

**RAHUL MODEL SENIOR SECONDARY PUBLIC SCHOOL**  
**Recognised & Affiliated to CBSE**  
**Railway Road, Sadh Nagar-II, Palam Colony, New Delhi**

**SUMMER HOLIDAY HOMEWORK**  
**CLASS – IX**

**ENGLISH**

1. Write 10 MCQs of each chapter and poem covered in the month of April and May. (Do this in your English Notebook) **(5 Marks)**

**2. Poster Making: Create a poster for an event. (5 Marks)**

<b>Roll No.</b>	<b>Topic</b>
A to H	Inter – House Dance or Music Festival
I to P	Charity Book Fair
Q to Z	Robotics Championship

3. Make a picture story, either chapter 1 or chapter 2. (Any one of the two) **(5 Marks)**  
(Do this in A-3 size sheet)

4. Project File:

(a) Letter to Editor **(10 Marks)**

(i) Letter highlighting the increasing number of road mishaps in your city.

(ii) Highlight the importance of proper garbage dispersal with an aim to create awareness among the city residents.

(b) Tenses and Determiners – Flow chart with exercise **(20 Marks)**

- Exercise types of question:  
Editing, Omission, Gap filling

(c) Mind Map in a creative way **(5 Marks)**

Your name first alphabet

Topic

A to H

Ch-1 How I taught my grandmother to read

I to P

Poem – I Bharat our Land

Q to Z

Ch-2 The Pot Maker

5. Pick one vocational skill (like Carpentry, farming or cooking). Draw and write a timeline that shows how this skill has changed from ancient times to the future. Treat the skill like a person and show its 'Career journey'. **(5 Marks)**

(Do this in A-3 size sheet)

**SCIENCE**

**1. Draw the following diagram on A-3 size sheet. It should be colourful, well labelled and neat presentation. (10)**

<b>Roll No.</b>	<b>Topic</b>
1-4	Simple permanent Tissue
5-8	Complex permanent Tissue
9-12	Types of Muscles Tissue
13-16	Types of Joints
17-20	Skeleton System
21-24	Longitudinal section of a flower

25-28	Male reproductive system
29-32	Female reproductive system
33-36	Germination of pollen on stigma
37-40	Fractional Distillation

**2. Prepare a poster on the following topic (any one) (10)**

- |   |                  |
|---|------------------|
| (i) Solar radiation and warming of earth.   | (Roll no.-1-8)   |
| (ii) Newton's laws of Motion                | (Roll no.-9-16)  |
| (iii) Simple Machines used in everyday life | (Roll no.-17-24) |
| (iv) Types of Energy                        | (Roll no.-25-32) |
| (v) Application of Ultrasonic waves         | (Roll no.-33-40) |
| (vi) Indian scientists with contribution    | (Roll no.-41-45) |

**3. Assignment**

**Note:** Assignment to be done on A 4 rules sheet.

**Case Based Questions (15 Marks)**

I. All living organisms are made up of cells and these cells perform all the functions essential for the survival of the organism, for example, respiration, digestion, excretion, etc. In unicellular organisms, a single cell carries out all these functions and in multicellular organisms, different group of cells carry out different functions. Cells were first discovered by Robert Hooke in 1665. He observed the cells in a cork slice with the help of a primitive microscope. Leeuwenhoek (1674), with the improved microscope, discovered free living cells in pond water for the first time. It was Robert Brown in 1831 who discovered the nucleus in the cell. Purkinje in 1839 coined the term 'Protoplasm' for the fluid substance of the cell.

(i) Who discovered the cell?

- |                 |                 |
|-----------------|-----------------|
| A. Robert Brown | B. Robert Hooke |
| C. T. Schwann   | D. Leeuwenhoek  |

(ii) Which of the following scientists identified the nucleus in the cell?

- |                 |                 |
|-----------------|-----------------|
| A. Robert Brown | B. Robert Hooke |
| C. T. Schwann   | D. Leeuwenhoek  |

(iii) (a) Who coined the term 'Protoplasm'? Why is it called so?

- |                 |                |
|-----------------|----------------|
| A. Robert Hooke | B. Leeuwenhoek |
| C. Robert Brown | D. Purkinje    |

**Or**

(iii) (b) What is protoplasm? Why is it called so?

- |                                |                   |
|--------------------------------|-------------------|
| A. Unit of life                | B. Cell organelle |
| C. Fluid substance of the cell | D. Cytoplasm      |

II. The cell theory, that all plants and animals are composed of cells and cell is the basic unit of life, was presented by two biologists, German botanist Schleiden (1838) and British zoologist Schwann (1839). Virchow (1855) further expanded the cell theory by suggesting that all cells arise from pre-existing cells. With the discovery of the electron microscope in 1940, it was possible to observe and understand the complex structure of the cell and its various organelles.

(i) Schwann was a

- |                      |                     |
|----------------------|---------------------|
| A. British zoologist | B. German zoologist |
| C. German botanist   | D. British botanist |

(ii) Schleiden was a

- |                     |                      |
|---------------------|----------------------|
| A. German zoologist | B. British zoologist |
| C. British botanist | D. German botanist   |

(iii) (a) Who is/are the founder/s of cell theory? What is meant by cell theory?

A. Robert Koch

B. Schleiden and Schwann

C. Antony Von Leeuwenhoek

D. Rudolf Virchow

**Or**

(iii) (b) Which scientist was the first to explain that new cells arise from pre-existing cells? Name the phrase used by the scientist.

A. Antony Von Leeuwenhoek

B. Rudolph Virchow

C. Matthias Schleiden

D. Theodore Schwann

III. The biology laboratory in Parth's school has lots of microscopes of different precisions. When he was passing through the laboratory, he found that many microscopes were already mounted with a slide. Just for fun, he went and looked at a slide through the microscope and found the image given alongside. He wasn't able to identify the organism or kind of organism, so he called his friend Manu to look at the slide. He immediately recognised the kind of organism that was.



(i) Can you identify what kind of cell is it?

(ii) How did Manu identify this kind of organism?

(iii) (a) Give two examples of such kind of organisms.

**Or**

(iii) (b) Which cell organelles is present in this type of cell?

IV. Ravi was travelling to his school to give his final examination of science. He was nervous. The teacher had told that there will be a surprise element in the exam that he didn't know of. When he reached the school, he found out that there will be a viva-voce exam for each of the student. When his turn came, he was given a very small task. He was shown the two images given alongside.



(i) Help Ravi to correlate between these two images.

(ii) What is the reason behind that correlation?

(iii) (a) Mark the solutions to the above two questions in the given image.

**Or**

(iii) (b) Name two other cell organelles in a plant cell.

V. Osmolality can be used to measure the amount of solute dissolved in a solution. If the level of solute of a solution is higher than the concentration solute inside the cell, water will flow out of the cell during osmosis. If the level of solute outside the cell is lower than the level of solute inside the cell, water will flow into the cell.

Analyse the Tables A and B and answer the following questions:

Table A: Persons and their serum osmolality levels

Person	Serum Osmolality (mmol/kg)
A	260
B	243
C	220
D	280
E	276
F	315
G	342

Table B: Range for normal and dangerous levels of serum's osmolality of a person's blood

Situation	Serum Osmolality (mmol/kg)
Should visit the doctor	< 275
Normal range	275-295
Should visit the doctor	>295

- (i) If we place a red blood cell (osmolality is 280mmol/kg) in the serum of person F, will the plasma flow into the cell or out of the cell?  
(ii) Which person (Refer Tables A and B) should visit the doctor?  
(iii) (a) Define osmosis. Write one of its application in daily life.

**Or**

- (iii) (b) What is the difference between diffusion and osmosis?

**Answer the following questions-**

**(15 Marks)**

- (i) A child walks from A to E along the sides of a regular pentagon of side 10 m. Find the distance travelled by him and the magnitude of his displacement.  
(ii) A car travels at a speed of 40 km/h for 10 minutes, then at 55 km/h for 20 minutes and finally at 20 km/h for 20 minutes. What is the average speed of the car?  
(iii) A car is moving with a velocity of 45 km/h. Calculate the distance travelled by the car in 1 h; 1 minute and in 1 sec.  
(iv) A car starts from rest and attains a speed of 40 km/h after 10 seconds. Calculate the acceleration of the car in (i) km/h<sup>2</sup> and (ii) m/s<sup>2</sup>.  
(v) Draw the displacement-time graphs for the following situations:  
(a) When the object is stationary.  
(b) When the object is moving with a uniform velocity.  
(c) When the object is moving with a variable velocity.

## SOCIAL SCIENCE

### Assignment

#### Section A – Multiple Assessment (MCQs – 5 Marks)

(1 mark each)

**Q1.** Which of the following is *not* a branch of Social Science?

- a) History  
b) Geography  
c) Biology  
d) Economics

**Q2.** Early humans mainly used tools made of:

- a) Iron                                      b) Copper                                      c) Stone                                      d) Bronze

**Q3.** Democracy is a form of government in which power lies with:

- a) Army                                      b) King                                      c) Citizens                                      d) Judges

**Q4.** In economics, human wants are:

- a) Unlimited                                      b) Limited                                      c) Fixed                                      d) Equal for all

**Q5.** The Stone Age people were mainly:

- a) Traders                                      b) Hunters and gatherers  
c) Industrial workers                                      d) Scientists

**Section B – Competency-Based / Case-Based Questions 10 Marks  
(2 marks each)**

**Q6.** Read the statement carefully:

*"A student studies history to understand past events, geography to learn about the environment, and economics to know how people use resources."*

- (i) Mention one importance of Social Science.  
(ii) Name any two branches of Social Science.

**Q7.** A group of villagers elects their representatives through voting.

- (i) Which form of government is shown here?  
(ii) Mention one feature of this system.

**Q8.** Look at the situation:

*"Ravi has ₹100 and wants to buy books, chocolates, and a cricket bat, but he cannot buy everything."*

- (i) What economic problem does Ravi face?  
(ii) Why does this problem arise?

**Q9.** Early humans moved from one place to another in search of food and water.

- (i) What is this lifestyle called?  
(ii) Mention one disadvantage of such a lifestyle.

**Q10.** State whether True or False:

- a) Democracy allows citizens to participate in decision-making.  
b) Stone tools were polished during the Paleolithic Age.

**Section C – Short Answer Questions - 15 Marks  
(3 marks each)**

**Q11.** Explain any three importance of studying Social Science.

**Q12.** Describe the life of early humans during the Stone Age.

**Q13.** What are the main features of democracy? Explain any three.

**Q14.** Differentiate between needs and wants with suitable examples.

**Q15.** How did the discovery of fire help early humans? Explain any three points.

**Section D – PROJECT – DISASTER MANAGEMENT**  
**(10 Marks)**

Submit a handwritten project on the related topics on Disaster Management.

Prevention and Mitigation of common disasters in India. Select any two for your project.

- Earthquake
- Cyclones
- Flood
- Drought
- Any man – made disaster

**Based on your selection, enumerate the following in your project –**

1. Meaning
2. Causes
3. Do's and Don'ts
4. Prevention and Mitigation Measures
5. Emphasize the importance of preparedness and sustainable development

**Submission Format -**

1. The project can be handwritten / PPT.
2. It should be well presented, researched and pictorial.
3. Cover page, table of contents, acknowledgement, certificate, bibliography, heading and sub-headings are must.
4. Handwritten project can be presented in a file or get your project spiral bound.
5. The project should not exceed 15 pages/slides.

**Section E – Map Skill**  
**(5 Marks)**

**Q17.** On the outline map of India, mark and label the following Stone Age sites:

- a) **Bhimbetka** – Madhya Pradesh
- b) **Hunsgi** – Karnataka
- c) **Kurnool Caves** – Andhra Pradesh
- d) **Burzahom** – Jammu & Kashmir
- e) **Daojali Hading** – Assam

**Section F – Subject Enrichment Activity**  
**5 Marks**

**Activity: Timeline and Poster Presentation**

**Attempt any ONE activity:**

**Option A – Stone Age Timeline**

Prepare a colorful timeline showing:

- Paleolithic Age
- Mesolithic Age
- Neolithic Age

Include:

- Tools used
- Lifestyle
- Major discoveries

OR

**Option B – Democracy Awareness Poster**

Design a poster on:

**“Importance of Democracy in Daily Life”**

Include:

- Slogans
- Rights and responsibilities
- Importance of voting

**MATHEMATICS**

**Note:**

- Complete all the work neatly.
- Keep the work creative, colourful where required.
- Do worksheet on ruled sheet.
- Do multiple assessment on A3 sheet.

Q1. Given that  $M(-7, 1)$  is the midpoint of segment  $AB$  where  $A$  has coordinates  $(3, -4)$ , find the coordinates of  $B$ . Show all working steps. (3)

Q2. Consider the points  $R(3, 0)$ ,  $A(0, -2)$ ,  $M(-5, -2)$  and  $P(-5, 2)$ . (3)

- Predict two sides of  $RAMP$  that are perpendicular to each other.
- Identify a side parallel to one of the axes.
- Find two mirror-image points and name the axis of reflection.

Q3. A computer screen is 800 pixels wide and 600 pixels high, with origin at the bottom-left. Circle  $A$  has centre  $(100, 150)$  and radius 80 px. Circle  $B$  has centre  $(250, 230)$  and radius 100 px. (3)

- Does any part of Circle  $A$  lie outside the screen?
- Does any part of Circle  $B$  lie outside the screen?
- Do the two circles intersect?

Q4. Bela has ₹100 for pocket money and spends ₹5 every day. Write a linear expression for the amount left after  $n$  days. After how many days will she have ₹40 left? (4)

Q5. A growing pattern of square tiles has 1 tile at Stage 1, adding 2 tiles at each stage. (4)

- Write the number of tiles at Stages 1 to 7 in a table.
- Find the linear polynomial for Stage  $n$ .
- How many tiles are at Stage 15 and Stage 26?
- Which stage has 21 tiles and which has 47 tiles?

Q6. Draw the graphs of  $y = 3x$  and  $y = -2x$  by selecting suitable points. State: (4)

- the slope of each.
- Do they pass through the origin?
- Which line is steeper?
- Which represents linear growth and which represents linear decay?

Q7. Without performing long division, determine whether  $7/20$  and  $4/15$  have terminating or repeating decimal expansions. (3)

Q8. A spice trader takes a loan of ₹850. The next day he makes a profit of ₹1,200. The following week he incurs a loss of ₹450. Write this as an integer equation and find his final financial standing. (3)

Q9. Using Brahmagupta’s rules for rational numbers, verify the distributive law:  $(1/2 + 3/4) \times 8/3 = (1/2 \times 8/3) + (3/4 \times 8/3)$ . Show all working on both sides. (3)

Q10. Case study

(4)

On graphs, a point is located using a **pair of numbers**: the first number shows the horizontal distance i.e. left or right, and the second number shows the vertical distance i.e. up or down.

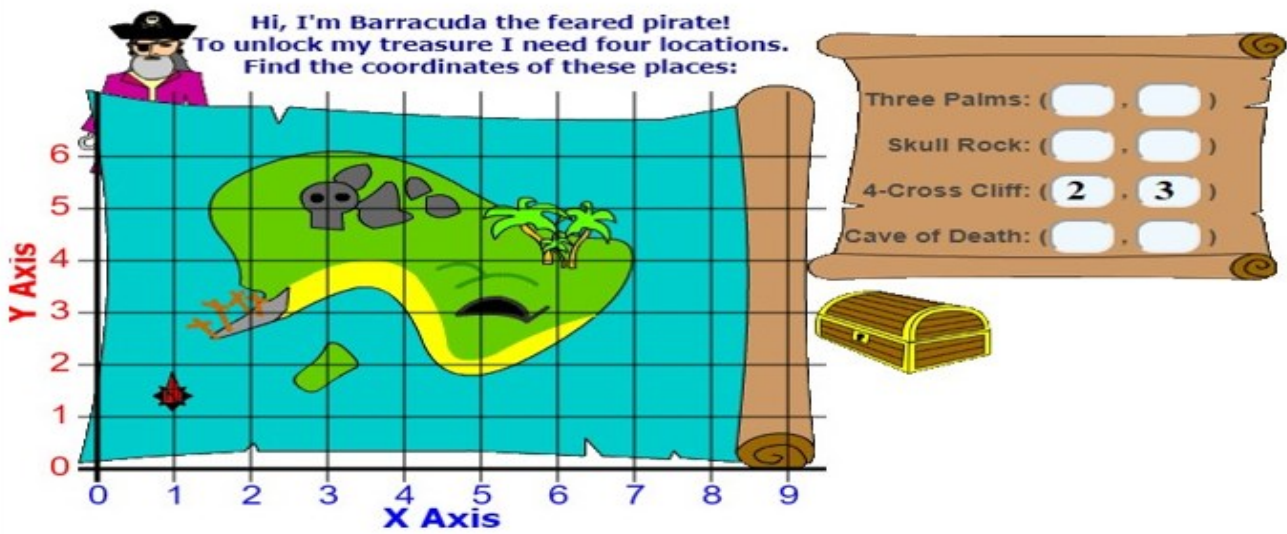
Example: In the image below, the point (2,3) is 2 units along (what?-right or left), and 3 units up which is the point of 4 – cross cliff.



The left-right (horizontal) direction is commonly called X-axis.  
The up-down (vertical) direction is commonly called Y-axis.

Where the x-axis and y-axis cross over each other at 90° is called the Origin i.e. (0, 0).

Clearly the X-axis and Y-axis divide the plane ( for you, it is the surface where we draw them) is known as Cartesian



- Find the coordinates of cave of death.
- Compute (abscissa THREE PALMS – ordinate CAVE OF DEATH).
- Is the abscissa of skull of rock 3. Justify your answer.
- Write the coordinates of the origin
- Calculate the sum of ordinates of three palm and a cross cliff.

**Multiple Assessment**

(10)

- |                         |                       |
|-------------------------|-----------------------|
| (a) Coordinate Geometry | Roll no. – 1 to 14    |
| (b) Polynomial          | Roll no. – 15 to 28   |
| (c) Number System       | Roll no. – 29 onwards |

**Lab Manual**

(6)

Activity – 1, 19 and 20  
Complete all your pending work of lab manual.

**हिंदी**

- उपसर्ग व प्रत्यय को A - 3 शीट पर सचित्र दर्शाएं। (कार्य रचनात्मकता से करें) (10)
- अनुप्रास, यमक और श्लेष अलंकार की परिभाषा व तीन-तीन उदाहरण लिखें। (10)
- अपनी 'व्याकरण' की पुस्तक से अपठित काव्यांश लिखें। (5)

- (4) 'क्या लिखूं' पाठ को ध्यानपूर्वक पढ़कर उसका सार लिखें। (5)
- (5) आपका छोटा भाई अनुशासनहीन होता जा रहा है। अनुशासन का महत्व बताते हुए पत्र लिखें। (5)
- (6) विद्यालय में कराटे प्रक्षिपण तथा उसकी उपसयुक्त कक्षाओं की व्याख्या का अनुरोध करते हुए प्रधानाचार्य को प्रार्थना - पत्र लिखिए। (5)
- (7) स्वर-कोकिला लता मंगेशकर की जीवनी को सचित्र A - 3 शीट पर रचनात्मक ढंग से करें। उनका कोई एक गीत भी याद करें। (10)

## INFORMATION TECHNOLOGY

**1. Make a practical file on the topic assigned according to Roll No. - (10)**

Roll No. -	Topic
1-15	Digital Documentation
16-30	Electronic Spreadsheet
31-45	Database Management Using

**2. Draw on A-3 size sheet on the topic assigned according to Roll No. - (10)**

Roll No. -	Topic
1-15	Types of keys
16-30	Motherboard
31-45	Mobile Apps

**3. Complete the following assignment in the notebook.**

**I. Answer the following questions- (2 x 11 = 22)**

- (i) Write the steps to insert column in a table.
- (ii) Which button allows quick insertion of rows or columns from the toolbar?
- (iii) How can you move a table within a document?
- (iv) Write the steps to create a table using the Insert Table dialog box.
- (v) What is the purpose of merging tables?
- (vi) How do you print only a specific page from a document?
- (vii) How can you print multiple pages that are not in continuations?
- (viii) What should you do to select a different printer for your document?
- (ix) What is data source?
- (x) What are the steps to print merged documents?
- (xi) How can recipients be excluded from the Mail Merge process?

**II. Answer the following questions- (4 x 2 = 8)**

- (i) What options are available for selecting a starting document in Mail Merge?
- (ii) Write the steps to send email messages.