



**SUMMER HOLIDAY HOMEWORK 2023-24**

**CLASS - IX**

**Summer Breaks Are On!**

Hot sizzling summer reminds us of the time, To break free and bask in the warm sunshine. There are burst of activities without minding the scorching heat, when friends are making merry and relishing the ice cream treat. So blend enjoyment with learning and introspection, to fetch glory and attain perfection.

Knowledge is power and to impart it righteously to our children, we have carefully and meticulously designed the Summer Break Assignment. Summer vacation is the best and fruitful time for learning and nurturing creativity. A variety of fun-filled activities and worksheets are given to be attempted during summer break. The major emphasis is laid on " Learning by Doing."

Attempt the assignments neatly and beautify them by providing required illustrations. Summer vacation is the time to learn and enjoy. So spend these holidays creating a nurturing and stimulating environment filled with fun, frolic and learning.

**ENGLISH**

-Prepare a scrapbook sticking atleast 20 newspaper articles/news from any English newspaper.

-Word Tree

In the same scrapbook prepare a 'Word Tree' using any 10 five letter words. Draw parts of a tree and write the words there.

- In a thin register define in detail with 2 examples each the following literary devices:

Simile

Metaphor



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Personification

Hyperbole

Irony

Synecdoche

Paradox

Onomatopoeia

Oxymoron

- In the same register answer the following question:

Imagine the famous singer Kishori Amonkar is going to visit your school. You have been asked to introduce her to the audience before her performance. How would you introduce her. Include the following points:

- Her parentage
- The school of music she belongs to
- Her achievements
- Her inspiration
- Awards

- Model Reading

Read at least 4 pages daily of your text books. This will help you in improving your spoken as well as written English. You can even read any one of the following novels:

Gulliver's Travel

Three Men in a Boat

Animal Farm

Lord of the Flies

You can also read film review of the following movies:

School of Rock



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Saving Private Ryan

The Man Who Knew Infinity

Karate kid

### HINDI

परियोजना कार्य

1-. महादेवी वर्मा का जीवन परिचय देते हुए उनकी मुख्य रचनाओं का सचित्रवर्णन कीजिए।

2-. दिए गए विषयों पर नारों का सचित्र वर्णन कीजिए।

1- योग का महत्व।

2 -रक्तदान हेतु नारा।

3 -हिंदी दिवस हेतु नारा।

4 -पृथ्वी के संरक्षण हेतु नारा।

3- अलंकार क्या है ?अलंकारों के प्रकार उदाहरण सहित वर्णन कीजिए।

प्रश्न 2- अनुच्छेद

1- परिश्रम का महत्व।

2- भाग्य और पुरुषार्थ।

नोट -1- परियोजना कार्य में किसी एक विषय पर कार्य करना है।

2-अनुच्छेद) दोनों( सभी को करना है।

### MATHS

POLYNOMIALS: (chapter-2)

Q.1 if find (i) (ii) (iii)



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Q.2 If find the values of each of the following (i) (ii)

Q.3 If  $2x+3y=8$  and  $xy=2$  find the value of 42

Q.4 If  $a^2+b^2+c^2-ab-bc-ca=0$  prove that  $a=b=c$

Q.5 Prove that :  $2a^2+2b^2+2c^2-2ab-2bc-2ca=[(a-b)^2+(b-c)^2+(c-a)^2]$

Q.6 If  $a^2+b^2+c^2=20$  and  $a+b+c=0$  find  $ab+bc+ca$

Q.7 Simplify :

(i)  $(2x+P-C)^2-(2x-P+C)^2$  (ii)  $(a+b+c)^2-(a-b+c)^2$

Q.8 Factorize each of the following by splitting the Middle Term:

(I)  $x^2+3$  (II)  $x^2+3$

(III) (IV)

(V)  $2x^2-$  (VI)  $x^2+$

Q.9 If  $P=2-a$  , Prove that  $a^3+6ap+p^3-8=0$

Q.10 If the polynomials  $2x^3+ax^2+3x-5$  and  $x^3+x^2-4x+a$  leave the same remainder when divided by

$(x-2)$  find the value of a.

Q.11 find the value of K, if  $x+3$  is a factor of  $3x^2+kx+6$

Q.12 in each of the following polynomials, find the value of a if  $(x+a)$  is a factor of

(i)  $x^3+ax^2-2x+a+4$  (ii)  $x^4-a^2x^2+3x-a$

Q.13 Find the values of a and b so that the polynomial  $x^3-ax^2-13x+b$  as  $(x-1)$  and  $(x+3)$  as factors

Q.14 Check whether the polynomial  $f(x)=4x^3+4x^2-x-1$  is a multiple of  $(2x+1)$

Q.15 Using factor theorem, factorize each of the following polynomials :

(i)  $x^3+6x^2+11x+6$  (ii)  $x^3+2x^2-x-2$  (iii)  $x^3-6x^2+3x+10$

(iv)  $x^3+23x^2+142x-120$  (v)  $y^3-2y^2-29y-42$

### ACTIVITY WORK

ACTIVITY-1 To verify the Algebraic identity:

$$(a+b)^2=a^2+2ab+b^2$$



ACTIVITY-2 To verify the Algebraic identity

$$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$$

## SCIENCE

### PHYSICS

1. A physical quantity which has both magnitude and direction is called  
(a) scalar quantity (b) vector quantity (c) neither (a) nor (b) (d) either (a) or (b)
2. The rate of change the velocity per second is known as.  
(a) acceleration (b) speed (c) distance (d) time
3. SI unit of velocity and speed both is  
(a) meter (b) meter/second (c) second (d) All of these
4. Which of the following is a scalar quantity.  
(a) Velocity (b) acceleration (c) displacement (d) distance
5. Which of the following is not a vector quantity  
(a) speed (b) acceleration (c) velocity (d) displacement
6. Distance and displacement are two quantities that seem to mean the same but are different with different meanings and definitions. Distance is the measure of “how much distance an object has covered during its motion” while displacement refers to the measure of “how far the object actually from initial place.” using this data answer following questions.
  - (i) Which of the following relation is always true when object moves in straight line.  
(a) Distance is always equal to displacement.  
(b) Distance is always greater than or equal to displacement.  
(c) Distance is always lesser than or equal to displacement  
(d) None of the above.





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(ii) Kapil travels 20 km to North but then come back to South for 40 km to pick up a friend. What is Kapil's total distance?

- (a) 60km (b) 80km (c) 20km (d) none of the above

7. Study the speed time graph of a body given here and answer the following questions

(i) What type of motion is represented by OA.

(ii) What type of motion represented by AB.

(iii) What type of motion represented by BC.

8. Define the following term with block diagram.

(i) Distance (ii) Displacement (iii) Uniform motion (iv) Non uniform motion

9. Draw distance time graph for an insect moving steadily on ground.

10. How velocity is different from speed?

11. Draw the following (i) Distance-time graphs for uniform and non uniform motion. (ii) Velocity -time graph for uniform velocity.

12. Draw distance time graph on the basis of given table.

13. Describe the following graph with example.

### **CHEMISTRY**

1. NCERT Exercise ( Matter in Our Surroundings)

2. Working Model/ Project

### **BIOLOGY**



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Q. 1 In unicellular organisms, a single cell performs all basic functions. For example, in Amoeba, a single cell carries out movement, intake of food and respiratory gases, respiration and excretion. But in multi-cellular organisms there are millions of cells. Most of these cells are specialised to carry out a few functions. Each specialised function is taken up by a different group of cells. Since these cells carry out only a particular function, they do it very efficiently. In human beings, muscle cells contract and relax to cause movement, nerve cells carry messages, blood flows to transport oxygen, food, hormones and waste material and so on. In plants, vascular tissues conduct food and water from one part of the plant to other parts. So, multi-cellular organisms show division of labour. Cells specialising in one function are often grouped together in the body. This means that a particular function is carried out by a cluster of cells at a definite place in the body. This cluster of cells, called a tissue, is arranged and designed so as to give the highest possible efficiency of function. Blood, phloem and muscle are all examples of tissues.

Read the above paragraph and give the answers of following questions

- i. Write down the differences between Eukaryotic and Prokaryotic cell.
- ii. How does an Amoeba obtain its food?

Q. 2 Draw the figure of animal and plant cell and write down the differences between them.

Q. 3 Assertion – Multi-cellular organisms show division of labour

Reason – All tissue are made up of specialized cells

- i. Assertion and reason both are true
- ii. Assertion is true but reason is false
- iii. Assertion is not true but reason is true
- iv. Assertion and reason both are false

Q. 3 Look at the following fig and differentiate the processes

Q. 3 (a) Label the following diagram

(b) Describe the permanent tissue



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Q. 4 Look at the following fig and write the two functions of each cell

Q. 5 Choose the correct answer

i). In all the three states of water, (i.e. ice, liquid and vapour) chemical composition of water

- (a) is very different
- (b) remains same
- (c) sometimes same and sometimes different
- (d) none of the above

ii). Which of the following statements is incorrect about the state of matter?

- (a) The force of attraction between the gas particles is very less.
- (b) Plasma consists of super energetic and super excited particles.
- (c) The plasma glows with a special colour depending on the nature of the gas.
- (d) Bose-Einstein condensate is formed by heating gas of extremely low density.

iii). Which of the following is not a property of gas?

- (a) Gases have a definite shape
- (b) Gases have no definite volume
- (c) The rate of diffusion of a gas is higher
- (d) Gaseous particles are in a state of random motion

iv). A form of matter that has no fixed shape but has a fixed volume. An example of this form of matter is \_\_\_\_\_

- (a) carbon dioxide (b) ice (c) water vapor (d) kerosene

v). When heat is constantly supplied by a burner to boiling water, then the temperature of the water during vaporisation:





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- (a) Rises very slowly  
(b) Rises rapidly until steam is produced  
(c) First rises and then becomes constant  
(d) Does not rise at all
- vi). The boiling point of water at sea level is \_\_\_\_\_  
(a)  $0^{\circ}\text{C}$  (b) 273 K (c) 373 K (d)  $273^{\circ}\text{C}$
- vii). The process in which solid is directly converted to vapor state is called \_\_\_\_\_  
(a) vapourisation (b) solidification  
(c) condensation (d) sublimation
- viii). The solid which undergoes sublimation is \_\_\_\_\_  
(a) ice cube (b) naphthalene  
(c) sodium chloride (d) potassium chloride
- ix). Which of the following phenomena would increase on rising temperature?  
(a) Diffusion, evaporation, compression of gases  
(b) Evaporation, compression of gases, solubility  
(c) Evaporation, diffusion, expansion of gases  
(d) Evaporation, solubility, diffusion, compression of gases
- x). Which of the following conditions is most favourable for converting gas into liquid?  
(a) High pressure, low temperature  
(b) Low pressure, low temperature  
(c) Low pressure, high temperature  
(d) High pressure, high temperature

### **SOCIAL SCIENCE**

HISTORY - Worksheet

CIVICS - WORKSHEET



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GEOGRAPHY - world physical & political map

India physical & political map

## **ECONOMICS**

### **WORKSHEET**

NOTE:-you have to solve the worksheet in your notebooks

## **COMPUTER**

a. Complete your work of chapter-1 (Question Answers) in computer notebook

b. Write notes on following topic:- (ASSIGNMENT FILE )

1. Emerging Technology

2. Importance of Computer in Education.

3. Computer Programming

c. Discuss the role of computer in our life. (ASSIGNMENT FILE )

All students are required to do holiday homework.

- Homework scores will be added in PT-1(SEA)

SEA- Subject Enrichment Activity

सभी विद्यार्थियों को गृह कार्य करना आवश्यक है।

- गृह कार्य के अंक PT -1(SEA) में जोड़े जायेंगे।