

IIFT Entrance Test

January 12, 2003

We are pleased to present a detailed analysis of the IIFT entrance test that was held on January 12, 2003. The questions has been recalled with the help of PT faculty and PT students from across the nation.

A bird's eye view :

- Duration : 120 minutes; Number of Questions : 196; Total Marks : 100.
- No sectional time limit.
- Total 4 sections:
 - ◆ Section 1: 48 Q (Quantitative Aptitude)
 - ◆ Section 2: 48 Q (Logical Reasoning + Data Interpretation + Data Sufficiency)
 - ◆ Section 3: 50 Q (General Knowledge)
 - ◆ Section 4: 50 Q (English Usage + Reading Comprehension)
- The marking scheme:
 - ◆ No negative marking.
 - ◆ 0.75 marks for each question of section 1.
 - ◆ 0.50 marks for each question of section 2.
 - ◆ 0.40 marks for each question of section 3.
 - ◆ 0.40 marks for each question of section 4.

Section 1 : 48 Q (Quantitative Aptitude)

There were 48 Questions on Quantitative Aptitude, the questions were simple with a majority of questions from Arithmetic topics like Functions, Quadratic Equations, Mensuration, Geometry, Time speed and distance, Trigonometry and Profit and Loss. A decent attempt in this section could have been around 30 - 35 questions in 40 minutes.

Section 2 : 48 Q (Logical Reasoning+Data Interpretation+Data Sufficiency)

This section was also manageable with 3 caselets of 15 question in all, 5 questions on Verbal analogy. There were 5 questions were based on DI in the paper. There were 7-8 questions were based on Data Sufficiency. The difficulty level was manageable and a good attempt in this section could have been 25-30 questions in 35 minutes.

Section 3 : 50 Q (General Knowledge)

There were 50 questions in all and a well read student with a good knowledge of current events as well as conventional G.K, could have easily attempted at least 30-35 questions in 15 minutes. The questions were based on Geography, Corporate world and General Science.

Section 4 : 50 Q (English Usage + Reading Comprehension)

The English Usage and Reading comprehension section of the paper was on the easier side. In the RC section 4 RC passages were given, which were short passages. Total 20 questions were asked on 4 RC passages. On English usage 5 questions on antonyms, 5 questions on synonyms, 5 questions on fill in the blanks and 5 question of one word substitution were asked. A decent attempt in this section could have been around 30 - 35 questions in 30 minutes.

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Quantitative Aptitude

Directions for Q.1 to 48 : For the following questions choose the correct option .

1. What will be the ratio of area of a square and another draw taking the diagonal of the first as its side ?
 (1) 1 : 2 (2) 1 : 3
 (3) 1 : 4 (4) 1 : 5
 (5) 1 : 6

Sol: Let the side of the square = a units. Then the diagonal of the square = $\sqrt{2}a$ units.

Hence, the ratio of the areas of both the squares = $\frac{a^2}{(\sqrt{2}a)^2} = 1 : 2$ **Ans (1)**

2. Circumradius of a circle inscribing equilateral triangle of side 12 cm.
 (1) $3\sqrt{4}$ (2) $4\sqrt{3}$
 (3) $3\sqrt{3}$ (4) $2\sqrt{3}$
 (5) None of the above

Sol: Area of equilateral triangle of side 12 = $\frac{\sqrt{3}}{4}12^2$. We know that circumradius = $\frac{abc}{4A}$, where a, b, c are the sides

and A = area of triangle. Hence circumradius = $\frac{12 \times 12 \times 12}{4 \times \frac{\sqrt{3}}{4} \times 12^2} = \frac{12}{\sqrt{3}} = 4\sqrt{3}$. **Ans.(2)**

3. To get 33% profit after allowing 5% discount, what should be marked price.
 (1) 10% more than cost price (2) 40% more than cost price
 (3) 20% more than cost price (4) 30% more than cost price
 (5) 50% more than cost price

Sol: Let the cost price = Rs. x and marked price = Rs. y. Then by the condition given in question :

$1.33x = 0.95y \Rightarrow \frac{x}{y} = \frac{95}{133} \Rightarrow \frac{5}{7}$. Hence, Marked Price should be $\frac{5 - 1}{5} \times 100 = 40\%$ more than cost price. **Ans (2)**

4. $f(x) = \frac{x}{1-x}$ and $f[h(x)] = x$ then the value of $h(x)$ is equal to :

- (1) $\frac{1-x}{x}$ (2) $\frac{1+x}{x}$
 (3) $\frac{x}{1+x}$ (4) $x(1+x)$
 (5) None of the above

Sol: Given $f(x) = \frac{x}{1-x}$. Therefore, $f[h(x)] = x \Rightarrow \frac{h(x)}{1-h(x)} = x \Rightarrow h(x) = \frac{x}{1+x}$. **Ans.(3)**

5. A pole is cracked and the upper part of the pole is fall down on the earth inclining the angle of 30° . If the distance between the top and foot of the pole is 10 feet, then the height of pole is :

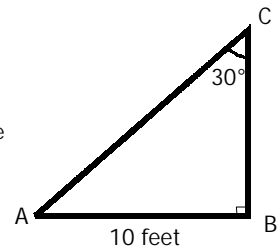
- (1) $10 + 20\sqrt{3}$ (2) $20 + 10\sqrt{3}$
 (3) $5 + 10\sqrt{3}$ (4) $5 + 5\sqrt{3}$
 (5) None of the above

Sol: We know that the height of the pole = AC + BC. Let BC = x, then in right triangle

ABC $\tan 60^\circ = \frac{x}{10} \Rightarrow x = 10\sqrt{3}$.

Now let AC = y, then $\cos 60^\circ = \frac{10}{y} \Rightarrow y = 20$. The height of the pole = $20 + 10\sqrt{3}$.

Ans.(2)



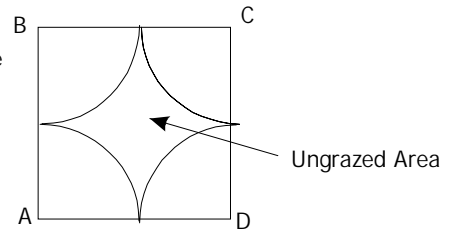
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6. Four horses are tied on four corners of a square with same length of rope they are free only to reach each other. What is the area ungrazed ?

- (1) $\frac{x^2}{8}$ (2) $\frac{x^2(4-\pi)}{8}$
 (3) $\frac{x^2(8-\pi)}{4}$ (4) $\frac{x^2(4-\pi)}{4}$
 (5) None of the above

Sol: Let, the side of the square garden = x units. Then the length of the rope = $\frac{x}{2}$ units. Then, the area ungrazed = $x^2 - \frac{x^2}{4} \frac{x^2(4-\pi)}{4} \pi \Rightarrow$ units.

Ans.(4)



7. Value of $\sin^2\theta + \operatorname{cosec}^2\theta$ lies between:

- (1) Less than 1 (2) More than 1
 (3) Between 1 and 2 (4) 0
 (5) None of the above

Sol: Ans.(2)

8. The average of the 3 number is 410, one of the number is 185. If the difference between two other numbers is 25, then the smallest numbers is ?

- (1) 185 (2) 150
 (3) 163 (4) 175
 (5) None of the above

Sol: Since the average of the three numbers is 410, hence the total of the three numbers = $410 \times 3 = 1230$. Let the other two number are x and x + 25. Then, by the condition given in question :

$2x + 25 = 1230 - 185 \Rightarrow x = 510$. Hence the smallest number = 185. **Ans.(1)**

9. Height of a cone is 30 m, A new cone has been cut from parallel to the base of big cone, volume of small cone is $\frac{1}{27}$ th of the big one. What is the height of small cone ?

- (1) $\frac{7}{8}$ (2) $\frac{8}{7}$
 (3) $\frac{9}{10}$ (4) $\frac{10}{9}$
 (5) None of the above

Sol: Let the height of the small cone = h units. Then by the condition given in the question :

$$\frac{1}{3}\pi r^2 h = \frac{1}{27} \times \frac{1}{3}\pi r^2 30 \Rightarrow h = \frac{30}{27} = \frac{10}{9} \text{ units. Ans (3)}$$

10. Rs. 120 is to distributed among X, Y, and Z. X is having Rs. 20 less than Y and Rs. 20 more than Z. How much amount does Y is having ?

- (1) 20 (2) 40
 (3) 60 (4) 30
 (5) None of the above

Sol: Let Y get Rs. y and Z get Rs. z. Then by the condition given in the question $y - 20 = z + 20 = x \dots(1)$

Again $x + y + z = 120 \dots(2)$ by equation (1) and (2) we get $x = 40, y = 60, z = 20$. **Ans(3)**

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11. A person is having telephone bill. The fixed amount of bill is Rs. 380 and extra call amount is Rs. 125. A person has to pay 5% of extra call amount in the total bill. What amount did the person is paying to pay a total bill ?
- (1) Rs. 385.125 (2) Rs. 268.75
 (3) Rs. 555.25 (4) Rs. 480.625
 (5) None of the above

Sol: Total amount of bill = $380 + 5\% \text{ of } 125 = 380 + 5.125 = \text{Rs. } 385.125$. **Ans.(1)**

12. There are 4 bells ringing after every 6, 7, 8 and 10 sec. In an hour how many times they were ringing together?
- (1) 2 times (2) 4 times
 (3) 3 times (4) 5 times
 (5) None of the above

Sol: In an hour the bells ring = $\frac{60 \times 60}{\text{LCM of } 6, 7, 8, 10} = 4.28 \approx 4$ times. **Ans(2)**

13. Tina's salary is 20% more than Tito and 40% less than Tony. If the sum of the salaries is 6300, then the salary of Tony is :
- (1) Rs. 3000 (2) Rs. 2200
 (3) Rs. 1800 (4) Rs. 1500
 (5) None of the above

Sol: Let the Tony's salary = Rs. x . Then, Tina's salary = $0.6x$ and the salary of Tito = $\frac{0.6}{1.2}x = 0.5x$. Now by the condition given in the question : $x + 0.6x + 0.5x = 6300 \Rightarrow 2.1x = 6300 \Rightarrow x = 3000$. Hence Tony's salary = Rs. 3000. **Ans.(1)**

14. Ravi ranks 10th from the front, Rahim is 25th from the back, Reena lies in exact in middle of the two. What is Reena's rank from the front ?
- (1) 34th (2) 45th
 (3) 28th (4) 47th
 (5) Cannot determine

Sol: Since, it is not given that how many students are between Ravi and Reena we cannot determine the Reena's Rank from the front. **Ans.(4)**

15. A person reduces his speed to 3/4th and reaches 20 minutes late. What is the total time taken by him with his usual speed ?
- (1) 1 hour (2) 2 hours
 (3) 3 hours (4) 4 hours
 (5) None of the above

Sol: Let the usual speed of the person = x kmph and the distance = d km. Then time = d/x hours. Again by the condition given in question $4d/3x = d/x + 1/3 \Rightarrow d/x = 1$ hour. **Ans.(1)**

16. What will be the least value of P for a positive value of equation $4P^3 - 7P^2 + 5$
- (1) 2 (2) 4
 (3) 5 (4) 8
 (5) None of the above

Sol: For $P = 1$, the value of equation $4 - 7 + 5 = 2$ i.e., the positive value. **Ans.(4)**

17. Degrees travel by the minute hand of a clock between 4 : 45 PM to 6 : 15 PM is :
- (1) 540° (2) 270°
 (3) 360° (4) 720°
 (5) 180°

Sol: Degrees travel by minute hand between 4 : 45 to 5 : 45 = 360° and degrees travel by minute hand between 5 : 45 and 6 : 15 = 180° . Hence, total degrees traveled = 540° . **Ans.(1)**

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18. There are 20 singers and 60 Dancers. 25% of Singers are below 25 year of age and 25% of the whole group is below 25 year of age. What percent of dancers are below 25 years of age.
- (1) 10% (2) 15%
(3) 20% (4) 30%
(5) 25%

Sol: Given 5 singers are below the age of 25 years and total 20 members are below the age of 25 years. So, the number of Dancers below 25 years = $20 - 5 = 15$. Required Percentage = $15 \times 100/60 = 25\%$. **Ans.(5)**

19. Ratio of the arithmetic mean and the second number of two number is 3 : 5, what will be the ratio of the two numbers ?
- (1) 1/5 (2) 1/8
(3) 1/8 (4) 1/10
(5) 1/7

Sol: Let the numbers are x and y. Then by the condition given in the question $x + y/2y = 3/5 \Rightarrow x/y = 1/5$. **Ans.(1)**

21. A man travels from A to B at the speed of 50 kmph while returning from B to a he increases his speed by 20%. What is his average speed for the entire trip.
- (1) 37.5 kmph (2) 55 kmph
(3) 40 kmph (4) 54.5 kmph
(5) None of the above

Sol: While returning the speed of the traveller = $50 \times 120/100 = 60$ kmph. Average speed during the whole journey = $2 \times 50 \times 60/(50 + 60) = 54.5$ kmph. **Ans.(4)**

22. One person goes to post office to purchase tickets of Rs. 5, 2 and 1, he gives Rs. 20 to the counter. Since there were no change, postman gives him two extra tickets of Rs. 2 and Rs. 1 each. What is the total number of tickets he bought ?

23. Ratio of ages of a married couple is 2 : 3 today, it was 3 : 5 when they was married and it will be 3 : 7 after 4 years. When will they married.

24. 'I was eight time as you were when I was as equal as you are today'. What is our present age ?

25. For which of the following values of K the equation $X^2 + 4(K - 2) + K$ will have equal roots ?

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Logical Reasoning + Data Sufficiency

Directions for Q. 1 to 48: For the following questions, choose the correct option.

Directions for Q. 1 to 6: Read the following information carefully and answer the questions that follow.

There are seven participants J, K, L, M, N, O and P are in a race.

- If J comes at first then O comes at last in the race.
- If O comes at first then J comes at last in the race.
- K always finishes ahead of M.
- L finishes immediately after M

Six questions on this information were asked in real examination.

Directions for Q. 7 to 11: Study the following table carefully and answer the questions that follow

ORGANS	WEIGHT
Lungs	70000 miligram
Brain	--
Liver	--
Heart	--
Muscles	7000 miligram

Five Questions were asked on above table :

8. Lung/ Heart ratio in gram is :
9. Total weight of all organs in grams is :
10. If Lungs is S, then what will be the weight of muscles ?

Directions for Q. 12 to 14: Find the relationship

12. Fog : Visibility :: Aids : ?
13. X Rays : Roentgen :: Radioactivity : ?
14. Annotation : Text :: Caption : ?

Directions for Q. 15 to 20: Read the following information carefully and answer the questions that follow :

X is a person, he has got 7 relations P, Q, R, S, T, N, M they are father, mother, brother, aunt, sister, son and daughter.

- (1) N and M are of same gender
- (2) Q and T are not of same gender
- (3) Q is not X's mother

Six questions followed on this caselnet.

Question 21 to 29: 7-8 questions on Data Sufficiency. (4 Option, Direct)

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General Knowledge

Directions for Q. 1 to 50: For the following questions, choose the correct option.

1. Head Quarters of European Central Bank is located at :
2. Which of the following person is the present Chairperson of Reliance ?
3. Power of Sun's energy is a source of energy.
4. In the world, which of the following is the country has to permitted 'Euthanasia' :
5. Which of the following gas is used in the decorative lights :
6. Strait between Srilanka and India is called :
7. From which of the following city the 'Morning Star' newspaper is published :
8. Kelkar committee's report was on :
9. The number one country in the world to produce 'Tin' is :
10. TRIPS stands for :
11. Who coined term USP ?
12. EPZ stands for :
13. The article 32 of Indian Constitution constitutes:
14. The statistics for Export - Import in India is collects by :
15. Tatas has took over which PSU (VSNL) ?
16. Which of this is an Igneous rock ?
17. Who belongs to the impressionist school of painting ?
18. The word 'Knesset' is relates to which of the following country ?
19. Which is the suffix used for a German Company ?
20. Which of the following is not a P&G product ?
21. If you move from Equator to poles, temperature difference will be maximum in which season.
22. Which of the following country is falls in equatorian ?
23. The value of 20°C in Fahrenheit temperature is :
24. The eatable part of the Coconut is :
25. Match the following states with their capitals :

Uttranchal	-	1. Kohima
Andhra Pradesh	-	2. Imphal
Nagaland	-	3. Dehradoon
Meghalaya	-	4. Hyderabad
26. Match the following items i.e. Countries with their Air Ports
27. Match the following Dances with their Dance styles.
28. Match the following Indian cities with Rivers.
29. In the Noble prize for medicine the scientists researched on which thing ?
30. Water Glass is made up of which material

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English Usage + Reading Comprehension

Questions 1 to 20 : Four moderate and small RC passages were asked in the paper. In all around 20 questions were asked on passages. The theme of the first passage was on Interview Facing, the second passage was based on the topic of Pollution.

Questions 21 to 25 : 5 questions were based on Synonyms.

Questions 26 to 30 : 5 questions were based on Antonyms.

26. Opposite of PERT

27. Opposite of INSOUCIANCE

Questions 31 to 35 : Questions number 31 to 35 is based on Fill in the blanks (two blanks).

Questions 36 to 40 : Questions 36 to 40 were based on sentences correction.

Questions 41 to 45 : Questions 41 to 45 were based on One word Substitution.

Overall analysis

The test can be rated as a moderate one. The RC and Maths section were on easier side, The passages on RC were easy and the questions were direct, and the questions of Quantitative aptitude were also easy. Questions of GK sections were also traditional.

Thus, overall we expect that a net score of around 68 -70 + should be good score for a student to get a call.

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