



# **IIT ASHRAM**

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## **KHOJ 2021**

### **SAMPLE PAPER**

### **ANSWER KEY WITH SOLUTION**

## **Class 5**

# KHOJ SAMPLE PAPER

## PART - I : MENTAL ABILITY

### Directions from 1-2:

Arrange each of the five words in the questions below in a meaningful sequences.

1. Bungalow
2. Flat
3. Cottage
4. House
5. Palace

(A) 3,2,1,4,5                      (B) 3,2,4,1,5                      (C) 3,2,1,5,4                      (D) 5,4,1,2,3

Sol. (B) Cottage – Flat – House – Bungalow – Palace

1. Key
2. Door
3. Lock
4. Room
5. Switchon

(A) 5,1,2,4,3                      (B) 4,2,1,5,3                      (C) 1,3,2,4,5                      (D) 1,2,3,5,4

Sol. (C) Key – Lock – Door – Room – Switch on

3. In the following question the letters of words have been jumbled up.  
Identify the word in the options for the given clues.

What the Earth is

(A) ODWO                      (B) RIFOPT                      (C) TENLAP                      (D) ASBW

Sol. (C) "What the Earth is" → PLANET

4. In a certain code ZEBRA is written as CHEUD and HORSE is written as KRUVH  
Identify the code for SHARE

(A) VKDUH                      (B) KCHRE                      (C) UEUVD                      (D) EKRUV

Sol. (A)

Z	E	B	R	A	H	O	R	S	E
C	H	E	U	D	K	R	U	V	H

Code for SHARE → VKDUH

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5. In a certain code PENCIL is written as BDFKJS.

Identify the word for BJFD

- (A) NICE                      (B) PINE                      (C) LINE                      (D) CLIP

Sol. (B)

P	E	N	C	I	L
B	D	F	K	J	S

The decoded word for BJFD  $\longrightarrow$  PINE

6. Find the missing term :12, 15, 18, 21, ?

- (a) 26                      (b) 27                      (c) 23                      (d) 24

Sol. (d) As per series,  $a, a + d, a + 2d, \dots$

$$a = 12, d = 3$$

7. 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.

8. Arrange the given words in the order they occur in dictionary.

1. SIGN                      2. SOLID                      3. SCENE                      4. SIMPLE

- (a) 3, 1, 2, 4                      (b) 3, 1, 4, 2                      (c) 3, 4, 1, 2                      (d) 3, 4, 2, 1

Sol. (b) The correct alphabetical order of the given words is : SCENE, SIGN, SIMPLE, SOLID. Thus, the correct sequence is 3, 1, 4, 2.

## PART – II : MATHEMATICS

1. What is the sum of first two prime numbers?

- (A) 2                      (B) 5                      (C) 3                      (D) 4

Sol. (B) Prime number =  $2 + 3 = 5$

2. What is the difference between the largest three digit number and the smallest four digit number?

- (A) 1                      (B) 2                      (C) 3                      (D) 4

Sol. (A) Difference =  $1000 - 999 = 1$

3. What is the value of  $15 \times 40 \times 3 \times 0$ ?

- (A) 1                      (B) 2                      (C) 3                      (D) 0

Sol. (D)  $15 \times 40 \times 3 \times 0 = 0$

4. What will be the quotient if we divide 360 by 4?

- (A) 70                      (B) 80                      (C) 90                      (D) 95

Sol. (C) Quotient =  $\frac{360}{4} = 90$

5. What is the H.C.F. of co-prime numbers?

- (A) 1                      (B) 2                      (C) 3                      (D) 4

Sol. (A) HCF of coprime number is 1

6. How many half hours make a day?

- (A) 38                      (B) 48                      (C) 36                      (D) 24

Sol. (B) 2 half hour = 1 hr.

1 day = 24 hr.

$\therefore$  1 day = 48 half hour

7. Identify the smallest 7-digit number

(A) 10,00,000

(B) 1 + greatest 6 digit number

(C) Both (A) and (B)

(D) Neither (A) nor (B)

Sol. (C) The smallest 7-digit number is 10,00,000

= The successor of the greatest 6-digit number

= The greatest 6-digit number + 1

8. A class of 30 students recently wrote a test. If 20 students scored 80, 8 students scored 90 and 2 students scored 100, find the class average on this test.

(A) 90

(B) 84

(C) 82

(D) 86

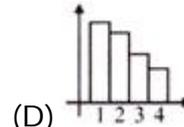
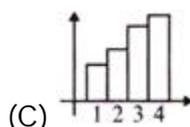
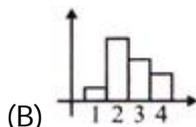
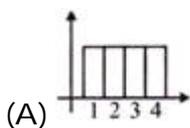
Sol. (B) From the given information, the total amount of marks obtained by the class is

$$20(80) + 8(90) + 2(100) = 2520.$$

Therefore, the class average is  $\frac{2520}{30} = 84$

## PART - III : PHYSICS/ CHEMISTRY

1. The size of the moon change daily. Then which of the following bar diagram gives the correct change in size of the moon. (1 - New moon, 2 - Crescent, 3 - Half moon, 4 - Full moon)



Sol. (C) As size of moon increases from new moon to full moon option C is correct answer.

2. Gravity of moon in comparison to earth is

(A) Double                      (B) Half                      (C) quarter                      (D) one sixth

Sol. (D) As moon has less mass compare to earth its gravity is  $1/6^{\text{th}}$  to the comparison of earth's gravity.

3. In which phase of moon, a solar eclipse occurs.

(A) New moon                      (B) Full moon                      (C) Crescent                      (D) Quarter

Sol. (A) Solar eclipse occurs when moon comes between sun and earth, this happened during only new moon.

4. Band of seven colors obtained through dispersion is called:

(A) Reflection                      (B) Refraction                      (C) Spectrum                      (D) Transparency

Sol. (C) Band of seven colors obtained through dispersion is called spectrum.



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9. Which among the following is an example of a pure substance?

- (a) Sea water                      (b) Soil                      (c) Air                      (d) Sugar

Sol. (d)

Sugar, because A pure substance is made up of only one kind of particles. But Sea water, Soil and Air are mixture.

10. The process of changing water into ice is called

- (a) Sublimation                      (b) Evaporation                      (c) Freezing                      (d) Precipitation

Sol. (c) Freezing, When the water converts from the liquid phase (that is, water) to the solid phase (that is, ice), the process is known as freezing.

11. When we dissolve sugar in water, the water level does not rise up because

- (a) Sugar does not dissolve in water  
(b) Sugar does not need space to occupy  
(c) Sugar is invisible  
(d) Sugar particles take up the space between the water particles.

Sol. (d) according to the property of matter, sugar particles take up the space between the water particles.

12. Melting of ice is:

- (a) Physical change                      (b) Chemical change  
(c) Both (a) and (b)                      (d) None of the above

Sol. (a) Physical change, because no new substance is formed.

13. Which of the following is soft material?

- (a) Iron                      (b) Sponge                      (c) Wood                      (d) None of these

Sol. (b) Sponge, because those materials which can be easily compressed are called soft materials.

14. Select odd one out?

- (a) Aluminium                      (b) Iron                      (c) Silver                      (d) Sand

Sol. (d) Sand, because Aluminium, Iron and Silver are elements but sand is not a element

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15. The process of setting down of particles of a solid in a liquid is:

- (a) Decantation      (b) Sublimation      (c) Sedimentation      (d) Filtration

Sol. (c) Sedimentation, because The process of settling down of particles of a solid in a liquid is known as sedimentation.

16. Which gas helps in burning?

- (a) Nitrogen      (b) Oxygen      (c) Carbon dioxide      (d) Argon

Sol. (b) Oxygen, because Air or Oxygen which helps in burning is called supporter of combustion.

### PART – IV : BIOLOGY

1. Silt:

- (A) is a type of soil particles      (B) occurs as deposit in river beds  
(C) Both the above are correct      (D) None of these

Ans. (C)

2. Which of the following parts of the human body has involuntary muscles?

- (A) Legs      (B) Arms      (C) Neck      (D) Intestine

Ans. (D)

3. Strawberries reproduce vegetative by sending out runners. Runners of strawberry plants are actually of which one of the following parts of the plants?

- (A) Root      (B) Stem      (C) Leaves      (D) Flower

Ans. (B)

4. Pick the odd one out.

- (A) Ducks      (B) Crocodiles      (C) Seals      (D) Fish

Ans. (D)

5. How many biomes are there?

- (A) Five      (B) Four      (C) Three      (D) Six

Ans. (D)

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6. \_\_\_\_ in soil is the fertile component.

- (A) Gravel                      (B) Humus                      (C) Moisture                      (D) Air

Ans.(B)

7. A particular community is exposed excessive noise pollution, what will be result after some times to members of the community

- (A) Headache                      (B) Deafness                      (C) Lack of sleep                      (D) All of these

Ans.(D)

8. Which of following diseases spreads through contaminated food and water?

- (A) Malaria                      (B) Cholera                      (C) Dengue                      (D) Filaria

Ans.(B)