

IIFT PAPER: (27-11-2011)SECTION - I

1. Mandeep and Jagdeep had gone to visit Ranpur, which is a seaside town and also known for the presence of the historical ruins of an ancient kingdom. They stayed in a hotel which is exactly 250 meters away from the railway station. At the hotel, Mandeep and Jagdeep learnt from a tourist information booklet that the distance between the sea-beach and the gate of the historical ruins is exactly 1 km. Next morning they visited the sea-beach to witness sunrise and afterwards decided to have a race from the beach to the gate of the ruins. Jagdeep defeated Mandeep in the race by 60 meters or 12 seconds. The following morning they had another round of race from the railway station to the hotel. How long did Jagdeep take to cover the distance on the second day?

- A. 53 seconds
B. 47 seconds
C. 51 seconds
D. 45 seconds

2. Sujoy, Mritunjoy and Paranjay are three friends, who have worked in software firms Z Solutions, G Softwares and R Mindpower respectively for a decade. The friends decided to float a new software firm named XY Infotech in January 2010. However, due to certain compulsions, Mritunjoy and Paranjay were not able to immediately join the start-up in the appointed time. It was decided between friends that Sujoy will be running the venture as the full time Director during 2010, and Mritunjoy and Paranjay will be able to join the business only in January 2011. In order to compensate Sujoy for his efforts, it was decided that he will receive 10 percent of the profits and in the first year will invest lesser amount as compared to his friends. The remaining profit will be distributed among the friends in line with their contribution. Sujoy invested Rs. 35,000/- for 12 months, Mritunjoy invested Rs. 1,30,000/- for 6 months and Paranjay invested Rs. 75,000/- for 8 months. If the total profit earned during 2010 was Rs. 4,50,000/-, then Paranjay earned a profit of:

- A. Rs. 1,75,500/-
B. Rs. 1,35,000/-
C. Rs. 1,39,500/-
D. None of the above

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3. In Bilaspur village, 12 men and 18 boys completed construction of a primary health centre in 60 days, by working for 7.5 hours a day. Subsequently the residents of the neighbouring Harigarh village also decided to construct a primary health centre in their locality, which would be twice the size of the facility built in Bilaspur. If a man is able to perform the work equal to the same done by 2 boys, then how many boys will be required to help 21 men to complete the work in Harigarh in 50 days, working 9 hours a day?

- A. 45 boys
- B. 48 boys
- C. 40 boys
- D. 42 boys

4. $\left(\sqrt{\frac{225}{729}} - \sqrt{\frac{25}{144}}\right) \div \sqrt{\frac{16}{81}} = ?$

- A. $\frac{5}{16}$
- B. $\frac{7}{12}$
- C. $\frac{3}{8}$
- D. None of the above

5. If $\frac{x}{y} = \frac{7}{4}$, find the value of $\frac{x^2 - y^2}{x^2 + y^2}$

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- A. $\frac{27}{49}$
- B. $\frac{43}{72}$
- C. $\frac{33}{65}$
- D. None of the above

6. While preparing for a management entrance examination, Romit attempted to solve three papers, namely Mathematics, Verbal English and Logical Analysis, each of which have the full marks of 100. It is observed that one-third of the marks obtained by Romit in Logical Analysis is greater than half of his marks obtained in Verbal English by 5. He has obtained a total of 210 marks in the examination and 70 marks in Mathematics. What is the difference between the marks obtained by him in Mathematics and Verbal English?

- A. 40
- B. 10
- C. 20
- D. 30

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7. Aniket and Animesh are two colleagues working in *PQ Communications*, and each of them earned an investible surplus of Rs. 1,50,000/- during a certain period. While Animesh is a risk-averse person, Aniket prefers to go for higher return opportunities. Animesh uses his entire savings in Public Provident Fund (PPF) and National Saving Certificates (NSC). It is observed that one-third of the savings made by Animesh in PPF is equal to one-half of his savings in NSC. On the other hand, Aniket distributes his investible funds in the share market, NSC and PPF. It is observed that his investments in share market exceeds his savings in NSC and PPF by Rs. 20,000/- and Rs. 40,000/- respectively. The difference between the amount invested in NSC by Animesh and Aniket is:

- A. Rs. 25,000/-
- B. Rs. 15,000/-
- C. Rs. 20,000/-
- D. Rs. 10,000/-

8. In March 2011, *EF Public Library* purchased a total of 15 new books published in 2010 with a total expenditure of Rs. 4500. Of these books, 13 books were purchased from *MN Distributors*, while the remaining two were purchased from *UV Publishers*. It is observed that one-sixth of the average price of all the 15 books purchased is equal to one-fifth of the average price of the 13 books obtained from *MN Distributors*. Of the two books obtained from *UV Publishers*, if one-third of the price of one volume is equal to one-half of the price of the other, then the price of the two books are:

- A. Rs. 900/- and Rs. 600/-
- B. Rs. 600/- and Rs. 400/-
- C. Rs. 750/- and Rs. 500/-
- D. None of the above

9. 2 years ago, one-fifth of Amita's age was equal to one-fourth of the age of Sumita, and the average of their age was 27 years. If the age of Paramita is also considered, the average age of three of them declines to 24. What will be the average age of Sumita and Paramita 3 years from now?

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- A. 25 years
- B. 26 years
- C. 27 years
- D. cannot be determined

10. An old lady engaged a domestic help on the condition that she would pay him Rs. 90 and a gift after service of one year. He served only 9 months and received the gift and Rs. 65. Find the value of the gift.

- A. Rs. 10
- B. Rs. 12
- C. Rs. 15
- D. None of the above

11. There are four prime numbers written in ascending order of magnitude. The product of the first three is 7429 and last three is 12673. Find the first number.

- A. 19
- B. 17
- C. 13
- D. None of the above

12. A rectangular piece of paper is 22 cm. long and 10 cm. wide. A cylinder is formed by rolling the paper along its length. Find the volume of the cylinder.

- A. 175 cm^3
- B. 180 cm^3
- C. 185 cm^3
- D. None of the above

13. Find the value of x from the following equation:

$$\log_{10} 3 + \log_{10} (4x+1) = \log_{10} (x+1) + 1$$

- A. $2/7$
- B. $7/2$
- C. $9/2$
- D. None of the above

14. Consider the volumes of the following objects and arrange them in *decreasing* order:

- i. A parallelepiped of length 5 cm, breadth 3 cm and height 4 cm
- ii. A cube of each side 4 cm
- iii. A cylinder of radius 3 cm and length 3 cm
- iv. A sphere of radius 3 cm

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- A. iv, iii, ii, i
- B. iv, ii, iii, i
- C. iv, iii, i, ii
- D. None of the above

15. If x satisfies the inequality $|x-1| + |x-2| + |x-3| \geq 6$, then:
- A. $0 \leq x \leq 4$
 - B. $x \leq 0$ or $x \geq 4$
 - C. $x \leq -2$ or $x \geq 3$
 - D. None of the above
16. A five digit number divisible by 3 is to be formed using the numerals 0, 1, 2, 3, 4 and 5 without repetition. The total number of ways in which this can be done is:
- A. 220
 - B. 600
 - C. 240
 - D. None of the above
17. If 2, a , b , c , d , e , f and 65 form an arithmetic progression, find out the value of ' e '.
- A. 48
 - B. 47
 - C. 41
 - D. None of the above
18. A contract is to be completed in 56 days and 104 men are set to work, each working 8 hours a day. After 30 days, $\frac{2}{5}$ th of the work is finished. How many additional men may be employed so that work may be completed on time, each man now working 9 hours per day?
- A. 56 men
 - B. 65 men
 - C. 46 men
 - D. None of the above
19. A bag contains 8 red and 6 blue balls. If 5 balls are drawn at random, what is the probability that 3 of them are red and 2 are blue?
- A. $\frac{80}{143}$
 - B. $\frac{50}{143}$
 - C. $\frac{75}{143}$
 - D. None of the above
20. In a circle, the height of an arc is 21 cm and the diameter is 84 cm. Find the chord of 'half of the arc'.
- A. 45 cm
 - B. 40 cm
 - C. 42 cm
 - D. None of the above

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21. Mr. and Mrs. Gupta have three children – Pratik, Writtik and Kajol, all of whom were born in different cities. Pratik is 2 years elder to Writtik. Mr. Gupta was 30 years of age when Kajol was born in Hyderabad, while Mrs. Gupta was 28 years of age when Writtik was born in Bangalore. If Kajol was 5 years of age when Pratik was born in Mumbai, then what were the ages of Mr. and Mrs. Gupta respectively at the time of Pratik's birth?

- A. 35 years, 26 years
- B. 30 years, 21 years
- C. 37 years, 28 years
- D. None of the above

22. Mr. Sinha received a certain amount of money by winning a lottery contest. He purchased a new vehicle with 40 percent of the money received. He then gave 20 percent of the remaining amount to each of his two sons for investing in their business. Thereafter, Mr. Sinha spent half of the remaining amount for renovation of his house. One-fourth of the remaining amount was then used for purchasing a LCD TV and the remaining amount – Rs. 1,35,000/- was deposited in a bank. What was the amount of his cash prize?

- A. Rs. 10,00,000/-
- B. Rs. 9,00,000/-
- C. Rs. 8,00,000/-
- D. None of the above

23. The ratio of number of male and female journalists in a newspaper office is 5: 4. The newspaper has two sections, political and sports. If 30 percent of the male journalists and 40 percent of the female journalists are covering political news, what percentage of the journalists (approx.) in the newspaper is currently involved in sports reporting?

- A. 65 percent
- B. 60 percent
- C. 70 percent
- D. None of the above

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24. The ratio of 'metal 1' and 'metal 2' in Alloy 'A' is 3: 4. In Alloy 'B' same metals are mixed in the ratio 5: 8. If 26 kg of Alloy 'B' and 14 kg of Alloy 'A' are mixed then find out the ratio of 'metal 1' and 'metal 2' in the new Alloy.

- A. 3: 2
- B. 2: 5
- C. 2: 3
- D. None of the above