



# D.A.V. NANDRAJ PUBLIC SCHOOL

Affiliated to CBSE, New Delhi (10+2)  
Marwari Arogya Bhawan No-3, Bariatu, Ranchi



## HOLIDAY ASSIGNMENT SESSION 2024-25 CLASS - IX

### ENGLISH

Make a project in about 1000-1500 words with cover page, acknowledgement, certificate, contents, pictures and bibliography on any one of the given topics:

Give a detailed biography of Robert Frost, his contribution in the field of English literature with special mention to his poems *The Road Not Taken* and *Stopping by the Wood on a Snowy Evening*.

OR

Some differently-abled people are far more famous and successful than physically fit people. Evelyn Glennie is one of such people. Prepare a project on at least five such differently-abled people who have achieved immense success and carved a niche in particular fields. Write about their struggle, sacrifice, dedication, determination and achievements in detail. Use pictures wherever needed.

### HINDI

क्षितिज भाग – 1:

पाठ – 1 और 2 के प्रश्नों के उत्तर याद करें।

परियोजना कार्य:-

किसी कहानी को पढ़कर उसका नाट्यरूपान्तरण करें।

परियोजना बनाते समय प्रमाण पत्र, आभार प्रदर्शन, विषय सूची, उद्देश्य, उपसंहार भी लिखें।

### SANSKRIT

1. पाठ : 1,2 एवं संधि (व्यंजन संधि) संख्या ( 1-40) अभ्यास करें।
2. शब्द रूप लिखकर याद करें।
3. अस्मद्, युष्मद्, तत्, इदम्, किम् (त्रिलिङ्गेषु), राजन्,
4. परियोजना कार्य :- स्वरुचि अनुसार संस्कृत में एक कहानी (चित्रानुसार) लिखें। (चार्ट पेपर पर)

## MATHEMATICS

Solve all the questions

Q1) Express each of the following decimals in the form  $p/q$

- i) 0.31 (bar over 31)      ii) 0.304 (bar over 4)

Q2) Represent  $\sqrt{2}$ ,  $\sqrt{3}$  and  $\sqrt{7.2}$  on the number line.

Q3) Add i)  $(\sqrt{3} + 7\sqrt{5})$  and  $(4\sqrt{3} + 6\sqrt{5})$  ii)  $(4\sqrt{2} + 6\sqrt{3})$  and  $(3\sqrt{2} - 2\sqrt{3})$

Q4) Subtract i)  $(6\sqrt{2} + 3\sqrt{5})$  from  $(3\sqrt{2} - 5\sqrt{5})$  ii)  $(3\sqrt{3} + 2\sqrt{6})$  from  $(\sqrt{3} + 5\sqrt{6})$

Q5) Multiply i)  $(\sqrt{3} + \sqrt{2})$  and  $(\sqrt{3} - \sqrt{2})$  ii)  $(2 - \sqrt{2})$  and  $(3\sqrt{3} + 6\sqrt{2})$

Q6) Rationalise the denominator of the following:

i)  $\frac{2+\sqrt{3}}{2-\sqrt{3}}$       ii)  $\frac{4\sqrt{3}+5\sqrt{2}}{\sqrt{48}+\sqrt{18}}$

Q7) Find the value of 'a' and 'b' of the following:  $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = a + b\sqrt{15}$

Q8) Find  $P(0)$ ,  $P(3)$  and  $P(-2)$  for the polynomial  $P(x) = 5 - 4x + 2x^2$ .

Q9) By Remainder Theorem find the remainder, when  $p(x)$  is divided by  $g(x)$ , where

- (i)  $P(x) = x^3 - 2x^2 - 4x - 1$ ,  $g(x) = x + 1$   
(ii)  $P(x) = x^3 - 3x^2 + 4x + 5$ ,  $g(x) = x - 3$

Q10) Use the factor theorem, determine whether  $g(x)$  is a factor of  $p(x)$  in each of the following cases

- (i)  $P(x) = 2x^3 + 3x^2 - 3x - 1$ ,  $g(x) = x + 1$   
(ii)  $P(x) = x^3 - 4x^2 + x + 6$ ,  $g(x) = x - 3$

Q11) Find the value of  $K$ , if  $x - 1$  is a factor of  $p(x)$  in each of the following cases

- (i)  $P(x) = 2x^2 + Kx + \sqrt{2}$       (ii)  $p(x) = Kx^2 - 3x + K$

Q12) If  $5^{x-2} \times 3^{2x-3} = 135$ , find the value of  $x$ .

Q13) If  $5^{x-3} \times 3^{2x-8} = 225$ , find the value of  $x$ .

Q14) simplify:  $\left[ \left( \frac{25}{9} \right)^{\frac{-3}{2}} \div \left( \frac{5}{2} \right)^{-3} \right]^{-1}$

Q15) Factorise:-  $x^6 - 7x^3 - 8$ .

Q16) Find four rational between  $1/5$  and  $1/6$ .

Q17) find three rational numbers between 3 and 4.

NCERT TEXT BOOK

EXERCISE 2.5 ALL QUESTIONS

PROJECT TOPIC - NUMBER SYSTEM

Project must include definition of all type of numbers with examples

Prime and Composite numbers.

Presentation of Rational and Irrational Numbers on the number line

Properties of Irrational Numbers.

## SCIENCE

### PHYSICS

#### CHAPTER 7: - MOTION

1. What is uniform circular motion? What is the expression for calculating speed of a body moving in circular path of radius 'r'? Draw a diagram for uniform circular motion and show the direction of motion and direction of centripetal force.
2. Derive the following three equations of motion mathematically: -
  - I)  $v = u + at$
  - II)  $s = ut + \frac{1}{2}at^2$
  - III)  $v^2 - u^2 = 2as$
3. An ant travels a distance of 8cm from P to Q and then moves a distance of 6cm at right angle to PQ. Find its resultant displacement
4. Learn the notes of chapter 7: Motion.

#### PROJECT WORK:-

Make a working model for uniform circular motion.

### CHEMISTRY

1. Which phenomenon occurs during the following changes
  - a) drying of wet clothes.
  - b) formation of cloud.
  - c) wax melt after burning of candle.
2. Ice water and steam are three states of substance and not different substances. Justify.
3. Do the following activities at home and write your observations accordingly.

**Activity 1:** Take 250 ml of water. Put 10 ml of dettol in it.

**Activity 2:** Take 50 ml of water in a plate. Keep it undisturbed for three or four hours.

### BIOLOGY

1. Write the contribution of following scientist s in the study of the cell.
  - a) Robert Hooke
  - b) Purkinje
  - c) Robert brown
  - d) Schleiden & Schwann.
2. State the main functions of each of the following components of the cell.
  - a) plasma membrane.
  - b) mitochondria.
  - c) nucleus
  - d) ribosome.
3. Draw the diagrams of plant cell and animal cell. Label the cell organelles present in them .
4. Write down the following experiments in prescribed lab manual practical notebook.

**Experiment 1:** Preparation of stained temporary Mount of onion peel. Record the observations and draw the labelled diagram.

**Experiment 2:** Preparation of stain temporary Mount of human cheek cell. Record the observations and draw the labelled diagram.

*Note: Holiday assignment has to be done in A4 size sheets and then to be submitted in stick file subject wise.*

## SOCIAL SCIENCE

### History

Q1. Project work:

**"Forest society and Colonialism".**

Subject topics: a. Why deforestation?

- b. Rise of commercial forestry.
- c. Rebellion in the forest.
- d. Forest transformation in Java.

Q2. Assignment:

**Draw a concept map on the topics given below:**

- a. The French revolution – Social setup.
- b. The abolition of slavery.
- c. Why Democracy?

Q3. Map work:

**Outline political map of France. Locate/ label/identify:**

- a. Bordeaux.
- b. Nantes.
- c. Paris.
- d. Marseille

### GEOGRAPHY

1. Prepare a project on "Natural Vegetation and Wildlife" of India in stick file with appropriate data and suggest some ideas to conserve them by the help of newspaper, magazine, text book, internet and other sources of information.

2. An outline political map of the India in your note book, locate and label the following Geographical features, with appropriate symbols:-

- (a) Himalayan Mountain
- (b) Black soil
- (c) Aravali Range
- (d) Chhota Nagpur Plateau
- (e) Indian Desert

## INFORMATION TECHNOLOGY

### 1. Make Portfolio

*Note: (Hard Copy in Stick file & Soft Copy will be sent an email ([itdeptdavnmps@gmail.com](mailto:itdeptdavnmps@gmail.com)))*

### 2. Complete Exercise of Communication Skills, Self-Management Skills & Information & Communication Skills (Chapter -3).