

**Nirmala Eng. Hr. Sec. School (CBSE), Risdi, (C.G)**

**Summer Holiday Home Work 2019-2020**

**CLASS – IX**

**ENGLISH**

1. Write summary of chapters 1 to 5 novel.
2. Write an article on “Environment”?
3. Write three forms of Tenses with all Forms (2 – 2 Examples)?
4. Write a short story on Two Friends were passing through a dense forest. Suddenly they heard some animals screaming?

**BIOLOGY**

**PART A – VERY SHORT ANSWER TYPE QUESTIONS -**

1. Where are Genes located?
2. Define cell? What does it mean in Latin?
3. What is the full form of D.N.A. and R.N.A.?
4. Name the single membrane bound cell organelle which is found in an animal cell?
5. What is Nucleoid?

**PART B – ANSWER THE FOLLOWING QUESTIONS –**

1. What are Plastids? Give the various types of plastids present in plants along with their functions.
2. Explain the role of composition of plasma membrane and cell wall?
3. Differentiate between Osmosis and Diffusion?
4. List two similarities and dissimilarities between –  
a) Plant cell and Animal Cell                      b) Mitochondria and Plastids

**S.ST.**

1. Prepare some important current affairs of India In a project file from year 2000 to 2019?
2. Prepare a map labeling the boundaries of India in a project file?
3. Complete the following questions in Economics Fair note book –

**VALUE BASED QUESTIONS -**

- a) What changes do we see in irrigation and Production methods during the last 30 years?  
b) Why is it important to preserve soil fertility and ground water?
4. Complete the suggested activity which is given in CHAPTER 1 “The story of village Palampur”(Page no 5)from Economics in Project file?

**HINDI**

- 1) कहानी “ दो बैलों की कथा” में जगह – जगह मुहावरों का प्रयोग हुआ है । कोई पाँच मुहावरे छाँटकर उनके अर्थ सहित वाक्यों में प्रयोग कीजिए।
- 2) तिब्बती समाज से संबंधित प्रयोजना कार्य–
  - 1) तिब्बत की भौगोलिक स्थिति
  - 2) तिब्बत का रहन-सहन
  - 3) तिब्बत की जलवायु
  - 4) तिब्बत की भाषा-शैली
  - 5) तिब्बत का खान-पान
  - 6) तिब्बत का प्राकृतिक सौंदर्य
  - 7) तिब्बत की आर्थिक स्थिति
  - 8) तिब्बत के धार्मिक स्थल
  - 9) तिब्बत में कृषि की दशा
  - 10) तिब्बत में कानून व्यवस्था की स्थिति

**COMPUTER APPLICATION**

- 1) Explain basic I/O devices.                      [Note: Minimum 3 Input device & 3 Output device with its diagram]
- 2) Write the use of mouse and keyboard with its figure.
- 3) Explain working of operating system, in detail.
- 4) Define the following:-
  - a. Desktop
  - b. Icon
  - c. My Computer
  - d. My Documents
  - e. Taskbar
- 5) Explain all functional component of a computer system with its figure.
- 6) What do you mean by word processing?
- 7) Explain any one word processing application software.                      [Note: OpenOffice Writer or MS Word]
- 8) What is Presentation?
- 9) How we create a presentation with animation, explain it.                      [Note: OpenOffice Impress or MS PowerPoint]
- 10) How we create a simple spreadsheet explain it.                      [Note: OpenOffice Calc or MS Excel]

## CHEMISTRY

- 1) Naphthalene balls disappear with time without leaving any solid – give reason.
- 2) Water at room temperature is a liquid – why ?
- 3) We can get the smell of the perfume sitting several metres away – give reason for this observation.
- 4) What produces more severe burns, boiling water or steam ?
- 5) The smell of hot sizzling food reaches you several metres away, but to get the smell from cold food, you have to go close - why ?
- 6) What are the characteristics of the particles of the matter ?
- 7) Define the term Density. Also write the formula and unit of Density.
- 8) Write three differences between solid and liquid states.
- 9) Write short notes on :-
  - (a) Compressibility, (b) Rigidity,
  - (c) Evaporation, (d) Sublimation.
- 10) A gas fills completely the vessel in which it is kept – give reason.
- 11) A gas exerts pressure on the walls of the container – give reason.
- 12) Define the following terms –
  - (a) Melting point, (b) Boiling point, (c) Freezing point.
- 13) What is the physical state of water at :-
  - (a) 100°C, (b) 25°C.
- 14) Suggest a method to liquefy atmospheric gases.
- 15) How does the water kept in an earthen pot ( MATKA ) become cool during summer ?
- 16) Why are we able to sip hot tea or milk faster from a saucer rather than a cup – explain.
- 17) What do you understand by “ Latent Heat “ ?  
Write the definitions of following :
  - (a) Latent heat of Fusion,
  - (b) Latent heat of Vaporization.
- 18) Write the four factors affecting the rate of evaporation.
- 19) What is Diffusion ? Explain the Diffusion in Solid, Liquid and Gas.
- 20) Define the Condensation Process.
- 21) Explain the Sublimation Process. How can you separate the components of a mixture containing Camphor and Sugar ?
- 22) A wooden chair should be called a SOLID – Why ?
- 23) What is SOLID CO<sub>2</sub> ( SOLID CARBON DIOXIDE ) ?
- 24) What type of clothes should we wear in summer ?
- 25) Why do we see water droplets on the outer surface of a glass containing ice – cold water – give reason?

## MATHS

### A. LEARN AND WRITE

1.  $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$  or  $a^3 - b^3 - 3a^2b + 3ab^2$
2.  $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$  or  $a^3 + b^3 + 3a^2b + 3ab^2$
3.  $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$
4.  $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$
5.  $a^2 - b^2 = (a - b)(a + b)$
6.  $(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$
7.  $a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$
8.  $(a + b)^2 = a^2 + b^2 + 2ab$
9.  $(a - b)^2 = a^2 + b^2 - 2ab$
10. if  $(a + b + c) = 0$  then  $a^3 + b^3 + c^3 = 3abc$
11. Area of  $\Delta = \frac{1}{2} \times \text{base} \times \text{height}$
12. Area of equilateral  $\Delta = \frac{\sqrt{3}}{4} \times a^2$      $a = \text{side of } \Delta$
13. Area of parallelogram = base x length
14. Area of rhombus =  $\frac{1}{2} \times d_1 \times d_2$
15. Area of trapezium =  $\frac{1}{2} \times (\text{base } 1 + \text{base } 2) \times \text{height}$
16. Area of rectangle = l x b
17. Area of square = side x side
18. T.S.A of cuboid =  $2(lb + bh + hl)$
19. Volume of cuboid = l x b x h
20. Area of walls of cuboid = perimeter x height

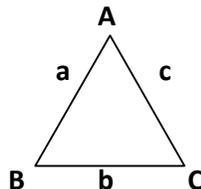
21. T.S.A of cube =  $6a^3$      $a$  = side
22. Volume of cube =  $a^3$      $a$  = side of cube
23. Area of four walls of cube =  $4a^2$
24. Side of square =  $\sqrt{\text{Area}}$
25. Area of circle =  $\pi r^2$      $\pi = \frac{22}{7}$
26. Circumference =  $2\pi r$      $r$  = radius
27. Radius =  $d/2$      $d$  = diameter

### SURFACE AREA & VOLUME

1. T.S.A of cone =  $\pi r(r + l)$
2. C.S.A of cone =  $\pi r l$
3. Slant height of cone  $l = \sqrt{r^2 + h^2}$
4. C.S.A of cylinder =  $2\pi r h$
5. T.S.A of cylinder =  $2\pi r(r + h)$
6. Volume of cylinder =  $\pi r^2 h$
7. C.S.A of sphere =  $4\pi r^2$
8. T.S.A of sphere =  $4\pi r^2$
9. Volume of sphere =  $\frac{4}{3}\pi r^3$
10. Volume of Hemisphere =  $\frac{2}{3}\pi r^3$
11. T.S.A of hemisphere =  $3\pi r^2$
12. C.S.A of hemisphere =  $2\pi r^2$

### HERON'S FORMULA

Area of  $\Delta = \frac{1}{2} \times b \times h$  [ OR ]



$$\text{Semi perimeter } S = \frac{a+b+c}{2} = \sqrt{s(s-a)(s-b)(s-c)}$$

### PHYSICS

- 1) What is velocity?
- 2) Define average speed?
- 3) Which device is used to measure the distance travelled by an automobile?
- 4) Name the device which is used to measure the instantaneous speed of an automobile
- 5) Define acceleration?
- 6) What information is not conveyed by speed of an object?
- 7) What is SI unit of retardation?
- 8) What will be final velocity of an object if it comes to rest?
- 9) What does the odometer Of an automobile measure?
- 10) Under what conditions is distance and displacement are equal?
- 11) What do you mean by positive and negative acceleration?
- 12) A car is moving along a straight road at steady speed. It travels 100 m in 4 sec
  - (a) What is average speed?
  - (b) How far does it travel in 1 sec?
  - (c) How far does it travel in 5 Sec? (d) How long does it take to travels 240 m?
- 13) Difference between speed and velocity?
- 14) A boy travels on a straight road, He goes from position A to position B .The distance between A and B is 6 km .Now from position B he returns back and travels a distance of 3 km to reach the position C
  - (i) The total distance travelled by him
  - (ii) Magnitude of his displacement
- 15) An athlete complete a round on a circular track of diameter 200 m in 20 sec .Calculate the following (i) The distance travelled by the athlete (ii) The magnitude of displacement of the athlete at the end of 70 sec.