1. I celebrate my birthday on 12 th January on earth. On which date would I have to celebrate my birthday if I were on a planet where binary system is being used for counting. (The number of days, months and years are same on both the planets.)

   (a) 11 th Jan   (b) 111 th Jan   (c) 110 th Jan   **(d) 1100 th Jan**

2. $4^{11} + 4^{12} + 4^{13} + 4^{14} + 4^{15}$ is divisible by which of the following?

   (a) 11   (b) 31   (c) 341   **(d) All of the above**

3. What will be the unit's digit of $(1273)^{122!}$? **1**

4. Gauri went to the stationers and bought things worth Rs. 25, out of which 30 paise went on sales tax on taxable purchases. If the tax rate was 6%, then what was the cost of the tax free items?

   a) Rs. 15   b) Rs. 15.70   **c) Rs. 19.70**   d) Rs. 20

5. If a radio is purchased for Rs 490 and sold for Rs 465.50 Find the loss%? **5%**

6. A boy was trying to find 5/8 th of a number. Unfortunately, he found out 8/5 th of the number and realized that the difference between the answer he got and the correct answer is 39. What was the number?

   (a)38   (b) 39   **(c) 40**   (d) 52

7. The average income of Sambhu and Ganesh is `3,000 and that of Arun and Vinay is `500. What is the average income of Sambhu, Ganesh, Arun and Vinay?

   **a) `1750**      b) `1850   c) `1000      d) `2500

8. The average age of four children is 8 years, which is increased by 4 years when the age of the father is included. Find the age of the father. **28 years**

9. The average age of three boys is 15 years. If their ages are in the ratio 3 : 5 : 7, the age of the youngest boy is

   a) 21 years   b) 18 years   c) 15 years   **d) 9 years**

10. How many litres of a 70% alcohol solution must be added to 50 liters of a 40% alcohol solution to produce a 50% alcohol solution? **25 litres**

11. The cost of Type 1 material is Rs. 15 per kg and Type 2 material is Rs.20 per kg. If both Type 1 and Type 2 are mixed in the ratio of 2 : 3, then what is the price per kg of the mixed variety of material?

    a) Rs. 19   b) Rs. 16   **c. Rs. 18**   d) Rs. 17

12. A trader has 1600 kg of sugar. He sells a part at 8% profit and the rest at 12% profit. If he gains 11% on the whole, find the quantity (in kgs) sold at 12%.

    a) 1200   b) 1400   c) 1600   d) 800

13. A hundred and twenty digit number is formed by writing the first x natural numbers in front of each other as 12345678910111213… Find the remainder when this number is divided by 8.

    (a)6   (b) 7   (c) 2   (d) 0

14. Find the remainder when 73 × 75 × 78 × 57 × 197 is divided by 34.

    a. 22   b. 30   c. 15   d. 28

15. Anand & Sameer started a business by investing capitals in the ratio 8:3. If Anand is the sleeping partner and Sameer manages business, what percentage of total profits should be given to Sameer as salary. So that their income at the end of the end of the year is same?

    a. 21 3/7 %   **b. 31 ¼ %**   c. 40 2/3 %   d. 50 %

16. If three numbers are in the ratio of 1 : 2 : 3 and half the sum is 18, then the ratio of squares of the numbers is:

    (a) 6 : 12 : 13   (b) 1 : 2 : 4   **(c) 36 : 144 : 324**   (d) 3 : 5 : 7

17. A and B are two alloys of argentum and brass prepared by mixing metals in proportions 7 : 2 and 7 : 11 respectively. If equal quantities of the two alloys are melted to form a third alloy C, the proportion of argentum and brass in C will be:

(a) 5 : 9   (b) 5 : 7   **(c) 7 : 5**   (d) 9 : 5

18. A, B, C enter into partnership with a total of Rs.8,200. A's capital is Rs.1,000 more than B and Rs.2,000 less than C's. What is B's share of the Profit of Rs.2,460?

     a) Rs.420   b) Rs.440   c) Rs.320   d) Rs.430

19. John bought 20 kg of wheat at the rate of Rs.8.50 per kg and 35 kg at the rate of Rs.8.75 per kg. He mixed the two. Approximately at what price per kg should he sell the mixture to make 40% profit at the cost price?

     a) Rs. 12   b) Rs. 8   c. Rs. 16   d) Rs. 20

20. Hans and Bhaskar have salaries that jointly amount to Rs. 10000 per month. They spend the same amount monthly and then it is found that the ratio of their savings is 6:1. Which of the following can be Han's salary?

     a. 6000   b. 5000   c. 3000   d. 4000

21. The average income of a person for the first 6 days is `29, for the next 6 days it is `24, for the next 10 days it is `32 and for the remaining days of the month it is `30. Find the average income per day

     27.33

22. A milk vendor has 2 cans of milk. The first contains 25% water and the rest milk. The second contains 50% water. How much milk should he mix from each of the containers so as to get 12 litres of milk such that the ratio of water to milk is 3 : 5?

     a) 5litres, 7 litres   b) 7litres, 4 litres   **c) 6litres, 6 litres**   d) 4litres, 8 litres

23. Rs.180 is to be divided among 66 men and woman. The sums of men's share and women's share are in the ratio 5: 4. But their individual shares are in the ratio 3 : 2 respectively. The number of men are

     a) 26   b) 40   **c) 30**   d) 10

24. A tempo dealer buys 20 tempos for Rs.3825. Of these, 8 are 4 seaters and the rest are 2-seaters. At what price must he sell the 4-seaters so that if he sells the 2-seaters at 3/4th of this price, he makes a profit of 20% on his outlay?

     a. Rs.180   **b. Rs.270**   c. Rs.360   d. Rs.450

25. A trader had 6 quintals (1 quintal = 100 kg) of rice. He sold a part of it at 7% profit and the rest at 17% profit, so that he made a total profit of 11%. How much rice did he sell at 17% profit?

     a) 200 kg   b) 220 kg   **c) 240 kg**   d) 260 kg

26. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

     a. 276   b. 299   **c. 322**   d. 345

27. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

     a. 4   b. 10   c. 15   **d. 16**

28. The product of two numbers is 4107. If the H.C.F. of these numbers is 37, then the greater number is:

     a. 101   b. 107   **c. 111**   d. 185

29. If 5625 plants are to be arranged in such a way that there are as many rows as there are plants in a row, the number of rows will be

     (a) 95   (b) 85   (c) 65   **(d) none of these**

30. The ratio of the cost price and selling price is 3:4. What is the profit percentage?

     a) 25%   b) 30%   **c) 33.33%**   d) 35%

31. Prateek's monthly salary decreases by 10% and his bonuses increases by 24% every year. If his salary and bonuses at the end of March 2010 were Rs. 8000 and Rs. 2500 respectively, find the difference between Prateek's monthly earnings in March 2010 and March 2012.

     a. 180 increase   b. 126 increase   **c. 176 decrease**   d. 192 decrease

32. A, B, C rent a pasture. A puts 10 oxen for 7 months, B puts 12 oxen for 5 months and C puts 15 oxen for 3 months for grazing. If the rent of the pasture is Rs. 175, how much must C pay as his share of rent?

     a. Rs. 45   b. Rs. 50   c. Rs. 55   d. Rs. 60

33. X sold an article to Y. Y gave X Rs.20. X gives the 20 rupee to Z and gets change. He gives Rs.12 back to Y. Y left with the article. Now Z comes back to X and says that the 20 rupee note was counterfeit and demanded refund. X gave 20 rupees to Z. Now, if X had been selling the article at 100% profit, how much has X lost in the whole transaction? **Rs. 16**

34. A coffee seller has two types of coffee Brand A costing 5 bits per pound and Brand B costing 3 bits per pound. He mixes two brands to get a 40 pound mixture. he sold this at 6 bits per pound. the seller gets a profit of 33 ½ percent. how much he has used Brand A in the mixture? **30 pounds**

35. A, B and C enter into a partnership. A initially invests Rs.25 lakhs and adds another Rs.10 lakhs after one year. B initially invests Rs.35 lakhs and withdraws Rs.10 lakhs after 2 years. C invests Rs.30 lakhs. In what ratio should the profits be divided at the end of 3 years?

    a) 20 : 19 : 18   b) 10 : 10 : 9   c) 20 : 20 : 19   **d) none of these**

36. A and B together invested Rs.12,000 in a business. At the end of the year, out of a total profit of Rs.1,800, A's share was Rs.750. What was the investment of A?

    a) Rs.7,000   b) Rs.9,000   **c) Rs.5,000**   d) Rs.3,000

37. The population of a town increased from 1,75,000 to 2,62,500 in a decade. The average percent increase of population per year is:

    a.4.37%   **b.5%**   c.6%   d.8.75%

38. A fruit vendor has 50% mangoes, 10% grapes, 25% bananas and 15% peaches in his stall. 4% of the mangoes, 1% of the grapes, 3% of the bananas and 2% of the peaches were rotten. What is the percentage of rotten fruits in the stall?

    a. 3.15%   b. 3.50%   c. 4.25%   d. 5.50%

39. In a joint venture 10 persons invested Rs.5,000 each and 4 persons invested Rs.1,000 each. The profit is Rs.13,500. How much each of the 10 persons get?

    a) 750   b) 700   c) 450   **d) 1,250**

40. The population of a village is 11000. If the number of children increases by 11 and the number of adults increases by 20%, the population becomes 12660. Find the population of children in town.

    a. 5000   b. 6500   **c. 6000**   d. 5000