

1. Read the following passage carefully :

(10 marks)

### Water Crisis in India

(1) With a diverse population that is three times the size of the United States but one-third the physical size, India has the second largest population in the world. According to the World Bank, India has taken significant steps to reduce poverty but although India has made improvements over the past decades in both the availability and quality of municipal drinking water systems, its large population has stressed planned water resources and rural areas are left out. In addition, rapid growth in India's urban areas has stretched government solutions, which have been compromised by over-privatisation.

(2) Regardless of improvements in drinking water, many other water sources are contaminated with both bio and chemical pollutants, and over 21% of the country's diseases are water-related. Furthermore, only 33% of the country has access to traditional sanitation.

(3) One concern is that India may lack overall long-term availability of replenishable water resources. While India's aquifers are currently associated with replenishing sources, the country is also a major grain producer with a great need for water to support the commodity. As with all countries with large agricultural output, excess water consumption for food production depletes the overall water table. Many rural communities in India that are situated on the outskirts of urban sprawl also have little choice but to drill wells to access groundwater sources.

(4) India's water crisis is often attributed to lack of government planning, increased corporate privatisation, industrial and human waste and government corruption. In addition, water scarcity in India is expected to worsen as the overall population is expected to increase to 1.6 billion by year 2050. To that end, global water scarcity is expected to become a leading cause of national political conflict in the future, and the prediction for India is no different.

(5) On a positive note, some areas of India are fortunate to have a relatively wet climate, even in the most arid regions. However, with no rain catchment programs in place, most of the water is displaced or dried up instead of used. In these areas, rain harvesting could be one solution for water collection. Collected water can be immediately used for agriculture, and with improved filtration practices to reduce water-borne bacteria also quickly available for human consumption.

1.1. On the basis of your reading of the above passage answer the following questions briefly :

(2 × 4 = 8 marks)

(a) What has contaminated many other water sources in India according to the passage ?

(b) To what is India's water crisis is often attributed ?

(c) How can rainwater harvesting system be a solution to India's water crisis ?

(d) What is predicted to be the biggest national political conflict in the future ?

1.2. Find meanings of the following words with the help of the options that follow :

(1 × 2 = 2 marks)

(a) What is the antonym of 'fortunate' (Para 5) as used in the passage ?

(i) unfortunate

(ii) fortune

(iii) lucky

(iv) providential

(b) Replenishable water resources means : water resources that can be \_\_\_\_\_.

(i) reused

(ii) recycled

(iii) refilled

(iv) refused

Q2: Write a letter to the editor of a national daily against the use of unfair means by students in examinations. You are Pallavi / Pankaj of B-4/174 Model Town, New Delhi.

(8)

Q3: Write a story in 150-200 words

The trek was tiring. Karan and his friends climbed on till noon. On reaching they realized that...

(10)

Q4: The following paragraph has not been edited. One word has been omitted in each line.

(4)

Before Word After

- |  |    |
|--|----|
| These days on rarely seen person           | a) |
| Who possesses the quality humility. Even a | b) |
| Small deed anyone of us seems              | c) |
| A big Achievement giving rise our ego      | d) |

Q5. Rearrange to form a meaningful sentence

(4)

1. Build/character/they/the
2. Are/values/moral/for/life/important
3. Also/they/help/to/succeed/life/in/us
4. Incomplete/are/humans/values/without

Q6. Read the following extract and answer the questions given below:

(4)

And as he put his head into that dreadful hole,

And as he slowly drew up, snake-easing his shoulders, and entered farther,

A sort of horror, a sort of protest against his withdrawing into that horrid black hole,

Deliberately going into the blackness, and slowly drawing himself after,

Overcame me now his back was turned

Questions:

1. Where did the snake put his head? (1)
2. What does the phrase "Snake-easing his shoulder" mean? (2)

3. Against what the poet is protesting?

(1)

Q7. Answer the following question:

2x3=(6)

1. Why did the poet hit the snake with a log?
2. Why is the albatross compared to a Christian soul?
3. How did Patol Babu feel after the scene was shot?

Q8. Answer the long question

(4)

Taking inspiration from the poem "Snake" write a paragraph on the topic "Conservation of the life-the need of the hour" in about 100 words.

SHIKSHA BHARATI PUBLIC SCHOOL - (2017-18)  
PERIODIC TEST - III

TIME:

MATHEMATICS - IX

MM: 50.

General Instructions: →

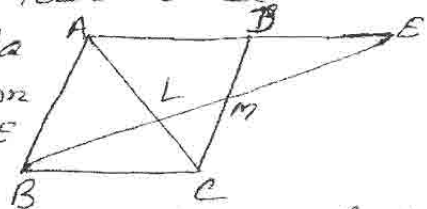
- i) Section-A contains 5 questions each of one mark, section-B 3 questions 2 marks each, section-C contains 5 questions 3 marks each and section-D contains 6 questions 4 marks each.
- ii) All questions are compulsory.

Section-A

1. Find the roots of the quadratic equation  $6x^2 - x - 2 = 0$ .
2. Find the 12th term of the A.P: 2, 7, 12, ...
3. In a  $\triangle ABC$  it is given that AD is an internal bisector of  $\angle A$  if  $BD = 4$  cm,  $DC = 5$  cm and  $AB = 6$  cm find AC.
4. Find the length of a tangent drawn from an external point which is 10 cm away from the centre to a circle of radius 6 cm.
5. A die is thrown once find the probability of getting:
  - i) a number less than 7.
  - ii) a number more than 6.

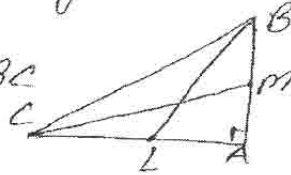
Section-B

6. Find a quadratic polynomial the sum and product of whose zeroes are  $-3$  and  $2$ , respectively.
7. Find the nature of roots of polynomial  $7y^2 + 4y + 5 = 0$ .
8. 21 cards are numbered 1, 2, 3, ... 21, put in a box and mixed thoroughly, one card is drawn from the box, find the probability of getting perfect square numbers.
9. Find the roots of:  $\frac{1}{x+4} - \frac{1}{x-7} = \frac{11}{30}$ ,  $x \neq -4, 7$ .
10. Find AP whose 3rd term is 16 and 7th term exceeds the 5th term by 12.
11. In fig. M is the mid point of side CD of a parallelogram ABCD. The line BM is drawn intersecting AC at L and AD produced at E. Prove that:  $EL = 2BC$ .



12. Prove that parallelogram circumscribing a circle is a rhombus.
13. A straight highway leads to the foot of a tower. A man standing at the top of a tower observes a car at an angle of depression of  $30^\circ$ , which is approaching the foot of the tower with a uniform speed. 6 seconds later the angle of depression of the car is found to be  $60^\circ$ . Find the time taken by the car to reach the foot of the tower from this point.

Section - D

14. A train travels 360 km at a uniform speed; if the speed had been 5 km/h more it would have taken 1 hr less for the same journey. Find the original speed of the train.
15. The 1st and last term of an AP are 6 and 348 respectively. If its common difference is 9, how many terms are there and what is the sum?
16. BL and CM are medians of a  $\triangle ABC$  right angled at A. Prove that:  
 $4(BL^2 + CM^2) = 5BC^2$ .
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17. Prove that the lengths of two tangents drawn from an external point to a circle are equal.
18. The angle of elevation of a top of a tower from a point on the ground is  $45^\circ$  on walking 30 meters towards the tower the angle of elevation becomes  $60^\circ$ , find the height of the tower and the original distance from the foot of the tower.
19. A bag contains 10 green marbles and some red marbles. If the probability of drawing a red marble is 3 times that of a green marble, determine the number of red marbles.

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# SHIKSHA BHARATI PUBLIC SCHOOL

## THIRD PERIODIC TEST 2017-18

### SCIENCE CLASS –X

TIME ALLOWED:3 HOURS

M.M: 50

#### General instructions:

- (i) All the questions are compulsory.
- (ii) Q.No. 1 to 2 are **one mark** questions. These are to be answered in one word or in one sentence.
- (iii) Q.No.3 to 8 are **two marks** questions .These are to be answered in about 30 words each.
- (iv) Q.No. 9 to 15 are **three marks** questions including a value based question. These are to be answered in about 50 words each.
- (v) Q.No.16 and 18 are **five marks** questions. These are to be answered in about 70 words each.

1. Define vegetative propagation.
2. Name three elements which behaves as metalloids.
3. One half of a convex lens is covered with a black paper. Will this lens produce a complete image of the object? Draw a labelled diagram to justify your answer.
4. List four characteristics properties of the images formed by plane mirrors.
5. Write the differences between real and virtual image.
6. An element X has a mass number 35 and the number of neutrons is 18. Identify the group number and period of element X.
7. Why is the position assigned to hydrogen in periodic table considered anomalous?
8. Differentiate between the arrangement of elements in Mendeleev's periodic table and Modern periodic table.
9. From the elements:  ${}_4\text{Be}$ ,  ${}_9\text{F}$ ,  ${}_{19}\text{K}$ ,  ${}_{20}\text{Ca}$ .
  - (i) Select the element having one electron in the outermost shell.
  - (ii) Select two elements of the same group.
  - (iii) Write the formula and mention the nature of the compound formed by the union of  ${}_{19}\text{K}$  and element X(2,8,7).
10. State Mendeleev's periodic law. Write the formula of the chlorides of Eka silicon and Eka aluminium. List two reasons responsible for late discovery of noble gases.
11. Four elements P, Q, R and S have atomic numbers 12, 13, 14 and 15 respectively. Answer the following questions giving reason:
  - (i) What is the valency of Q?
  - (ii) Classify these elements as metals and non-metals.
  - (iii) Which of these elements will form the most basic oxide?
12. Why is fertilisation in plants called double fertilisation?
13. Define speciation, Mention the factors responsible for speciation.
14. State the laws of refraction of light. Explain the term absolute refractive index of a medium and write an expression to relate it with the speed of light in vacuum.
15. An object of height 4 cm is placed at a distance of 20 cm from a convex lens of focal length 10 cm. Use lens formula to determine the position of image formed.

16. (i) List two main precautions to be taken while tracing the path of a ray of light passing through rectangular glass slab.
- (ii) What is meant by power of lens? Define its SI unit.
- You have two lenses of focal length +20 cm and -20 cm .Write the nature of each lens.Which of the two lenses can form a virtual and magnified image of an object placed 15 cm from the lens?
17. Name the plant over which Mendel worked upon. Write the Mendel first law of inheritance. Find the possible progeny of a cross between homozygous (T T) tall and heterozygous (tt) dwarf in F1 and F2 generation.
18. Which element has
- (i) two shells ,both of which are completely filled with electrons?
  - (ii) the electronic configuration 2, 8, 2 ?
  - (iii) a total of three shells with four electrons in its valance shell?
  - (iv) twice as many electrons in its second shell as in its first shell?
  - (v) Will the atomic size of (i) larger or smaller than (ii) ?

**SHIKSHA BHARATI PUBLIC SCHOOL**  
**UNIT TEST 3 (2017-2018)**  
**CLASS X SUBJECT SOCIAL STUDIES**

TIME 1 HOUR 30 MINUTES

MM50

**Section A (History)**

- Q1 Which three independent countries were a part of Indo –China? (1)
- Q2 Why was 'Tonkin' free school established? (1)
- Q3 "Rats were most common in the modern, newly built areas of Hanoi". How was the rat hunt started in Hanoi? (3)
- Q4 What protest erupted in the Saigon Native Girls School? (3)
- Q5 What ideas did Phan Boi Chau and Phan Chu Trinh share in common? What did they differ on? (5)

**Section –B (Geography)**

- Q6 What do you mean by basic industries? Give example. (1)
- Q7 What are agglomeration economies? (1)
- Q8 Differentiate between agro and mineral based industries with giving examples. (3)
- Q9 Why does the Chotanagpur Plateau have the maximum concentration of iron and steel industries? (3)
- Q10 Discuss the steps to be taken to minimize environmental degradation by industry . (5)

**Section C (Economics)**

- Q11 What is collateral? (1)
- Q12 Explain the concept of 'double coincidence of wants? (3)
- Q13 In what ways does the Reserve Bank of India supervise the functioning of Banks? (3)
- Q14 What are the difference between formal and informal sources of credit ? (5)

**Section --D ( civics)**

- Q15 What is a Political Party? (1)
- Q16 What are the characteristics of a Political Party? (3)
- Q17 Explain the role of opposition party in a democracy. (3)
- Q18 What are the main function of a Political Party? (5)