

# VISHWA BHARATI PUBLIC SCHOOL, DWARKA

## HOLIDAY HOME WORK (2019-20) CLASS IX

### ENGLISH

- 1 Write descriptive paragraphs (word limit-120 to 150 words) on:
  - a) Your youth icon
  - b) international yoga day
- 2 Read ch- 2 and 3 of Moments and do the question answers in practise notebook.
- 3 Revise all the syllabus covered.

### HINDI

- 1 हास्य या देशभक्ति की एक कविता याद करे।
- 2 बालों के तेल के लिए एक आकर्षक विज्ञापन बनाइए ।
- 3 “दुःख का अधिकार” या “तुम कब जाओगे, अतिथि” कहानी के संवाद लिखकर उसको नाटक में परिवर्तित करके लिखिए ।
- 4 अभी तक करवाए गए पाठ्यक्रम का दोहरान कीजिए ।

### SANSKRIT

1. किसी भी एक राज्य के पाँच दर्शनीय स्थलों का चित्र बनाकर दस - दस वाक्य संस्कृत में लिखें।
2. कक्षा में करवाये गये कार्यों का मौखिक और लिखित अभ्यास करें ।

### MATHS

1. Do the given assignment in practice notebook.
2. Revise the syllabus covered so far.

### SCIENCE

- 1 Do the worksheets given.
- 2 Revise the syllabus covered.

### SOCIAL SCIENCE

1. Do any **one** of the following projects. ( **Roll Nos 1-17**)
  - A. Collect report on the **Road Accidents** in Delhi from newspapers and prepare a project on it. Mention the measures that can be taken to avoid road accidents. Collect information on 'Road Safety Week' from newspaper clippings. Focus on the need of road safety for students.
  - B. Prepare a Project on the recently occurred cyclone ' FANI' along the coast of Orissa .  
Trace its origin, disaster preparedness of the government, destruction caused.along with pictures from newspaper to support its occurrence.
  - C. Make **models** on Cyclone or Flood resistant houses.
    - Note that the projects should be made from Eco friendly materials and should not be more than 15 pages.Projects should be prepared individually.
    - Prepare the Projects in A-4 size file.

2. Do any one of the following: **(Roll Nos 18–till the end)**
  - A. Do a comparative analysis of General Elections 2019 with General elections of 2014
  - B. Make a list of any 3 national political parties and 5 regional political parties with their respective symbols and ideologies.
3. Revise the chapters done in the class during the months of April and May.

### **ART**

- 1 Make two landscape in sketch file with any two medium of colours.
- 2 Make any folk art on A3 size sheet

### **SUPW**

- 1 Make a bird house with book fold.

## **CHEMISTRY**

- Q1 A drop of dettol got evenly distributed in water. How
- Q2 Liquid Nitrogen is used as a commercial refrigerant to flash freeze foods. Nitrogen boils at  $-196^{\circ}\text{C}$ . What is this temperature on the Kelvin temperature scale.
- Q3 Why do solid not diffuse ?
- Q4 Why do the gases exerts more pressure on the walls of the container than the solids?
- Q5 Why can a sponge be compressed though it is a solid?
- Q6 Why are clothes spread out for drying?
- Q7 Wearing synthetic clothes during summer is usually avoided? Why
- Q8 What is dry ice?
- Q9 How can physical state of matter be changed?
- Q10 Write any three differences between boiling and evaporation.
- Q11 Describe the effect of pressure
- Q12 What is the significant of boiling point and melting point
- Q13 What is the effect of temperature on a matter?
- Q14 What property of gas is utilized when natural gas is supplied for vehicles.
- Q15 What happen to a gas if its intermolecular spaces is reduced?
- Q16 How will you find out whether a sample of water is pure or impure?
- Q17 Why do we sweat on a humid day?

## **BIOLOGY**

1. State the function of chromosome in a cell.
2. Write two similarities and one dissimilarity between mitochondria and plastid.
3. Name the cell organelle that you would associate with elimination of old and worn out cells.
4. Name two cell organelles that contain their own genetic material.
5. Division of labour exists even at intracellular level, justify the statement by giving two examples.
6. a) List any two structural differences and two similarities between animal cell and plant cell. b) What would happen if an animal cell is kept in distilled water for 24 hrs?
7. When a living plant cell loses water through osmosis, there is contraction of the contents of the cell away from the cell wall. What is this phenomenon called?

## **PHYSICS**

1. A stone is dropped from a building of height of 30m. It accelerates at a rate of  $8\text{ m/s}^2$ . What will be velocity of the stone when it hits the ground? How long will it take to reach the ground?
- 2) A car moving at a speed of 52 km/h, when applied brake comes to a stop in 5 s. Another car which is moving at a speed of 3 km/h come to a stop in 10s, when applied a break. Plot the speed vs time graphs for both the cars on the same scale. Which among the two cars will travel farther after the braking?

- 3) Akash jogs from one end A to the other end B of a 400-metre road in 2 min 45 sec and then turns around and jogs 200 metres back to point C in another 1 min 30 sec. What are Akash's average speed and velocities in jogging (a) from A to B and (b) from A to C?
- 4) A man is chased by a dog who runs around a circular park of diameter 200 m. He runs at a speed with which he covers the perimeter in 40 sec. At the end of 2 min 20 sec what will be the distance covered by him. Also, find the displacement at the end of the given period.
- 5) A stone is thrown in a vertically upward direction with a velocity of 5 m s<sup>-1</sup>. If the acceleration of the stone during its motion is 10 m s<sup>-2</sup> in the downward direction, what will be the height attained by the stone and how much time will it take to reach there?
- 6) How will the equations of motion for an object moving with a uniform velocity change?
- 7) A body starts to slide over a horizontal surface with an initial velocity of 0.5 m/s<sup>2</sup>. Due to friction its velocity decreases at the rate 0.05m/s<sup>2</sup>. How much time will it take for the body to stop ?

## MATHS ASSIGNMENT

### CLASS - IX

1. Let  $R_1$  and  $R_2$  are the remainders when the polynomials  $x^3 + 2x^2 - 5ax - 7$  and  $x^3 + ax^2 - 12x + 6$  are divided by  $x + 1$  and  $(x - 2)$  respectively. If  $2R_1 + R_2 = 20$ , find the value of  $a$ .
2. Find the value of  $k$  so that  $2x - 1$  be a factor of  $8x^4 + 4x^3 - 16x^2 + 10x + k$ .
3. Find the value of  $(x - a)^3 + (x - b)^3 + (x - c)^3 - 3(x - a)(x - b)(x - c)$ , if  $a + b + c = 3x$ .
4. Find the remainder when  $p(y) = y^3 + y^2 + 2y + 3$  is divided by  $x + 2$ .
5. If  $3x - 7y = 10$  and  $xy = -1$ , find the value of  $9x^2 + 49y^2$ .
6. Factorize:
  - (i)  $x^3 + 13x^2 + 32x + 20$ .
  - (ii)  $2y^3 + y^2 - 2y - 1$
7. Evaluate using identities:
  - (i)  $5.63 \times 5.63 + 11.26 \times 2.37 + 2.37 \times 2.37$ .
  - (ii) 
$$\frac{(361)^3 + (139)^3}{(361)^2 - (361 \times 139) + (139)^2}$$
8. If  $a + b + c = 0$ , then find the value of  $\frac{a^2}{bc} + \frac{b^2}{ca} + \frac{c^2}{ab}$
9. Factorise :  $(x^2 - 2x)^2 - 8(x^2 - 2x) + 16$
10. If the polynomials  $ax^3 + 4x^2 + 3x - 4$  and  $x^3 - 4x + a$  leave the same remainder when divided by  $(x - 3)$ . Find the value of  $a$ .
11. Simplify  $(2x - 5y)^3 - (2x + 5y)^3$
12. Find the value of  $a$ , so that  $x + 1$  be a factor of  $ax^3 + x^2 - 2x + a - 9$
13. If  $a + b + c = 9$  and  $ab + bc + ca = 40$  find  $a^2 + b^2 + c^2$
14. Factorise :
  - (i)  $(a^2 - 2a)^2 - 23(a^2 - 2a) + 120$
  - (ii)  $x^4 + x^3y$
  - (iii)  $2y^3 + y^2 - 2y - 1$ .
  - (iv)  $x^2 + 9x - 52$
  - (v)  $x^3 - 1/x^3$
  - (vi)  $27 - 125a^3 - 135a + 225a^2$

15. Check whether  $q(x)$  is a factor of  $g(x)$ .

$$g(x) = 4t^3 + 4t^2 - t - 1.$$

$$q(x) = 2t + 1.$$

16. A cubic polynomial has ..... zeroes.

17. Fill in the blanks:

a) A polynomial of two terms is called as \_\_\_\_\_.

b) The degree of cubic polynomial is \_\_\_\_\_.

c) The degree of  $\sqrt{5}y - 3$  is \_\_\_\_\_.

d) The degree of a non-zero constant polynomial is \_\_\_\_\_.

18. Find  $a$  and  $b$  if (i)  $(\sqrt{3} - 1)/(\sqrt{3} + 1) = a + b\sqrt{3}$  (ii)  $(3 + \sqrt{7})/(3 - \sqrt{7}) = a + b\sqrt{7}$