Aptitude Question Paper (2005)

1. In a class composed of x girls and y boys what part of the class is composed of girls

   A.y/(x + y)   B.x/xy   C.x/(x + y)   D.y/xy   (Ans.C)

2. What is the maximum number of half-pint bottles of cream that can be filled with a 4-gallon can of cream(2 pt.=1 qt. and 4 qt.=1 gal)

   A.16   B.24   C.30   D.64   (Ans.D)

3. .If the operation,^ is defined by the equation x ^ y = 2x + y,what is the value of a in 2 ^ a = a ^ 3

   A.0   B.1   C.-1   D.4   (Ans.B)

4. A coffee shop blends 2 kinds of coffee,putting in 2 parts of a 33p. a gm. grade to 1 part of a 24p. a gm.If the mixture is changed to 1 part of the 33p. a gm. to 2 parts of the less expensive grade,how much will the shop save in blending 100 gms.

   A.Rs.90   B.Rs.1.00   C.Rs.3.00   D.Rs.8.00   (Ans.C)

5. There are 200 questions on a 3 hr examination.Among these questions are 50 mathematics problems.It is suggested that twice as much time be spent on each maths problem as for each other question.How many minutes should be spent on mathematics problems

   A.36   B.72   C.60   D.100   (Ans.B)

6. In a group of 15,7 have studied Latin, 8 have studied Greek, and 3 have not studied either.How many of these studied both Latin and Greek

   A.0   B.3   C.4   D.5   (Ans.B)

7. If 13 = 13w/(1-w) ,then (2w)2 =

   A.1/4   B.1/2   C.1   D.2   (Ans.C)

8. If a and b are positive integers and (a-b)/3.5 = 4/7, then

   (A) b < a   (B) b > a   (C) b = a   (D) b >= a   (Ans. A)

9. In june a baseball team that played 60 games had won 30% of its game played. After a phenomenal winning streak this team raised its average to 50% .How many games must the team have won in a row to attain this average?

   A. 12   B. 20   C. 24   D. 30   (Ans. C)

10. M men agree to purchase a gift for Rs. D. If three men drop out how much more will each have to contribute towards the purchase of the gift/

   A. D/(M-3)   B. MD/3   C. M/(D-3)   D. 3D/(M2-3M)   (Ans. D)

11. .. A company contracts to paint 3 houses. Mr.Brown can paint a house in 6 days while Mr.Black would take 8 days and Mr.Blue 12 days. After 8 days Mr.Brown goes on vacation and Mr. Black

begins to work for a period of 6 days. How many days will it take Mr.Blue to complete the contract?

A. 7   B. 8   C. 11   D. 12   (Ans.C)

12. 2 hours after a freight train leaves Delhi a passenger train leaves the same station travelling in the same direction at an average speed of 16 km/hr. After travelling 4 hrs the passenger train overtakes the freight train. The average speed of the freight train was?

A. 30   B. 40   C.58   D. 60   (Ans. B)

13. If 9x-3y=12 and 3x-5y=7 then 6x-2y = ?

A.-5   B. 4   C. 2   D. 8   (Ans. D)

14. There are 5 red shoes, 4 green shoes. If one draw randomly a shoe what is the probability of getting a red shoe   (Ans 5c1/ 9c1)

15. What is the selling price of a car? If the cost of the car is Rs.60 and a profit of 10% over selling price is earned   (Ans: Rs 66/-)

16. 1/3 of girls , 1/2 of boys go to canteen .What factor and total number of classmates go to canteen.
    Ans: Cannot be determined.

17. The price of a product is reduced by 30% . By what percentage should it be increased to make it 100%   (Ans: 42.857%)

18. There is a square of side 6cm . A circle is inscribed inside the square. Find the ratio of the area of circle to square.   (Ans. 11/14)

19. There are two candles of equal lengths and of different thickness. The thicker one lasts of six hours. The thinner 2 hours less than the thicker one. Ramesh lights the two candles at the same time. When he went to bed he saw the thicker one is twice the length of the thinner one. How long ago did Ramesh light the two candles .
    Ans: 3 hours.

20. If M/N = 6/5,then 3M+2N = ?

21. If p/q = 5/4 , then 2p+q= ?

22. If PQRST is a parallelogram what it the ratio of triangle PQS & parallelogram PQRST . (Ans: 1:2)

23. The cost of an item is Rs 12.60. If the profit is 10% over selling price what is the selling price ?

    (Ans: Rs 13.86/-)

24. There are 6 red shoes & 4 green shoes . If two of red shoes are drawn what is the probability of getting red shoes   (Ans: 6c2/10c2)

25. To 15 lts of water containing 20% alcohol, we add 5 lts of pure water. What is % alcohol.
    (Ans : 15%)

26. A worker is paid Rs.20/- for a full days work. He works 1,1/3,2/3,1/8.3/4 days in a week. What is the total amount paid for that worker ?   (Ans : 57.50)

27. If the value of x lies between 0 & 1 which of the following is the largest?

(a) x   b) x2   (c) –x   (d) 1/x   (Ans : (d))

28. If the total distance of a journey is 120 km .If one goes by 60 kmph and comes back at 40kmph what is the average speed during the journey?   Ans: 48kmph

29. A school has 30% students from Maharashtra .Out of these 20% are Bombey students. Find the total percentage of Bombay?   (Ans: 6%)

30. An equilateral triangle of sides 3 inch each is given. How many equilateral triangles of side 1 inch can be formed from it?   (Ans: 9)

31. If A/B = 3/5,then 15A = ?   (Ans : 9B)

32. Each side of a rectangle is increased by 100% .By what percentage does the area increase? (Ans : 300%)

33. Perimeter of the back wheel = 9 feet, front wheel = 7 feet on a certain distance, the front wheel gets 10 revolutions more than the back wheel .What is the distance?   Ans : 315 feet

34. Perimeter of front wheel =30, back wheel = 20. If front wheel revolves 240 times. How many revolutions will the back wheel take?   Ans: 360 times

35. 20% of a 6 litre solution and 60% of 4 litre solution are mixed. What percentage of the mixture of solution

(Ans: 36%)

36. City A's population is 68000, decreasing at a rate of 80 people per year. City B having population 42000 is increasing at a rate of 120 people per year. In how many years both the cities will have same population?   (Ans: 130 years)

37. Two cars are 15 kms apart. One is turning at a speed of 50kmph and the other at 40kmph . How much time will it take for the two cars to meet?(Ans: 3/2 hours)

38. A person wants to buy 3 paise and 5 paise stamps costing exactly one rupee. If he buys which of the following number of stamps he won't able to buy 3 paise stamps.
     Ans: 9

39. There are 12 boys and 15 girls, How many different dancing groups can be formed with 2 boys and 3 girls.

40. Which of the following fractions is less than 1/3

(a) 22/62   (b) 15/46   (c) 2/3   (d) 1   (Ans: (b))

41. There are two circles, one circle is inscribed and another circle is circumscribed over a square. What is the ratio of area of inner to outer circle?   Ans: 1 : 2

42. Three types of tea the a,b,c costs Rs. 95/kg,100/kg and70/kg respectively.How many kgs of each should be blended to produce 100 kg of mixture worth Rs.90/kg, given that the quntities of band c are equal

a)70,15,15   b)50,25,25   c)60,20,20   d)40,30,30   (Ans. (b))

43. in a class, except 18 all are above 50 years.15 are below 50 years of age. How many people are there

(a) 30   (b) 33   (c) 36   (d) none of these.   (Ans. (d))

44. If a boat is moving in upstream with velocity of 14 km/hr and goes downstream with a velocity

of 40 km/hr, then what is the speed of the stream ?
(a) 13 km/hr   (b) 26 km/hr (c) 34 km/hr (d) none of these   (Ans. A)

45.Find the value of (0.75 * 0.75 * 0.75 - 0.001) / (0.75 * 0.75 - 0.075 + 0.01)
(a) 0.845   (b) 1.908 (c) 2.312 (d) 0.001   (Ans. A)

46.A can have a piece of work done in 8 days, B can work three times faster than the A, C can work five times faster than A. How many days will they take to do the work together ?

(a) 3 days   (b) 8/9 days   (c) 4 days   (d) can't say   (Ans. B)

47.A car travels a certain distance taking 7 hrs in forward journey, during the return journey increased speed 12km/hr takes the times 5 hrs.What is the distancetravelled

(a) 210 kms   (b) 30 kms   (c) 20 kms   (c) none of these   (Ans. B)

48.Instead of multiplying a number by 7, the number is divided by 7. What is the percentage of error obtained ?

49.Find $(7x + 4y) / (x-2y)$ if $x/2y = 3/2$?

(a) 6   (b) 8   (c) 7   (d) data insufficient   (Ans. C)

50.A man buys 12 lts of liquid which contains 20% of the liquid and the rest is water. He then mixes it with 10 lts of another mixture with 30% of liquid.What is the % of water in the new mixture?

51.If a man buys 1 lt of milk for Rs.12 and mixes it with 20% water and sells it for Rs.15, then what is the percentage of gain?

52.Pipe A can fill a tank in 30 mins and Pipe B can fill it in 28 mins.If 3/4th of the tank is filled by Pipe B alone and both are opened, how much time is required by both the pipes to fill the tank completely ?

53.If on an item a company gives 25% discount, they earn 25% profit. If they now give 10% discount then what is the profit percentage.
(a) 40%   (b) 55%   (c) 35%   (d) 30%   (Ans. D)

54.A certain number of men can finish a piece of work in 10 days. If however there were 10 men less it will take 10 days more for the work to be finished. How many men were there originally?

(a) 110 men   (b) 130 men   (c) 100 men   (d) none of these   (Ans. A)

55.In simple interest what sum amounts of Rs.1120/- in 4 years and Rs.1200/- in 5 years ?

(a) Rs. 500   (b) Rs. 600   (c) Rs. 800   (d) Rs. 900   (Ans. C)

56.If a sum of money compound annually amounts of thrice itself in 3 years. In how many years will it become 9 times itself.
(a) 6   (b) 8   (c) 10   (d) 12   (Ans A)

57.Two trains move in the same direction at 50 kmph and 32 kmph respectively. A man in the slower train observes the 15 seconds elapse before the faster train completely passes by him. What is the length of faster train ?
(a) 100m   (b) 75m   (c) 120m   (d) 50m   (Ans B)

58.How many mashes are there in 1 squrare meter of wire gauge if each mesh

is 8mm long and 5mm wide ?

(a) 2500　　(b) 25000　(c) 250　(d) 250000　　　(Ans B)

59. x% of y is y% of ?
(a) x/y　　(b) 2y　　(c) x　　(d) can't be determined　　Ans. C

60. The price of sugar increases by 20%, by what % should a housewife reduce the consumption of sugar so that expenditure on sugar can be same as before ?

(a) 15%　　(b) 16.66%　　(c) 12%　(d) 9%　　　　(Ans B)

61. A man spends half of his salary on household expenses, 1/4th for rent, 1/5th for travel expenses, the man deposits the rest in a bank. If his monthly deposits in the bank amount 50, what is his monthly salary ?
(a) Rs.500　　(b) Rs.1500　　(c) Rs.1000　　(d) Rs. 900　　(Ans C)

62. The population of a city increases @ 4% p.a. There is an additional annual increase of 4% of the population due to the influx of job seekers, find the % increase in population after 2 years ?

63. The ratio of the number of boys and girls in a school is 3:2 Out of these 10% the boys and 25% of girls are scholarship holders. % of students who are not scholarship holders.?

64. 15 men take 21 days of 8 hrs. each to do a piece of work. How many days of 6 hrs. each would it take for 21 women if 3 women do as much work as 2 men?
(a) 30 (b) 20　　(c) 19　　(d) 29　　　　　(Ans. A)

65. A cylinder is 6 cms in diameter and 6 cms in height. If spheres of the same size are made from the material obtained, what is the diameter of each sphere?

(a) 5 cms　　(b) 2 cms　(c) 3 cms　(d) 4 cms　(Ans C)

66. A rectangular plank (2)1/2 meters wide can be placed so that it is on either side of the diagonal of a square shown below.(Figure is not available)What is the area of the plank?
(Ans :7*(2)1/2　)

67. What is the smallest number by which 2880 must be divided in order to make it into a perfect square ?
(a) 3　(b) 4　　(c) 5　　(d) 6　　　　　(Ans. C)

68. A father is 30 years older than his son however he will be only thrice as old as the son after 5 years　　what is father's present age ?
(a) 40 yrs　　(b) 30 yrs　(c) 50 yrs　(d) none of these　(Ans. A)

69. An article sold at a profit of 20% if both the cost price and selling price would be Rs.20/- the profit would be 10% more. What is the cost price of that article?

70. If an item costs Rs.3 in '99 and Rs.203 in '00.What is the % increase in price?
(a) 200/3 %　　(b) 200/6 %　　(c) 100%　(d) none of these　(Ans. A)

71. 5 men or 8 women do equal amount of work in a day. a job requires 3 men and 5 women to finish the job in 10 days how many woman are required to finish the job in 14 days.
a) 10　b) 7　　c) 6　　d) 12　　　　　(Ans 7)

72. A simple interest amount of rs 5000 for six month is rs 200. what is the anual rate of interest?
a) 10%　　b) 6%　　c) 8%　　d) 9%　　　(Ans 8%)

73. In objective test a correct ans score 4 marks and on a wrong ans 2 marks are ---. a student score 480 marks from   150 question. how many ans were correct?

a) 120 b) 130   c) 110   d) 150   (Ans130)

74. An artical sold at amount of 50% the net sale price is rs 425 .what is the list price of the artical?
a) 500   b) 488   c) 480   d) 510   (Ans 500)

75. A man leaves office daily at 7pm A driver with car comes from his home to pick him from office and bring back home.One day he gets free at 5:30 and instead of waiting for driver he starts walking towards home. In the way he meets the car and returns home on car He reaches home 20 minutes earlier than usual. In how much time does the man reach home usually??   (Ans. 1hr 20min)

76. A works thrice as much as B. If A takes 60 days less than B to do a work then find the number of days it would take to complete the work if both work together?

Ans. 22½days

77. How many 1's are there in the binary form of 8*1024 + 3*64 + 3   Ans. 4

78. In a digital circuit which was to implement (A B) + (A)XOR(B), the designer implements (A B) (A)XOR(B)   What is the probability of error in it ?

79. A boy has Rs 2. He wins or loses Re 1 at a time If he wins he gets Re 1 and if he loses the game he loses Re 1.He can loose only 5 times. He is out of the game if he earns Rs 5.Find the number of ways in which this is possible?   (Ans. 16)

80. If there are 1024*1280 pixels on a screen and each pixel can have around 16 million colors. Find the memory required for this?   (Ans. 4MB)

81.. On a particular day A and B decide that they would either speak the truth or will lie. C asks A whether he is speaking truth or lying? He answers and B listens to what he said. C then asks B what A has said B says "A says that he is a liar" What is B speaking ?(a) Truth (b) Lie (c) Truth when A lies (d) Cannot be determined

Ans. (b)

82. What is the angle between the two hands of a clock when time is 8:30

Ans. 75(approx)

83. A student is ranked 13th from right and 8th from left. How many students are there in totality ?

84. A man walks east and turns right and then from there to his left and then 45degrees to his right.In which direction did he go   (Ans. North west)

85. A student gets 70% in one subject, 80% in the other. To get an overall of 75% how much should get in third subject.

86. A man shows his friend a woman sitting in a park and says that she the daughter of my grandmother's only son.What is the relation between the two
Ans. Daughter

87. How many squares with sides 1/2 inch long are needed to cover a rectangle that is 4 ft long and 6 ft wide

(a) 24   (b) 96   (c) 3456 (d) 13824 (e) 14266

88. If a=2/3b , b=2/3c, and c=2/3d what part of d is b/

(a) 8/27   (b) 4/9   (c) 2/3   (d) 75% (e) 4/3   Ans. (b)

89.2598Successive discounts of 20% and 15% are equal to a single discount of

(a) 30%   (b) 32%   (c) 34%   (d) 35%   (e) 36   Ans. (b)

90.The petrol tank of an automobile can hold g liters.If a liters was removed when the tank was full, what part of the full tank was removed?

(a)g-a (b)g/a   (c) a/g   (d) (g-a)/a   (e) (g-a)/g   (Ans. (c))

91.If x/y=4 and y is not '0' what % of x is 2x-y
(a)150%   (b)175%   (c)200%   (d)250%   (Ans. (b))