

**MT. COLUMBUS SCHOOL**  
**Dakshinpuri, New Delhi – 62**  
**HOLIDAY HOMEWORK (SUMMER VACATION)**

SESSION: 2019-20

**CLASS- X**

**ENGLISH**

**PROJECT**

**Assessment of Speaking skills:** Prepare a recording of your speech (bring it in a CD with your name, class and section mentioned properly) on any of the following topics:

- Importance of Girls Education
- Protection of Endangered Species
- Hobbies and interests

Your speech should contain the following things in the beginning-

Your name, class and section.

Speaking skills will be assessed on the following parameters -

Fluency, accuracy, content, originality and presentation.

**ASSIGNMENT (On A4 Size Sheet)**

Q.1. 'All parental acts are for the betterment of the children.' It is true. However, one has to make efforts through trials and errors shedding off one's early hesitations and fears to succeed in any enterprise. Justify this statement by taking points from the lesson 'His First Flight'.

Q.2. Sometimes, appearances can be very deceptive. How does this statement prove with the story 'The Midnight Visitor'?

**HINDI**

**ASSIGNMENT (On A4 Size Sheet)**

1- मीडिया के आम जीवन पर सकारात्मक और नकारात्मक प्रभाव पर टिप्पणी लिखिए।

2- पठित पाठ 'हरिहर काका' तथा 'बड़े भाई साहब' का सार अपने शब्दों में लिखें।

3- मीराबाई का कोई एक पद कण्ठस्थ करें।

**MATHS**

**PROJECT**

**Lab Activity ( Do in your lab activity file)**

- To obtain the conditions for consistency or inconsistency of given pair of linear equations in two variables by graphical method.(Pg no. 6).
- To obtain the solution of a quadratic equation by completing the square geometrically.(Pg no. 10).
- To verify that the sum of first n-natural number is  $\frac{n(n+1)}{2}$ , i.e.  $\sum_{n=1}^n n = \frac{n(n+1)}{2}$ , by graphical method.(Pg. no.14).

### **ASSIGNMENT (Do in your Math Notebook)**

1. A number when divided by 73 gives 34 as quotient and 23 as remainder. Find the number.
2. Using Euclid's division lemma, show that the square of any positive integer is either of the form  $3m$  or  $(3m+1)$  for some integer.
3. If  $n$  is an odd integer then show that  $n^2 - 1$  is divisible by 8.
4. Find the HCF and LCM of 108, 120 and 252 using prime factorization method.
5. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10, 12 minutes respectively. In 30 hours, how many times do they toll together?
6. Show that  $\frac{1}{\sqrt{3}}$  is irrational.
7. Find the zeros of  $x^2 - 2$  and verify the relationship between the zeros and coefficients.
8. If  $\alpha$  and  $\beta$  are the zeros of the polynomial  $2x^2 + 7x + 5$ , write the value of  $\alpha + \beta + \alpha\beta$ .
9. Solve each of the following system of equations graphically:  $2x - 3y + 13 = 0$  and  $3x + 2y - 2 = 0$ .
10. Solve for  $x$  and  $y$ :  $\frac{5}{x-1} + \frac{1}{y-1} = 2$ ,  $\frac{6}{x-1} - \frac{3}{y-2} = 1$ .
11. Find the value of  $k$  for which the given system of equation has infinitely many Solutions:  $kx + 3y = k - 3$ ,  $12x + ky = k$ .
12. Five years ago, A was thrice as old as B and ten years later A shall be twice as old as B what are the present ages of A and B?
13. A boat goes 16 km upstream and 24 km downstream in 6 hours also, it covers 12 km upstream and 36 km downstream in the same time. Find the speed of the boat in still water and that of the stream.
14. The difference of two number is 4 and the difference of their reciprocal is  $\frac{4}{21}$ . Find the numbers.
15. Solve for  $x$  and  $y$ :  $\frac{1}{2x} - \frac{1}{y} = -1$ ,  $\frac{1}{x} + \frac{1}{2y} = 8$ .

### **SCIENCE**

#### **PROJECT**

Q1. Complete the following practicals in respective practical files:

#### **PHYSICS**

- Determination of the equivalent resistance of two resistors when connected in series and parallel.
- Determination of the focal length of : a. Concave mirror      b. Convex mirror

#### **CHEMISTRY**

- Finding the pH of the following samples by using pH paper :  
a. Dilute Hydrochloric acid      b. Dilute NaOH solution  
c. Dilute Ethanoic acid solution      d. Lemon juice      e. Water
- Studying the properties of acids and bases by their reaction with  
a. Litmus solution      b. Zinc metal      c. Solid Sodium carbonate

**ASSIGNMENT (Do all the questions in your respective notebooks)**

- a. Name two natural acid-base indicators.
- b. What is litmus? For what it is used?
- c. What is olfactory indicator? Name two olfactory indicators.
- d. What colour does the turmeric paper turn when put in an alkaline solution?
- e. Give the name and formulae of two strong acids and two weak acids.
- f. Name two synthetic acid-base indicators.
- g. An electric heater is rated at 2KW. Calculate the cost of using it for 2hours daily for the month of June, if each unit costs rupees 4.00.
- h. Should the resistance of ammeter be low or high? Give reason.
- i. Calculate the current flowing in 60W bulb rated for 220V.
- j. Two copper wires A and B length 30 m and 10 m have radii 2cm and 3cm respectively. Compare the resistance of two wires. Which will have less resistance?
- k. An ammeter has a range of 0-3 ampere and there are 30 divisions on the scale. Calculate the least count of the ammeter.
- l. What is reflex action? Explain the mechanism of reflex action with suitable example.
- m. State the sequence of events through a reflex arc which occur when a bright light is focused on your eyes.
- n. Mention the part of the brain involved in the following:
  - i. Walking in a straight line.
  - ii. Picking up a pencil.
  - iii. Blood pressure.
  - iv. A question is asked by the teacher in the class.
  - v. Changing pupil.

**SOCIAL SCIENCE**

**PROJECT**

Prepare a project on the following topics according to your roll number..

- a) Consumer Awareness (Roll No 1 to 14)
- b) Sustainable Development (Roll No 15 to 28)
- c) Social Issues (Roll No 29 and Above)

The project report will be presented in the following order:

1. Cover page showing project title, student information, school and session.
2. List of content with page numbers.
3. Acknowledgements
4. Project overview: Purpose, Aim & Methodology.
5. Conclusion
6. Bibliography.

Collect relevant information, facts, pictures and figures to prepare the project. All the photographs and sketches should be labeled.

The total length of the project report should be not more than 10-15 pages of A4 size sheet. It should be handwritten and credit will be awarded to use of maps, graphs, articles of newspapers and magazines, good layout, cost effective and creative use of materials.

**ASSIGNMENT**( Do in your social science workbook).

**Q1.Complete the following worksheets.**

- a) History – Chapter 1: The Rise of Nationalism in Europe (Worksheet 3 )
- b) Geography – Chapter 1: Resources & Development (Worksheet 3)  
Chapter 2: Water Resources (Worksheet 4)
- c) Political Science – Chapter 1 : Power sharing (Worksheet 2 and 3)

### IT

#### **PROJECT**

Collect the information of the following terms using internet and paste them on A4 Size Sheet.

- |                                   |                        |
|-----------------------------------|------------------------|
| 1. Web Browser                    | 2. Website             |
| 3. Blogs                          | 4. Newsgroup           |
| 5. URL (Uniform Resource Locator) | 6. Social Networking   |
| 7. Search Engines                 | 8. Chat                |
| 9. E-mail                         | 10. Video Conferencing |

### ART & CRAFT

Complete the Art Education File with the help of drawing and colouring.

The topics are as follows:

- 1.Elements of Art
- 2.Principles of Art
- 3.Other Visual Arts Terms
- 4.Still life
- 5.Logo Design
- 6.Portrait Study

#### **Guidelines for Holiday Homework**

- ❖ Holiday homework to be done as per instructions given in each subject.
- ❖ Work should be neat & presentable.
- ❖ Last date of submission is 6<sup>th</sup> July, 2019.
- ❖ Holiday Homework should be done under parental guidance & not by parents.
- ❖ A well presented 'Holiday Homework' fetches you marks & appreciation from your teachers & classmates.
- ❖ Marking will be done in each subject. The marks for the same will be added in U.T- II (Activity) / Subject Enrichment (VI - X).
- ❖ It is compulsory for all the students to complete their Holiday Homework.