

# N.C.E.T SAMPLE TEST OVERVIEW

## TEST STRUCTURE AND SAMPLE QUESTIONS

The N.C.E.T. has five sections. A total of 62 questions are to be attempted over 140 minutes. The test structure is given below.

Section No	Name	No of Questions	Time Suggested (Minutes)
I	Problem-Solving	15	20
II	Analytical Proficiency	10	15
III	English Proficiency	10	15
IV	Computer Fundamentals	25	30
V	Coding Proficiency	2	60
	<b>Total</b>	<b>62</b>	<b>140</b>

## SAMPLE QUESTIONS

A few sample questions are given below for the guidance of the candidates in the preparation. These samples do not necessarily indicate either the types or the difficulty levels of questions that can be in the actual test. In general, the preparation standard expected is that of a graduate from an Indian University having completed 10 + 2 + 3 patterns of education.

### SECTION-I: Problem-Solving

**Q1:** Not surprisingly, the growth of the Car industry is driven by the increase in the number of people using cars and the increase in per-person use of cars. In 2014, it was expected that there would be 200 million car users in India, or about 20 percent of the population, would generate \$ 50 billion in car revenues. Industry revenues should expand from \$ 50 billion to \$ 150 billion by 2018, while the number of users should grow to over 560 million or to about half the population of India in the same period. What will be the simple average growth rate of the population of India in the given period 2014-2018?

#### Choices (With Correct Answers)

1. 2 %
2. 3 %
3. 4 %
4. 4.5 %

**Q2:** The cost of manufacturing an article is made up of materials, labor, and overheads in the ratio 4: 3: 2. If the cost of labor is \$ 45, find the total cost of an article (\$). Also, find the profit percentage if the article is sold for \$ 180.

#### Choices (With Correct Answers)

1. \$140, 35.33%
2. \$130, 33.33%
3. \$140, 33.66%
4. \$135, 33.33%

**Q3:** A difference between simple interest and compound interest of 3 years of sum Rs. 1600 is Rs 122 at the same rate. Find the rate of interest.

**Choices (With Correct Answers)**

1. 2 %
2. 3 %
3. 4 %
4. 5%

**Q4:** A certain sum in a certain time becomes Rs 560 at the rate of 6% per annum at simple interest, and the same sum amount to Rs 320 at the rate of 2% in the same duration. Find the sum and time period.

**Choices (With Correct Answers)**

1. Rs 200 and 30 year
2. Rs 250 and 30 year
3. Rs 200 and 25 year
4. Rs 220 and 25 year

**Q5:** A sum of Rs 10 is given as a loan to be returned in 6 monthly installments at R. What is the rate of interest?

**Choices (With Correct Answers)**

1. 30%
2. 40%
3. 50%
4. 80%

## SECTION-I: Analytical Proficiency

**Q1:** The ratio between two numbers is 1: 4; the ratio between AM and GM will be:

**Choices (With Correct Answers)**

1. 1:4
2. 2:3
3. 5:4
4. 3:7

**Q2:** X number of men can finish a piece of work in 25 days. If there were 4 more men, the work could be finished in 5 fewer days. The original numbers of men are?

**Choices (With Correct Answers)**

1. 12
2. 10
3. 16
4. 20

**Q3:** Abhay, Pradeep, and Chandu can complete a work separately in 24, 36, and 48 days respectively. They started work together, but Chandu left after 4 days of start, and Abhay left 3 days before the completion of the work. In how many days will the work be completed?

**Choices (With Correct Answers)**

1. 12

2. 11
3. 15
4. 20

**Q4:** Suraj and Arjun take a straight route to the same terminal point and travel at constant speeds. At the initial moment, the positions of the two and the terminal point form an equilateral triangle. When Arjun covered a distance of 80 km, the triangle became right-angled. When Arjun was at a distance of 120 km from the terminal point, the Suraj arrived at the point. Find the distance between them at the initial moment, assuming that there are integral distances throughout the movements described.

**Choices (With Correct Answers)**

1. 250
2. 330
3. 240
4. 200

**Q5:** A packet of 700 gm of dry fruit cost Rs 72. It contains some cashew nuts and some almonds. If cashew nuts cost Rs 96/-kg and almonds cost Rs 112/- kg. Then calculate the number of almonds in that packet.

**Choices (With Correct Answers)**

1. 250 gm
2. 330gm
3. 300 gm
4. 200 gm

### SECTION-3: English Proficiency

**Q1:** Choose the correct answer and complete the sentence:

\_\_\_rugby team scored three kick goals. According to the timetable, the train runs \_\_\_\_\_ day twice \_\_\_\_\_ hour.

**Choices (With Correct Answers)**

1. Each, every, every
2. Every, every, each
3. Each, every, each
4. Every, each, Every

**Q2:** Her throat tightened, understanding the honor despite his nonchalant delivery. Choose the appropriate synonym for the highlighted word.

**Choices (With Correct Answers)**

1. Considerate
2. Attentive
3. Appearing casually calm
4. None of the above

**Q3:** Fill in the blank with the appropriate preposition/ article  
Visiting Moscow was great, but the temperature was 25 degrees \_\_\_\_\_ zero.

### Choices (With Correct Answers)

1. Over
2. Around
3. Below
4. About

## SECTION-4: Computer Fundamentals

**Q1:** Which of the following is not a derived data type in c?

### Choices (With Correct Answers)

1. Function
2. Enumeration
3. Pointer
4. Array

**Q2:** Which of the following is an integral data type?

### Choices (With Correct Answers)

1. Char
2. Float
3. Double
4. Void

**Q3:** What will be the output when you execute the following c code?

```
#include<stdio.h>
int main()
{
    double num=6.9;
    int var=4;
    printf("%d\t",sizeof(!num));
    printf("%d\t",sizeof(var=12/2));
    printf("%d",var);
    return 0;
}
```

### Choices (With Correct Answers)

1. 4,2,6
2. 4,4,4
3. 2,2,5
4. 2,4,6

## SECTION-5: Coding

**Q1:** For a number X, let its "Coolness" be defined as the number of "101"s occurring in its binary representation.

For example, the number 21 has Coolness 2, since its binary representation is 10101, and the string "101" occurs twice in this representation. A number is defined as **Very Cool** if its Coolness is greater than or equal to **K**. Please, output the number of Very Cool integers

between 1 and  $\underline{R}$ .

**Input:** Two space-separated integers,  $R$  and  $K$ .

**Output:**

Print Single integer representing the number of Very Cool integers between 1 and  $R$ .

**Constraints:**

$1 \leq R \leq 105$

$1 \leq K \leq 100$