DIRECTIONS:

This test is to see up to what extent you can comprehend the content material presented in various items. The material of the test pertains to three subject areas namely, science, social studies and mathematics. The test consists of twenty one items. Each item contains the material which is sufficient to guide you to respond the questions raised at the end of each item. There is no time limit for the test. Most of you will finish it within one hour. If you do not know answer to any particular item, you can pass on to next one.

ITEM NO. 1:

Bhagati Movement had a long history in India. Most of the saints of the Bhagati Movement were from non-Brahman castes. These saints emphasized that the relationship between men and God were based on love, and worshipping God with devotion was better than merely performing religious ceremonies. Chatanya, Kabir, Guru Nanak, all belong to Bhagati movement. Guru Nanak's followers followed certain rules and they were known as Khalsa which means, 'The Pure'.

(Contd...)
Q. 1. Nanak was a
(a) Suffi Saint of India.
(b) Bhagati Saint of India.
(c) Religious Leader.
(d) Pir.

Q. 2. Who was the founder of Sikh Religion -
(a) Kabir
(b) Chanitanya
(c) Guru Nanak
(d) None of above

ITM No. 2:

In the Mugal administration, there was a number of officers to assist the emperor in administration. The Wazir and Bakshi were two very important officers. The Wazir looked after the revenue administration and Bakshi looked after military organisation. The most powerful person was still the emperor. The Chief Qazi held the highest position among the judges. The pattern of administration at the capital was repeated in each Suba. Each Suba was divided into number of Sarkars and each of these into number of Paraganas. A group of religious made one Pargana.

Q. 1 : Arrange the following in the order of lowest unit to highest unit:
(a) Country
(b) Village

(Contd.)
Q.2: In the Mugal Administration who had the total control over the Administration -
(a) The Wazir
(b) The Bakshi
(c) The Chief Qazi
(d) The Emperor

ITEM No. 3:
Elements are those which cannot be broken up into simpler substances, compounds are those which are made up of two or more elements combined in a fixed ratios. In compounds elements loose their original properties.

Q. 1: Classify the following into elements and compounds -
Copper, Zinc Dust, Carbon dioxide, Water, Sodium Chloride, Gold, Silver, Nitrogen Gas.

Q. 2: Give reasons for the above classification.

ITEM No. 4:
15:3 :: 40:_____
(a) 5
(b) 8
(c) 10
(d) 4

(Contd...)
Oxides are formed by the Chemical Combination of Oxygen which are metal or non-metals. Metals combined with oxygen to form basic oxide. Basic oxides of get dissolved, they give rise to alkalies. Sodium Oxide is a basic salt, it dissolves in water to form caustic soda.

Q. 1: Which of the following statement is true -

(a) Every basic oxide is an alkali.
(b) Only those oxides which are soluble in water, are basic oxides.
(c) Only alkalies are basic oxides.
(d) Only those basic oxides which are soluble in water are alkalies.

Q. 2: In the above example, Sodium Oxide is -

(a) An alkali.
(b) An Acid
(c) A Salt
(d) None of the above

When metals and non-metals are heated in air, they form their oxides. Metals give metallic oxides and non-metals give non-metallic oxide. Metallic oxide when dissolved in water, form alkalies. Whereas non-metallic oxides when dissolved in water, give rise to acids. Some of the basic oxides are not soluble in water. Similarly, some of the acidic oxides are not soluble in water.

(Contd....)
water. Carbon, when heated in air, gives $\text{CO}_2$ and with water gives carbolic acid.

Q. 1: Carbondioxide is a -

(a) Basic oxide.
(b) Acidic Oxide.
(c) Insoluble Oxide.
(d) None of the above

Q. 2: Magnesium is heated in air to form its oxides. When the resulting oxide is dissolved in water, it gives -

(a) Strong Alkali.
(b) Weak Alkali.
(c) Strong Acid.
(d) Weak Acid.

ITEM No. 7:

Plants and animals are made up of cells. Plants and animals are called living-beings. Non-living objects are those which do not constitute of cells. They do not require food, light, water etc. for their survival. Animals can be classified into vertebrates and non-vertebrates. On the basis of this information, answer the following questions:

Q. 1: Classify the following examples into living things, non-living things, vertebrates and non-vertebrates -

(a) Man, mango, goat.
(b) Stone, mountain, house.
(c) Lion, fish and snake.
(d) Earth-worm, insects and protozoa.  (Contd.)
ITEM No. 8:

Every body in this universe attracts every body with a force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between their centres. The body which is heavier of the two will attract the lighter one. Earth being heaviest of all bodies, attracts all other bodies on it.

A boy sitting on a stool is measuring the weight of wooden-block with the help of spring balance. The weight shown by the spring balance is due to force of attraction between the wooden-block and the -

(a) Boy
(b) Earth
(c) Stool
(d) Spring Balance

ITEM No. Q:

A flock of cows and buffaloes consisting of 25 buffaloes giving milk, 20 cows also yield milk. 10 cows do not give milk and 20 buffaloes do not give milk -

Q. 1: What is the total number of cows which give milk?

(a) 20
(b) 23
(c) 30
(d) 25

(Contd.)
Q.2 : What is the total number of milk yielding animals in the flock?
(a) 25
(b) 45
(c) 30
(d) 60

ITEM No. 10 :

80 percent of Indian population resides in villages and rest in cities and towns. 40% work in factories or some do private business in urban area. What percentage of Indian population live as well as work in villages.
(a) 80%
(b) 20%
(c) 60%
(d) None of the above

ITEM No. 11 :

In a jungle, there are tigers, panthers, lions, elephants, ducks, peacocks, buffaloes, mosquitoes, spiders, trees and grass.

Q. In the jungle there are -
(a) Only wild animals.
(b) Only domestic animals.
(c) Only birds and insects.
(d) Both plants and animals.

(Contd....)
ITEM No. 12:

You are given a blue wooden ball, a black metallic ball and a red stone ball. All balls are of the same size. Which of them will float in water.

(a) Wooden Ball
(b) Metallic Ball
(c) Stone Ball
(d) All Balls.

ITEM No. 13:

There are four girls namely, Sita, Geeta, Rita and Anita. Sita is sweet, fair complexion and slim than Rita. Sita is darker in complexion than Geeta. Geeta and Anita have more or less the same colour.

Q. Who is darker of all?

(a) Sita
(b) Geeta
(c) Rita
(d) Anita

ITEM No. 14:

A boy says, "I have as many brothers as sisters". His sister says, "I have twice as many brothers as sisters".

Q. How many brothers and sisters are in the family?

(Contd...)
ITEM No. 15:
An acid, an alkali and a salt can be identified by following chemical tests:

(a) An acid turns blue litmus red.
(b) An alkali changes red litmus blue.
(c) A salt is neutral to litmus.

Q. You are given four beakers containing colourless liquids, marked A, B, C and D. Find out which is which?

ITEM No. 16:
One litre of water weighs approximately one kilogram and one litre has one thousand millilitres. A person wanted four litres of water for making 'sharbat'. He has only two jars. One being of three litres, other of five litres. He wanted to weigh four kilograms of sugar, and four litres of water.

Q. How did he measure exactly four litres of water and four kilograms of sugar.

ITEM No. 17:
Some air is enclosed in a cylinder with a moveable piston. Four different positions of the piston, the pressure and volume occupied by the air is shown in the following diagram:

(Contd.)
Q. What do you conclude about the pressure and volume relationship from the above experiment?

ITEM No. 18:

Class X, Section A has 24 students. There are four girls and 20 boys. In Class X, Section B there are 54 students. It has 9 girls and 45 boys in it. Class X, Section C has 36 students, with six girls and 30 boys. Unknown to the teachers, each Section has a lucky seat. In which Section, is it most likely that a girl will be sitting on the lucky seat?

(a) In Section 'C' for it contains more girls than in Section 'A' and fewer boys than in Section 'B'.

(b) In the Section 'B' for this contains the maximum number girls.

(c) In the Section 'A' for this contains the fewer boys.

(d) In any of the Sections for all have the same number of girls in relation to total number of students.

(Contd.)
ITEM No. 19:

In a pendulum problem, we have two variables. One is length of the pendulum and the other is the weight of the bob. You are provided with two pendula of varying lengths and having bobs of the same weight. You are provided with additional bobs with different weights. In which of the following situation the time period will be greatest.

(a) The pendulum having greater length and lighter weight.
(b) The pendulum having shorter length and light weight.
(c) The pendulum with shorter length and heavy weight.
(d) The pendulum with greater length irrespective of weight of the bob.

ITEM No. 20:

In a lever for doing a same amount of work, we can increase power and decrease the distance through which power acts and vice-versa. The condition is that product of power and distance through which power is applied remains constant. In a festival a boy weighs 50 kgs., was sitting at a distance of 10 feet from the fulcrum. Another boy was sitting at a distance of five feet from the fulcrum, and the log was in equilibrium.

Q. 1: Find the weight of the boy?

(a) 50 Kgs.
(b) 500 Kgs.
(c) 100 Kgs.
(d) 200 Kgs.

(Contd.)
Q.2: Whether a boy having 25 kgs. weight can keep the log in equilibrium or not. At what distance, he should sit to bring the lever in equilibrium.

(a) 10 feet.
(b) 20 feet.
(c) 5 feet.
(d) At the fulcrum.

ITEM No.21:

Consider the relation, P, "is relatively prime to, as it relates to the set (0, 1, 2, 3, 4, 5, and 6). Remember that a number M is relatively prime to a number if M has no common factor (except 1) with M.

Q. 1. In which of the following fractions are the numerator and denominator relatively prime?

(a) 2/3
(b) 15/18
(c) 3/24
(d) 10/16

Q.2: Which of the above fractions are reduced to the lowest terms?
**SCORING KEY OF CONTENT COMPREHENSION TEST BY G.S. SC DHI AND TEJINDER MOHINI.**

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<th>Q.No.</th>
<th>Answer</th>
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<td>2</td>
<td>(c)</td>
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<td>1</td>
<td>(b)(c)(d)(a)</td>
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<td>2</td>
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* Add three litres jar of water in five litres of jar twice. One litre of water will flow out. Add three litres of water to it it will be now four litres.