7

155. Varun is guessing which of the 2 hands holds a coin. What is the probability that Varun guesses correctly three times in a row?

(a) (1/6) (b) (1/2) (c) (1/4) (d) (1/8)

156. A pie has to be divided amongst few kids. Puneet gets 2/7th portion of the pie and Sheela gets 5/8th portion of the pie. Who amongst the two gets lesser share?

(a) Puneet (b) Sheela

(c) Both get equal share (d) Cannot be determined

157. Write $(625)^{10}$ as a number, in the number system with base 8.

(a) 9161 (b) 1161 (c) 19161 (d) 1061

158. The value of $\log abc\ a^3b^3c^3$ is

(a) abc (b) a3 (c) 3 (d) 27

159. Paul can complete a project in 6 days. With the help of an intern, he can do it in 4 days. In what time can the intern complete the project alone?

(a) 6 days (b) 6 1/4 days

(c) 12 days (d) 12 ½ days

160. Suparna needs to browse through 75 pages of a novel before she gives her review to the class. She has 2.5 hours before the lecture. What should be her reading speed in pages/hour?

(a) 16 (b) 30 (c) 20 (d) 22

161. The value of 361 raised to the power log195 is

(a) 5 (b) 19 (c) 25 (d) 95

162. Write $\sqrt{1008}$ as a mixed surd.

(a) $12\sqrt{7}$ (b) $7\sqrt{14}$ (c) $7\sqrt{12}$ (d) $7\sqrt{13}$

163. If the product of two co-prime numbers is 1599, then find the LCM of these numbers.

(a) 1 (b) LCM will be equal to HCF

(c) 1599 (d) LCM cannot be calculated

164. What is the square root of 576/9?

(a) 4 (b) 8 (c) 12 (d) 16

165. Find the greatest number that divides 42, 90 and 182 so as to leave the same remainder in each case.

(a) 2 (b) 4 (c) 7 (d) 9

166. What will be the value of x in the expression ?

[$72^2 - 28^2 = 50x$]

(a) 44 (b) 46 (c) 86 (d) 88

167. Mauli purchased a designer saree from Mumbai at 8/9th of its MRP. When she came back to Delhi, her neighbour coaxed Mauli to sell the saree to her. She was even ready to pay 9% more than its MRP. What would Mauli's gain percentage be, if she decides to sell the saree to her neighbour?

(a) 15.59% (b) 16.61% (c) 20.36% (d) 22.65%

168. What is the value of x in the expression log10 (20 × x) = 3?

(a) 500 (b) 50 (c) 2/100 (d) 30/20

(e) 3/20

169. If $m^n = 2401$, then m/n =

(a) 4/7 (b) 7/4 (c) 11/3 (d) 4/11

170. If by selling 10 papayas, the cost price of 8 papayas is realized, then the loss percent is

(a) 20% (b) 10% (c) 8% (d) 2%

171. The value of $(1/512)^{1/9}$ is

(a) 1/2 (b) 1/3 (c) 1/4 (d) 1/6

172 .Out of 9 people waiting for their turns for an interview, in how many ways can a selection for 4 be made if 1 particular person is always selected?

(a) ${}^{8}P_{3}$ (b) ${}^{9}P_{4} - {}^{1}P_{1}$ (c) ${}^{9}P_{4}$

(d) ${}^{8}C_{3}$ (e) ${}^{8}P_{4}$

173. If $\log_x (1/343) = -3$, then the value of x is equal to

(a) 3 (b) 7 (c) – 7 (d) – 3

174. What is the value of square of $7^{1/2}$, when it is expressed as a mixed fraction?

(a) $49^{1/2}$ (b) $49^{1/4}$ (c) $56^{1/4}$ (d) $14^{1/4}$

175. In a class of 50 students, the average age of girls is 12.3 years and that of boys is 12.5 years. If the average age of the class is 12.42 years, then the number of boys and girls respectively in the class are

(a) (25, 25) (b) (20, 30) (c) (30, 20)

(d) (35, 15) (e) (40, 10)

176. A stone is dropped from a height of 5 km. The distance it falls through varies directly with the square of the time taken to fall through that distance. If it falls 64 m in seconds, find the distance the stone covers in the 5th second?

(a) 36 m (b) 58 m (c) 72 m (d) 100 m

177. In a game, each person is dealt 3 cards from a deck of 52 cards and a player is said to have a winning deck if any only if and a jack each, irrespective of the colour or the sign. What is the total possible number of winning decks for this game?

(a) 3 (b) 4 (c) 16 (d) 64

(e) 128

178. A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red is

(a) 1/22 (b) 3/22 (c) 2/91 (d) 2/77

179. Five friends Megha, Meghna, Mehak, Menka and Meenakshi are to be seated on a round table such that Megha never sits next to Meghna. In how many ways is it possible?

(a) 4! (b) 4! × 2 (c) 3! × 2 (d) 3!

180. Sameer plants 7225 plants, so that there are as many rows as there are trees in a row. How many trees are there in a row?

(a) 75 (b) 95 (c) 85 (d) 65

181. If $\log_{10} 3 = 0.4771$, find the value of

(a) 0.7 (b) 0.9 (c) 1.1 (d) 1.9

182. The LCM of 26, 52 and 78 is

(a) 152 (b) 154 (c) 156 (d) 158

183. log5 0.2 is equal to

(a) 1 (b) 2 (c) –2 (d) –1

184. The total number of prime factors of $(7 \times 2)^{24} \times (4 \times 5)^{21}$ is

(a) 45 (b) 84 (c) 90 (d) 111

185. The square of one number is 25. If the HCF and LCM of two numbers are 5 and 35 respectively, find the other number.

(a) 5 (b) 7 (c) 25 (d) 35

186. If Anita scores 66 out of hundred then, approximately how much does she score out of 75?

(a) 50 (b) 60 (c) 66 (d) 45

187. The number 2594* is completely divisible by 6. The smallest value of * can be

(a) 0 (b) 2 (c) 4 (d) 6

188. The correct relationship after eliminating x, y and z from $x + y = a$, $y + z = b$, $z + x = c$ and $x + y + z = m$, is

(a) $m = x + y + z$ (b) $2m = a + b + c$

(c) $m = x - y - z$ (d) $2m = x - y - z$

(e) None of these

189. In how many ways can a group consisting of 5 girls and 4 boys be formed from a class of 8 girls and 5 boys?

(a) 260 (b) 270 (c) 280 (d) 290

190. A sequence of 4 bits is randomly generated. Each bit takes up a binary format and can either have a value of 0 or 1. What is the probability that atleast one of these bits is zero?

(a) 0 (b) 1/16 (c) 15/16 (d) 1

191. The simple interest earned on a certain amount is double the money when invested for 15 years. What interest rate is offered?

(a) 26.66% (b) 12% (c) 30% (d) 13.33%

192. What is the value of antilog10 100?

(a) 2 (b) 10^{100} (c) 100 (d) 10

193. If log10 4 = 0.6020 and log10 3 = 0.4771, what is the value of log10 12?

(a) 1.0791 (b) 1.1211 (c) 0.2869 (d) 0.1329

194. If $\log_2(3) = 1.585$, then $\log_2(18)$ =

(a) 4.17 (b) 4

(c) 2 (d) Inadequate data

195. The difference of two numbers is 15. The LCM and HCF 180 and 15 respectively. Find the numbers.

(a) 15, 30 (b) 30, 45 (c) 45, 60 (d) 60, 75

196. There are Red, Yellow and Green marbles in a jar. How many marbles are Yellow in colour?

Given:

A. Probability of finding a Red marble is the same as that of a Green marble but is double that of finding a Yellow marble.

B. There are 6 Green marbles in the jar.

(a) If the question can be answered by using statement A alone but not by using B alone

(b) If the question can be answered by using statement B alone but not by using A alone

(c) If the question can be answered by using either statements alone

(d) If the question can be answered by using both the statements together but not by either statement alone

197. The value of ${}^{74}P_2$ is

(a) 2775 (b) 150

(c) 5402 (d) None of the above

198. Rohit invests Rs.25,000 in an investment at a compound interest of 15% per annum. However, he has to withdraw his investments after 16 months. How much interest did Rohit earn?

(a) Rs.5121 (b) Rs.5187.50

(c) Rs.2441.33 (d) Rs.4221

199. Mohan walks a certain distance and rides back in 6 hours and 15 minutes. If he walks both ways he takes 7 hours and 45 minutes. If Mohan rides both ways, the time which he will take will be

(a) 4 hours (b) 19/4 hours

(c) 9/2 hours (d) 17/4 hours

(e) None of these

200. A field person of a customer care department of a company on an average attends 3 complaints. If customer care receives about 200 complaints daily, and have 45 field persons to attend, how many complaints are to be out sourced?

(a) 145 (b) 135 (c) 55 (d) 65

201. Recycling 900 kg of paper saves 17 trees. How many trees are saved when 1200 kg of paper are recycled?

(a) 19 (b) 25 (c) 20 (d) 22