IIT ASHRAM BRINGS...

CLASS 6 PHASE-II

KH⊙J (2021)
A Hunt for young Scientists..!

SAMPLE PAPER

Time : 1 Hours   **Maximum Marks : 160**

IMPORTANT INSTRUCTIONS

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

A. GENERAL :

1. This booklet consists of 40 questions.
2. Blank papers, clipboards, log tables, slide rules, calculators, cellular phones, and electronic gadgets in any form are not allowed to be carried inside the examination hall.
3. The answer sheet, a machine–readable Optical Mark Recognition (OMR), is provided separately.
4. Do not tamper with / mutilate the OMR or the Booklet.
5. Write Name and Address in capital letters on OMR sheet.
6. Submit the OMR Sheet back to Invigilator after examination before leaving the examination hall.
7. Previous year or Term exam's percentage | grade | Marks scored in Maths and Science must be written at the back of OMR Sheet

B. QUESTION PAPER FORMAT:

7. The question paper consists of **4 Parts.**

   Part-I :- Mental Ability (8 Questions)   **Part-II :- Mathematics (8 Questions)**

   Part-III :- Physics/ Chemistry (16 Questions)   **Part-IV :- Biology (8 Questions)**

C. Marking Scheme :

8. For each question in **Part-I , II, III & IV** you will be **awarded 4 marks** if you have darkened only the bubble corresponding to the correct answer and zero mark if no bubble is darkened. In all other cases where the answer marked is not correct, **minus one (–1) mark** will be awarded.

IIT ASHRAM

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PART – I : MENTAL ABILITY

Directions from 1-2:
Arrange each of the five words in the questions below in a meaningful sequences.

1. 1. Hecto
    2. Centi
    3. Deca
    4. Kilo
    5. Deci
    (A) 1,3,4,5,2   (B) 1,5,3,4,2   (C) 2,5,3,1,4   (D) 5,2,1,4,3

2. 1. Sea   2. Rivulet
    3. Ocean   4. River
    5. Glacier
    (A) 5,2,1,3,4   (B) 5,2,4,1,3   (C) 5,3,1,4,2   (D) 5,4,3,2,1

3. In the following questions the letters of words have been jumbled up.
    Identify the word in the options for the given clues.
    A juicy fruit
    (A) CWIET   (B) VESEN   (C) ENRGOA   (D) KOOB

4. In a certain code language, BOARD is written as EQBNC. How will the word CLIMB be written in that language?
    (A) CLJKD   (B) DKJLF   (C) DNHMB   (D) FNJIA

5. Find the missing term :

    A, C, ?, G, I

    (a) D   (b) E   (c) F   (d) H

Directions : (6-7)
In each of the following questions, four words are given, out of which three are same in one way and the fouth one is different from others. Select the odd one.

6.
    (A) Milk   (B) Syrup   (C) Squash   (D) Cake

7.
    (A) 4   (B) 8   (C) 16   (D) 9

8. Which number is opposite 3 in a standard dice given below ?

   (A) 1   (B) 4 (C)   5   (D) Can't be determined

PART – II : MATHEMATICS

1. Roman numeral for 498 is _____

   (a) CDCXVIII   (b) CDCXIV   (c) CDXCVIII   (d) CDXCVII

2. Number name for 900800700 in Indian system is _____

   (a) Ninety crores, eight lakhs and seven hundred

   (b) Nine crores, eight lakhs and seven hundred

   (c) Ninety crores, eighty lakhs and seven hundred

   (d) Ninety crores, eight lakhs and seven

3. Number of prime numbers from 1 to 50 are _____

   (a) 18   (b) 12   (c) 15   (d) 20

4. Six friends ate a restaurant and agreed to share the bill equally. Because Lakshmi forgot her money, each of her, five friends paid an extra `3 to cover her portion of the total bill. What was the total bill?

   (a) `90        (b) `84   (c) `75        (d) `108

5. What shape are the faces of a cube?

   (a) Circle   (b) Triangle   (c) Square   (d) Pentagon

6. A motorbike travels 220 km in 5 litres of petrol. How much distance will it cover in 1.5 litres of petrol?

   (a) 50 km   (b) 60 km   (c) 40 km   (d) none

7. The number of lines of symmetry of the letter Z of the English alphabet is

   (a) 0   (b) 1   (c) 2   (d) 3

8. A cycle travels at a speed of 45 km/h. How far will it travel in 36 minutes?

   (a) 27 km   (b) 20 km   (c) 36 km   (d) 45 km

PART – II :   PHYSICS/ CHEMISTRY

1.   Longer line on a battery symbol in a circuit drawn on paper represents the
   (A)   Positive terminal   (B) Negative terminal
   (C)   A bulb   (D) Resistance

2.   Which of the following is equal to 1 ton?
   (A)   1000 grams   (B)   1000 kg   (C) 100 kg   (D)   10000 kg

3.   Study the arrangement of three bar magnets as shown in figure. Which arrangement is possible?

   (A)   (B)   (C)   (D)
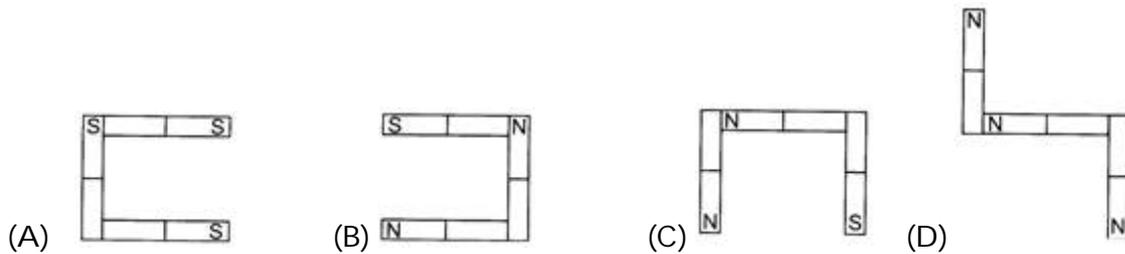
4.   Magnets lose their properties significantly if
   (A)   Left in the open for short time   (B)   Touched with iron for short time
   (C)   Dropped from a height repeatedly   (D)   None of these

5.   When Abhishek looked at a lighted torch through an object he could see a faint glow, but not the torch. The object is
   (A)   Transparent   (B)   Opaque   (C)   Translucent   (D)   None of these

6.   Study the set-up below.

Book   Ring   Screen
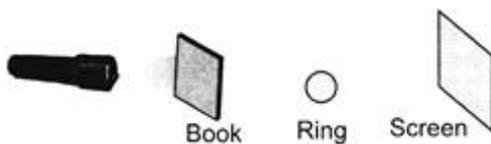
   How will the shadow look like?

(A)   (B)   (C)   (D)

7. Read the given statements and select the correct option,
   Statement 1: The displacement of a body may be zero, though distance can be finite.
   Statement 2: If a body moves such that finally it arrives at initial point, then displacement is zero while distance is finite.

   (A) Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.

   (B) Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.

   (C) Statement 1 is true and statement 2 is false.

   (D) Statement 1 is false and statement 2 is true.

8. The diagram shows identical lamps X and Y connected in series with a battery. The lamps light with normal brightness.

   If a third lamp Z is connected in parallel with lamp X, then what will happens to the brightness of the lamp Y?

   (A) Brighter than normal   (B) Normal

   (C) Dimmer than normal   (D) Very dim (cannot be seen)

9. Which of the following is lustrous material?
   (a) Wood   (b) Plastic   (c) Copper   (d) Chalk

10. Chocolates, biscuits and other items aredisplayed in a shop in see- through containers that are made of glass or plastic. This explains the property of _____of glass and plastic.
    (a) Hardness   (b) Opaqueness   (c) Softness   (d) Transparency

3. Elements contain:
   (a) Atoms of different kind   (b) Atoms of same kind
   (c) Molecules of different kind   (d) Different patterns of molecules.

4. The intermolecular space between the molecule is maximum in which state.
   (a) Gas   (b) Liquid   (c) Solid   (d) All of these

5. Which of the following is a chemical change.
   (a) Boiling of water   (b) Tearing of newspaper
   (c) Cooking ofvegetable   (d) Freezing water into ice

6. Which of the following is a reversible change.
   (a) Curdling of milk   (b) Ripening of fruits
   (c) Melting of ice   (d) Burning of wood

7. Wool is obtained from which of the following animals?
   (a) Sheep   (b) Horse   (c) Pig   (d) Dog

8. How much of Earth's water is freshwater:
   (a) 97%   (b) 50%   (c) 30%   (d) 1%

PART – V : BIOLOGY

1. Which one of the following is a deficiency disease?

   (A) Beri-beri   (B) Rickets   (C) Scurvy   (D) All of these

2. Which one of the following minerals is an essential for developing strong bones and teeth?

   (A) Calcium and phosphorus   (B) Iodine and sodium

   (C) Iron and phosphorus   (D) Sodium and iron

3. In plants of gourd and cucurbita, some thread like structures arise from the stem that helps the plants to climb. These structures are called

   (A) leaf tendrils   (B) thorns   (C) spines   (D) stem tendrils

4. The part of the leaf by which it is attached to the stem is called

   (A) petiole   (B) lamina   (C) veins   (D) None of these

5. Ulna is a bone which is present in:

   (A) Arm   (B) Leg   (C) Skull   (D) Rib cage

6. Which type of joint is there between upper arm bone and lower arm bone?

   (A) Hinge joint   (B) Fixed joint   (C) Pivot joint   (D) Ball and socket joint

7. Look at the following statements: Statement 1: The living organisms which can prepare their own food are called producers Statement 2: The living organisms which consumes the food prepared by plants are called consumers Which of the above statements is correct?

   (A) Statement 1 is correct   (B) Statement 2 is correct

   (C) Both statements are correct   (D) Both statements are incorrect

8. The microscopic animals which live in water are called:

   (A) Zooplanktons   (B) Phytoplankton?s (C)Hydrophytes   (D) All of these