

HOLIDAY HOMEWORK

2017 – 2018

CLASS: IX

SUBJECT: ENGLISH

Design your own newspaper under the heading 'EXPRESSION' including the following topics:

a) Article:

Write an article on the topic 'Cruelty Toward Animals' in about 150 words.

d) Story:

Write a story in about 150-200 words using the lines given below:

Two boys found an old coin while digging a hole. They discussed what they should do with it

d) An Interview:

Take an interview of your neighbor / friend regarding how he / she will plan to spend summer vacation and how he / she will make it cheerful.

b) Vocabulary:

Paste any article and underline 20 verbs mentioning their meaning and antonyms with the help of dictionary and learn them.

ग्रीष्मावकाश गृह कार्य
विषय – हिन्दी
कक्षा – नौवीं

- 1) पठित पाठों को पढ़कर उनके प्रश्नोंत्तर याद करें।
 - 2) अनुस्वार, अनुनासिक, नुक्ता, वर्ण विच्छेद का अभ्यास करें।
 - 3) स्वर संधि का अभ्यास करें।
 - 4) संवाद लेखन, विज्ञापन निर्माण एवं अनौपचारिक पत्र लेखन का अभ्यास करें।
 - 5) गतिविधि – निबंध लेखन (फूल स्केप शीट)
- 'सोशल मीडिया' वरदान या अभिशाप (शब्द सीमा 750–1000)

CLASS IX

MATHEMATICS

ASSIGNMENT OF CHAPTER – 2 (POLYNOMIALS)

Q.1 Evaluate using identity : $0.54 \times 0.54 - 0.46 \times 0.46$

Q.2 Find the products:

a) $(x - \frac{1}{X})(x + \frac{1}{X})(x^2 + \frac{1}{X^2})(x^4 + \frac{1}{X^4})$

b) $(x - \frac{y}{5} - 1)(x + \frac{y}{5} + 1)$

Q.3 If $x + \frac{1}{X} = \sqrt{5}$, Find:

a) $x^2 + \frac{1}{X^2}$

b) $x^4 + \frac{1}{X^4}$

Q.4 If $x^2 + \frac{1}{X^2} = 27$, find values of the following:

a) $x + \frac{1}{X}$

b) $x - \frac{1}{X}$

Q.5 If $4x^2 + y^2 = 40$ and $xy = 6$, find the value of $2x + y$.

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

Q7: Simplify

1. $([a + b + c])^2 - ([a - b - c])^2$

2. $\frac{1.2 * 1.2 * 1.2 - 0.2 * 0.2 * 0.2}{1.2 * 1.2 * 1.2 + 0.2 * 0.2 * 0.2}$

Q8: If $2x+3y=13$ and $xy = 6$. Find the value of $8x^3 + 27y^3$?

Q9: If $x - \frac{1}{x} = 3$, Find the value of $x^3 - \frac{1}{x^3}$.

Q10: If $x^2 + \frac{1}{x^2} = 83$. Find the value of $x^3 - \frac{1}{x^3}$.

Q11: If $x - \frac{1}{x} = 3 + 2\sqrt{2}$, Find the value of $x^3 - \frac{1}{x^3}$.

Q12: Evaluate

1. $(1.5)^3 - (0.9)^3 - (0.6)^3$

Q13: Simplify $\frac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a - b)^3 + (b - c)^3 + (c - a)^3}$.

14) If $a + b + c = 15$ and $a^2 + b^2 + c^2 = 83$, find $a^3 + b^3 + c^3 - 3abc$.

15) Factorize the algebraic expressions:

- $a^{12}x^4 - a^4x^{12}$
- $3 - 12(a - b)^2$
- $8(a + 1)^2 + 2(a + 1)(b + 2) - 15(b + 2)^2$

16) The polynomial $ax^3 + 3x^2 - 13$ and $2x^3 - 5x + a$ are divided by $x + 2$. If remainder in each case is the same, find the value of "a".

17) Find the value of "a" for which $2x^4 - ax^3 + 4x^2 + 2x + 1$ is divided by $1 - 2x$.

18) Factorize $x^3 + 13x^2 + 32x + 20$, if it is given that $(x + 2)$ is its factor.

Class –IX

Assignment – 3

Chapter 3 – “Coordinate Geometry”

1. Name the quadrant in which the following point lie:
(-3,2), (4,-3), (-5,-4) and (3,2)
2. A point P is on the x-axis and 2 units on the right from the origin. State its abscissa and ordinate.
3. Which of these two points (0,-5) and (-5,0) lies on x-axis?
4. Plot the following points on the graph paper.
 - a. (-2, 0)
 - b. (3, -2)
 - c. (-5,-1)
 - d. (0,5)
5. Plot the points S(0,4), T(-3,0), A(0,-4) and R(3,0) to draw a rhombus STAR. Also find its area.
6. Draw a quadrilateral whose vertices are (3,-2), (2,-3), (-4, 5) and (5,-3).
7. What is the perpendicular distance of the points (5,-2) from the y-axis and from x-axis?
8. (i) Plot the points A(1,-1) and B(4,5). Draw a line segment joining these points. Write the co-ordinate of any one point lie on this line segment between the points A and B.
(ii) Extend this line segment and write the coordinate of any one point on this line which lie outside the line segment \overline{AB} .
9. (i) Plot the points M (5,-3) and N (-3,-3).
(ii) What is the length of MN?
(iii) Find the coordinates of the points A, B and C lying on MN such that
 $MA=AB=BC=CN$
10. Plot the points whose vertices are the points (-1, 1), (-3, 2) and (-1, 2) in a Cartesian plane. Name the figure so formed.

HOLIDAY HOMEWORK

SCIENCE PROJECT

CLASS IX

Prepare a questionnaire and conduct a survey of ten families in your surrounding for the diseases occurring in their families.

Make a record of the diseases, its history in the family (if any), causes, duration and the treatment taken for the disease. Record your observations and summarize it in the project.

ASSIGNMENT 1

CLASS IX

SCIENCE (BIO-CHEM)

1. Which property of gases makes them used as a convenient domestic fuel?
2. Convert the following temperature to Kelvin
(i) 57°C (ii) 13°C (iii) 100°C
3. Convert the following temperature to degree Celsius
(i) 773K (ii) 333K
4. State the differences between solid, liquid and gas.
5. Explain giving examples the various factors on which rate evaporation depends.
6. Distinguish between evaporation and boiling.
7. Give the temperature at which water exists at two different states.
8. Give reasons for the following observations:
 - a. Liquids and gases can be compressed but it is difficult to compress solids.
 - b. A balloon when kept in sun, bursts after some time.
 - c. The temperature remains constant during the change of state.
 - d. Steam produces more severe burns than boiling water.
 - e. Water vapourizes at 100°C but how is it possible for water to evaporate at room temperature.
9. What is dry ice? How is it obtained?
10. Define sublimation. Name any three sublime substances.
11. Adil parked his bicycle on a sunny day in the parking stand of his school. When the school got over, Adil saw his burst cycle tyre. Thereafter he kept less air in his cycle tyres and did not inflate them fully.
 - a. Why did the tyre burst?
 - b. Why is air compressible?
 - c. What value of Adil is reflected in the above act?

ASSIGNMENT 2

CLASS IX

SCIENCE (BIO-CHEM)

1. What are plastids? Name the three different kinds of plastids found in plant cell along with their functions.
2. What is the full form of ATP and DNA?
3. State two conditions required for osmosis.
4. What is the difference between chromatin, chromosomes and genes?
5. Where in the mitochondria does the ATP generating chemical reaction take place?
6. Name the cell organelle for the following:
 - a. Present only in plant cell, provides strength and rigidity to the cell.
 - b. It is the site for lipids synthesis and helps in detoxification of drugs.
 - c. It helps in the formation of lysosomes.
 - d. Its inner membrane is folded and has its own DNA and protein.
 - e. It imparts colour to the fruits and flowers.
7. Vasu was helping his mother in laying the table when they had some guest for dinner. Vasu was about to sprinkle salt on salad for dressing. His mother stopped him from doing so and told him that it is too early to sprinkle salt on the salad, he should do so only when they are seated for having the dinner.
 - a. What would happen if salt is sprinkled on the salad?
 - b. Which property of cells is seen in adding salt to it?
 - c. What value of Vasu is seen?
8. Draw a labelled diagram of a plant cell and an animal cell.
9. Differentiate between the following:
 - a. RER and SER
 - b. Plant cell and animal cell
 - c. Nucleoid and nucleus
 - d. Prokaryotic and eukaryotic cell.
10. Define the following: Endocytosis, Plasmolysis.
11. Explain the structure and function of golgi bodies.
12. How do substances like carbon dioxide and water move in and out of the cell?
13. Explain the role of ER in membrane biogenesis?
14. What happens to a cell when placed in the following solutions:
 - a. Hypotonic solution
 - b. Hypertonic solution
 - c. Isotonic solution.

SUMMER VACATION HOMEWORK

2017 – 2018

Class – IX

PHYSICS

Q1 – Draw the following graph:-

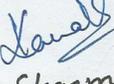
- a) Distance time for stationary object.
- b) Distance time graph for uniform motion.
- c) Velocity time graph for non-uniform motion.
- d) Velocity time graph for constant speed or velocity.

Q2 – Answer the following question:

- I. The slope of distance time graph gives _____
- II. Area under velocity time graph gives _____
- III. The slope of velocity time graph gives _____

Q3 – Draw a poster on [A3 size] related to the chapter motion.

Q4 – Revise chapter – 8 [motion] for Pre – Mid Term Exam.

1. Ms. Poojanka A. Tandon 
2. Ms. Sanju Sharma 
3. Ms. Susmita B. Singh 
4. Ms. Kanak 
5. Mr. Sushil Sharma 

HOLIDAY HOMEWORK

SOCIAL SCIENCE

CLASS-IX

1. Collect the pictures of historical events taken place in France during French Revolution.
2. Make the albums on GOLDEN MOMENTS (France)

How to prepare:

Cover page

Introduction

Acknowledgement

Index

Information (INCLUDE)

Name & Date of the event

Reason

Main leaders (if any)

Effects

Place

A lot of pictures should be pasted.

HOLIDAY HOMEWORK (2017-18)

S.U.P.W. (Computer)

Class – IX

1. Video conferencing (Roll no 1-6)
2. E-learning (Roll no 7 -12)
3. E- Commerce. (Roll no 13-18)
4. Role of ICT in Education (Roll no 19-24)
5. Security and privacy in computers.(Roll no 25-30)
6. Computer hackers and crackers (Roll no 31-36)
7. Green computing. (Roll no 37-42)
8. Internet Securities (Roll no 43-48)
9. Different Operating systems (Roll no 49 onwards)

Note:-

- **Make a poster on the above said topic on A3 sized sheet.**
- **Take help from internet and other resources.**
- **Insert pictures related to your poster to make it attractive.**
- **Text must be readable.**