

SUMMER ASSIGNMENT :-

BIOLOGY : (To be done in the class work copy)

1. Draw a labeled diagram of a plant cell.
2. Draw a labeled diagram of a prokaryotic cell.
3. Make lists of each plant and animal tissues in the form of flow chart to classify them.
4. All the living organisms cannot be simply classified as plants and animals, find out the various groups of living organisms found on the earth and write their characteristics with examples.

Subject: ENGLISH*

Q1. Design an English Magazine which should include the following details :-

- a) Attractive cover page with name of the Magazine.
- b) Editor's name
- c) Articles on banning child labour and girl child needs good education and support.
- d) Advertisement
- e) Jokes
- f) A story with a moral

Q2. Suppose you are a doctor serving in a government hospital and attending on the Covid infected patients. Write a diary entry expressing your feelings and emotions in about 150 words.

Q3. Revise all the questions and answers of the chapters discussed so far.

विषय:हिंदी*

- (I) अपनी पाठ्यपुस्तक संचयन से 'गिल्लू' तथा 'स्मृति' कहानी का अध्ययन करें।
- (II) 'पर्यावरण तथा हम' और 'विज्ञान के चमत्कार' विषय पर अनुच्छेद लिखें।

Subject:S.S.T*

History

1. Write glossary from each chapter.
2. Make a time line from the chapter The Russian Revolution.

Geography

1. Take a map of India and mark adjacent countries, extent and Standard Meridian.
2. On another map of India indicate physical features.

Political Science

1. Describe the features of democracy.
2. Differentiate between democratic and undemocratic government.
3. Write a short note about Nelson Mandela and his struggle against apartheid.
4. What is Article 30 of Indian constitution?
5. Describe the philosophy of Indian constitution.

Economics

1. Differentiate between fixed capital and working capital.
2. What do you mean by multiple cropping and its benefits?
3. Describe any three food crops.

Subject:Computers*

Study chapter 1 and do Assignment given at the end of the Chapter-1

Subject:Maths*

1. Practice chapters done so far.
2. Practice solved examples of all chapters done.
3. Learn squares of numbers till 20.
4. learn cubes of numbers till 15.
5. Learn algebraic identities
6. Complete given WORKSHEET.

Class : IX

Subject : Mathematics

Assignment 1: Number System

1. Explain each of the following in $\frac{P}{q}$ form:
 - (i) 0.675 (ii) $0.3\bar{2}$ (iii) $0.12\bar{3}$ (iv) $0.003\bar{52}$ (v) $4.\bar{32}$ (vi) 2.317317317.....
3. Find two irrational numbers and two rational numbers between 0.5 and 0.55
4. Simplify each of the following by rationalizing the denominator.
 - (i) $\frac{7 + 3\sqrt{5}}{7 - 3\sqrt{5}}$ (ii) $\frac{2\sqrt{3} - \sqrt{5}}{2\sqrt{2} + 3\sqrt{3}}$ (iii) $\frac{7\sqrt{3} - 5\sqrt{2}}{\sqrt{48} + \sqrt{18}}$
6. Simplify:- a) $3\sqrt{5} + -\sqrt{5} + \sqrt{180}$ (b) $\sqrt{54} + \sqrt{150}$
7. Give an example each of two irrational numbers, whose
 - (i) difference is a rational number
 - (ii) difference is an irrational number
 - (iii) sum is a rational number
 - (iv) sum is an irrational number
 - (v) product is a rational number
 - (vi) product is an irrational number
 - (vii) quotient is a rational number
 - (viii) quotient is an irrational number
8. Without actual division decide which of following rational numbers have terminating decimal representation:-
 - (i) $\frac{33}{375}$ (ii) $\frac{15}{28}$ (iii) $\frac{16}{45}$ (iv) $\frac{12}{35}$ (v) $\frac{80}{27}$ (vi) $\frac{123}{1250}$
9. Examine whether the following numbers are rational or irrational
 - (i) $\frac{3\sqrt{8}}{\sqrt{2}}$ (ii) $\left(\sqrt{2} + \frac{1}{2}\right)^2$ (iii) $\frac{22/7}{5\pi}$ (iv) $(3 + \sqrt{2})(2 - \sqrt{3})(3 - \sqrt{2})$
 $(2 + \sqrt{3})$
11. Represent $\frac{8}{5}$ and $\sqrt{20}$ on a number line.
12. (a) Represent $\sqrt{5.2}$ on a number line. (b) Visualize 0.436 on the number line
13. Insert 6 rational numbers between $-\frac{2}{3}$ and $\frac{3}{4}$
14. Find two irrational numbers between $\sqrt{3}$ and 2.
15. Rationalise the denominator of $\frac{1}{1 - \sqrt{7}}$

PHYSICS :-

Q1. A scooterist covers a distance of 3 km in 5 minutes .Calculate his speed in

- a) cm/s
- b) m/s
- c) km/hr

- Q2. A car travels 30 km at a uniform speed of 40km/hr and the next 30km at a uniform speed of 20km/hr. Find its average speed?
- Q3. A train travels at a speed of 60km/hr for 0.52 hr, at 30 km/hr for the next 0.24h and then at 70km/hr for the next 0.71 hr. What is the average speed of the train?
- Q4. A bus covers a distance of 250 km from Delhi to Jaipur towards west in 5 hrs in the morning and returns to Delhi in the evening covering the same distance of 250 km in the same time of 5 hrs. Find the average speed and average velocity of the bus for the whole journey?
- Q5. If a bus travelling at 20m/s is subjected to a study deceleration of 5m/s² ,how long will it take to come to rest?
- Q6. A car travels one –third distance on a straight road with a velocity of 10km/hr, next one-third with velocity 20km/hr and the last with a velocity 60km/hr. What is the average velocity of the car in the whole journey?
- Q7. A Cheetah starts from rest, and accelerates at 2m/s² for ten seconds. Calculate
 a) The final velocity
 b) The distance travelled
- Q8. Draw a velocity-time graph to show the following motion:
 A car accelerates uniformly from rest for 5s ; then it travels at a steady velocity for 5s.
- Q9. Name the two quantities, the slope of whose graph gives: a) Speed b) Acceleration
- Q10. A motorcycle moving with a speed of 5m/s is subjected to an acceleration of 0.2m/s² , Calculate The speed of the motorcycle after 10 seconds, and the distance travelled in this time?
- Q11. A cyclist is travelling at 15m/s. She applies brakes so that she does not collide with a wall 18m away. What deceleration must she have?
- Q12. Why is uniform circular motion accelerated?
- Q13. A stone is thrown in vertically upward direction with a velocity of 5m/s. If the acceleration of the stone during its motion is 10m/s² in the downward direction, what will be the height attained by the stone and how much time will it take to reach there?
- Q14. An artificial satellite is moving in a circular orbit of radius 42250km. Calculate its speed if it takes 24 hrs to revolve around the earth?

Fill in the blanks

- If the position of an object does not change with time, it is said to be at _____.
- Rest and Motion are _____ (absolute/relative) terms
- The study of motion without taking into account the cause of motion is called _____ (kinematics/dynamics).
- An object is said to be at _____ (rest/motion), if it changes its position with respect to its surroundings in a given time
- Distance is the length of _____ (actual/shortest) path traveled by a body in a given time.
- Displacement is the _____ (actual/shortest) path covered by a moving object from the initial point of reference in a specified direction.
- Distance is a _____ (scalar/vector) physical quantity while displacement is a _____ (scalar/vector) physical quantity.
- When a body moves unequal distances in equal intervals of time, then the body is said to describe _____ (uniform/non-uniform) motion.
- In uniform motion, speed of an object is _____ (constant/not constant).
- SI unit of velocity is _____ (metre per second/ km per hour/ miles per hour).
- The rate of change of velocity of a moving body with time is called _____.
- Slope of position-time graph _____ (is zero/may be zero/ cannot be zero) if the object is at rest.

13. Slope of the distance-time graph gives the _____ (speed/acceleration) of the object.
14. The nature of distance-time graph is a _____ (straight line/curve) having _____ (uniform /varying) slope when the object has non-uniform motion.
15. The slope of the velocity-time graph gives _____ (displacement/acceleration).
16. An object is under free fall. Considering upward as positive direction, the displacement of the object during a short time interval is positive during _____ (ascent/descent) and negative during _____ (ascent/descent).
17. In a uniform circular motion, velocity of a particle is _____ (constant/not constant) but its speed is _____ (constant/not constant).