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KHOJ 2021

SAMPLE PAPER

ANSWER KEY WITH SOLUTION

Class 6

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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

Sol. (C) Centi – Deci – Deca – Hecto - Kilo

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

Sol. (C) Glacier – Ocean – Sea – River – Rivulet

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

Sol. (C) "A juicy fruit" → ORANGE

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

Sol. (A) The letters of the word are written in a reverse order and in the group of letters so obtained, the first, third and fifth letters are each moved one step forward while the second and fourth letters are each moved one step backward to get the code.

5. Find the missing term :

A, C, ?, G, I

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

Sol. (b) Series consists of alternate letter in order. So, the missing term would be E.

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Directions : (6-7)

In each of the following questions, four words are given, out of which three are same in one way and the fourth one is different from others. Select the odd one.

6. (A) Milk (B) Syrup (C) Squash (D) Cake
Sol. (D) All others are the drinks.

7. (A) 4 (B) 8 (C) 16 (D) 9
Sol. (B) All other numbers except (B) are square of natural numbers.

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



- (A) 1 (B) 4 (C) 5 (D) Can't be determined
Sol. (B) Clearly, from the standard dice the sum of numbers on the opposite faces is '7', so number opposite to 4 is 3.

PART - II : MATHEMATICS

1. Roman numeral for 498 is _____
(a) CDCXVIII (b) CDCXIV (c) CDXCVIII (d) CDXCVII

Sol. (c)
 $498 = 400 + 90 + 8$ CDXCVIII

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

Sol. (a) 90, 08,00,700
Ninety crores, eight lakhs and seven hundred

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

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

Sol. (c) Prime numbers between 1 to 50
2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

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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

Sol. (a)

Since each of five friends paid an extra ₹ 3 to cover Lakshmi's portion of the bill, then Lakshmi's share was $5 \times ₹ 3 = ₹ 15$.

Since each of the six friends had an equal share, then the total bill is $6 \times ₹ 15 = ₹ 90$.

5. What shape are the faces of a cube?

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

Sol. (c) Shape of faces of cube is square

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

Sol. (b)

In 5 litre distance covered = 220 km

In 1 litre distance covered = $\frac{220}{5}$

In 1.5 litre distance covered = $\frac{220}{5} \times 1.5 = 60$ km

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

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

Sol. (a) Alphabet Z having no lines of symmetry.

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

Sol. (a)

Speed = 45 km/h

Time = 36 minutes = $\frac{36}{60}$ hr

Distance = Speed \times Time = $45 \times \frac{36}{60} = 27$ km

PART – III : 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

Sol. (A) Longer line represent positive and short line represent negative terminal of battery.

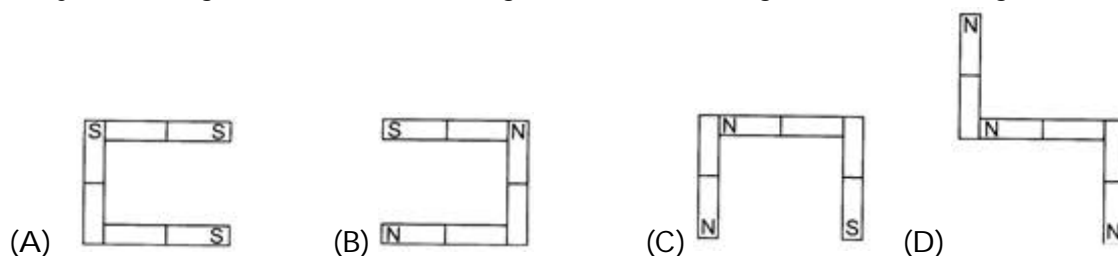
2. Which of the following is equal to 1 ton?

- (A) 1000 grams (B) 1000 kg (C) 100 kg (D) 10000 kg

Sol. (B)

metric ton = 1000 kg

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



Sol. (C)

As we know like charges repel each other and unlike poles attract each other, by this rule in option C, all the joined magnets have unlike poles at the joining surface so option C is possible arrangement.

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

Sol. (C)

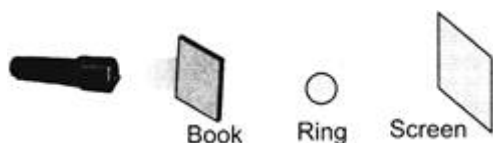
If magnets are dropped from a height repeatedly, then it loses their property.

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

Sol. (C) As he sees a faint glow that means the object is translucent.

6. Study the set-up below.



How will the shadow look like?

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

Sol. (C) As book is an opaque object option C will be correct.

7. Read the given statements and select the correct option,

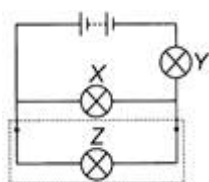
Statement 1: The displacement of a body may be zero, though distance can be finite.

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.

Sol. (A) Both statement is right, as distance is length of the path travelled by object, it cannot be zero. So answer is (A)

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)

Sol. (A)

When lamp Z is connected in parallel with the lamp X, resistance of the combination reduces due to which current flowing in the circuit increases and the bulb Y will glow brighter than the normal.

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9. Which of the following is lustrous material?

- (a) Wood (b) Plastic (c) Copper (d) Chalk

Sol. (c) Copper, because in generally all metals are lustrous.

10. Chocolates, biscuits and other items are displayed 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) Opacity (c) Softness (d) Transparency

Sol. (d) Transparency, because transparent nature of Glass and plastic container, biscuits, sweets etc. can be seen easily by buyers. Shopkeepers do like this.

3. Elements contain:

- (a) Atoms of different kind (b) Atoms of same kind
(c) Molecules of different kind (d) Different patterns of molecules.

Sol. (b) Atoms of same kind, because an element is a substance that is made entirely from one type of atoms.

4. The intermolecular space between the molecule is maximum in which state.

- (a) Gas (b) Liquid (c) Solid (d) All of these

Sol. (a) Gas, because molecules are free to move anywhere due to less intermolecular force of attraction.

5. Which of the following is a chemical change.

- (a) Boiling of water (b) Tearing of newspaper
(c) Cooking of vegetable (d) Freezing water into ice

Sol. (c) Cooking of vegetable, because new substances formed.

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

Sol. (c) Melting of ice, because melted ice can freeze again by decrease in temperature.

7. Wool is obtained from which of the following animals?

- (a) Sheep (b) Horse (c) Pig (d) Dog

Sol. (a) Sheep, wool is obtained from Sheep.

8. How much of Earth's water is freshwater:

- (a) 97% (b) 50% (c) 30% (d) 1%

Sol. (d) 1% , Only 1% of Earth's water is freshwater.

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PART – IV : BIOLOGY

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

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

Ans. D

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

Ans. A

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

Ans. D

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

Ans. A

5. Ulna is a bone which is present in:

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

Ans. A

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

Ans. A

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

Ans. C

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

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

Ans. A