

MGN PUBLIC SCHOOL ADARSH NAGAR ,JALANDHAR

SCIENCE

HOLIDAYS HOMEWORK JUNE (2023)

SCIENCE FOR CLASS VI

“TO RAISE NEW QUESTIONS, NEW POSSIBILITIES ,TO REGARD OLD PROBLEMS FROM A NEW ANGLE, REQUIRES CREATIVE IMAGINATION AND MARKS REAL ADVANCE IN SCIENCE”. –

ALBERT EINSTEIN

- "LET'S NURTURE THE NATURE SO THAT WE CAN HAVE A BETTER FUTURE."

Here are few activities, perform them to save and preserve nature.

1. Plant a sapling and take a pledge to take care of it. Observe its growth and its different parts.
 2. Draw a poster on World Environment day. Colour it with a catchy slogan.
 3. Make one 3-D working model using old or waste material from home (newspapers, cardboards, clay etc , avoid nonbiodegradable things) as per allotted:-
 - A. Open Electric Circuit - Roll no. 1-10
 - B. Closed Electric Circuit – Roll no. 11-20
 - C. Composition of Air – Roll no. 21- 30
- Rectilinear propagation of light – Roll no. 31 onwards

4) Complete the exercises of chapter-3 Separation of substances along with diagrams in your science notebook.

Wishing you all a fulfilled summer break.

SCIENCE FOR CLASS VII

A DREAM DOESN'T BECOME REALITY THROUGH MAGIC; IT TAKES SWEAT, DETERMINATION AND HARD WORK."

- "LET'S NURTURE THE NATURE SO THAT WE CAN HAVE A BETTER FUTURE."
A greenhouse creates an artificial environment (a steady state climate) by careful control of temperature, light, humidity, air quality, soil moisture, and heat levels
 - Visit to any greenhouse along with your parents and observe which plants are grown inside it.
 - What are advantages of growing plants in the greenhouse to the farmers.
 - Note Down your observations in science notebook and paste photographs also.

(2) i) Make a 3 – D model as per allotted with the help of waste materials(old news paper, straw etc) or clay using your creativity

i) Human digestive system (Alimentary canal) . Label each part. *Roll no :(1to10)

ii) Model to show mechanism of breathing in human beings. *Roll no :(11to 20)

iii) Human Respiratory System *Roll no :(21to 30)

iv) Human Excretory System

Roll no :(31to 42)

4) Complete Question_Answers of chapter 4 Heat in your science notebook and draw a

i) Diagram in which heat is transferred through conduction convection and radiation.

ii) Diagram depicting land and sea breeze.

HAPPY SUMMER VACATIONS :

Enjoy all days venture to do different activities.

SCIENCE FOR CLASS VIII

To be ready for tomorrow's opportunities, do your homework today. Learn, refine your skills and focus on growth.



Nothing is more powerful for your future than being a gatherer of good ideas information and learn new innovations .

Science is a way of thinking much more than it is a body of Knowledge

Common for all

I. Go through the link given below. Select any one topic of your interest comprehend the idea by applying the knowledge to actual situation the way you will apply it in your real life situation, rearrange if anything you want to change as per your requirement and situation and then create your improved design and prepare a plan of it in 100-200 words

<https://www.robolab.in/31-amazing-innovations-from-young-indians/>

II. Prepare a presentation on the topics given according to your roll number:

Roll No:	Topics :
1-10	Practices of crop production(including all the steps)
11-20	Classification of micro organisms
21-30	Friendly Micro organisms and harmful microorganisms
31-40	Food preservation and Nitrogen cycle
41-50	Natural resources and Fossil fuels

Note: Bring your power point presentation in a pen drive

Submit the hardcopy of your ppt and plan in a folder on 20 th July,2023

SCIENCE FOR CLASS IX

Q1: a)The graph in figure 1 shows the position of a body at different times. Calculate the speed of the body as it moves from a) A to B b) B to c c) C to D

Ans : a) 2m/s b) zero c) 1m/s

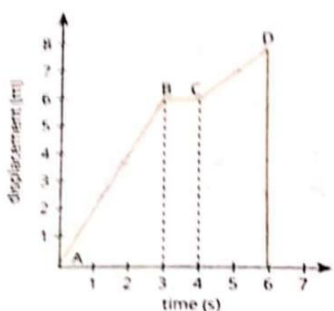


Figure 1

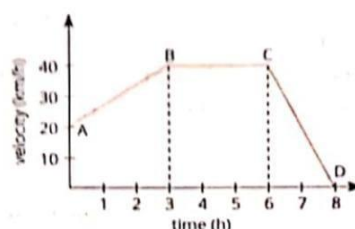


Figure 2

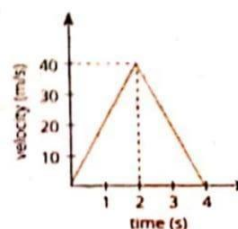


Figure 3

B) From the velocity -time graph (Figure 2) shown above, find the

- a) Velocity at point at C
- b) Acceleration of the body between A and B
- c) Acceleration of the body between B and C
- d) Acceleration of the body between C and D

ANS : a) 40 km/h
b) 6.67 km/h²
c) zero
d) -20km/h²

C) From the velocity -time graph (figure 3) shown above, find the

- a) Acceleration
- b) Retardation
- c) Distance covered by the body

Ans. a)20m/s² b)-20m/s² c) 80 m

Q2: The following table represents the distance travelled by a car with time in a fixed direction.

Time (s)	0	1	2	3	4
Displacement (m)	0	10	20	30	40

Draw a distance – time graph using the above data and with time and with its help find

- a) The distance travelled by the car at the end of 2.5s
- b) The speed of the Ans: a) 25m ..b) 10m/s

Q3 If a car attains a speed of 36 km/h from rest in 12 minutes. What is the distance covered?
(Ans: 3.6km)

Q4: A body is moving with a speed of 40 km/h. One second later, it is moving at 58 km/h. What is its acceleration?
(Ans:5 m/s²)

Q5: A car accelerates uniformly from 18 km/h to 36 km/h in 5 s. Calculate acceleration in m/s².
Ans: 1m/s²

Q6: A car starts from rest and picks up a velocity of 20m/s in 10s. Calculate the acceleration of the car.
Ans : 2m/s²

Q7 : A train starting from rest moving with uniform acceleration attains a speed of 36 km/h in 10 s .
Find its acceleration .Ans : 1 m/s²

Q8 : A truck running at 90 km/h , slows down to 54km/h over a distance of 20 m . calculate a) the retardation produced by its brakes and b) the time in which the truck slows down.

Ans: a) retardation: 10 m/s² b) t =1 s

Q9: A motorbike initially moving at 18 km/h, accelerated at the rate of 5m/s² for 5s. Calculate a) the distance covered by it from start b) the final velocity.

Ans: a) distance=87.5m b) final velocity=30m/s

Q10: A train is moving with the initial velocity of 30 m/s . The brakes are applied so as to produce a uniform acceleration of -1.5m/s². Calculate the time in which it will come to rest. Ans: 20s

Q11: A car accelerates uniformly from 18 km/h to 36 km/h in 2 s. Calculate a) the acceleration b) the distance covered by the car in that time.

Ans: a) 2.5 m/s². b) s=15m

Q12: A car is travelling at 54 km/h. If its velocity increases to 72 km/h in 5 s, then find the acceleration of the car in SI units. Ans: 1 m/s²

Q13: A racing car has a uniform acceleration 5m/s². What distance will it cover in 20 s after starting from rest?
ANS: 1 km

Q14: Brakes applied to a car produce a uniform retardation of 0.9m/s². If the car was travelling with the velocity of 27 m/s, what distance will it cover before coming to rest?

Ans: 405m

Q15: Find the initial velocity of a car that is stopped in 10 s by applying brakes. Retardation due to brakes is 2.5 m/s². Ans: 25m/s

Q16: An aeroplane taking off from a field has a run of 500 m. What is the acceleration and take off velocity if it leaves the ground 10 s after the start? ANS: a=10m/s²

V=100m/s

Q17: A bullet is fired into a wall with a velocity of 50m/s. If the bullet stops at the depth of 10 cm inside the wall , find the retardation provided by the wall. Ans = 12.5km/s²

Q18 A circular track has a circumference of 314 m with AB as one of its diameter. Acyclist travels from A to B along circular path with a velocity of constant magnitude of 15.7 m/s. Find:

- (1) the distance moved by the cyclist
- (2) the displacement of the cyclist if AB represents north south direction.
- (3) the average velocity of the cyclist.

Q19 Give one example of motion where an object does not change its speed but its direction of motion changes continuously.

Q20 Is uniform circular motion accelerated motion?

ACTIVITY BASED

1) Ask three members of your family to run on a straight line path of known length. Measure the time taken by each of them to run from one end to the other. Calculate the speed of each member.

2) Make any 10 questions from chapter -Is matter around us pure?

3) Project -Improvement in food resources

- a. Name the type of crops grown in different regions of Punjab (Malwa, Majha and Doaba)
- b. How can we save the declining ground water of Punjab. Give your suggestions in points.

SCIENCE FOR CLASS X PHYSICS

1. Make a PPT on

Roll No 1-25 -Image formation at different positions on principal axis by concave and convex mirror.

Roll 26 onwards -Image formation at different positions on principal axis by concave and convex lens

2. Draw a neat and well labeled diagram of human eye [refer to pg. 161 of NCERT science book].

Explain the labelled parts.

3. Draw a well labeled diagram of refraction by a rectangular glass slab and triangular prism.

4. A convex lens has a focal length of 10cm. At what distance from the lens should the object be placed so that it forms a real and inverted image 20cm away from the lens? What would be the size of the image formed if the object is 22 cm high? With the help of a ray, the diagram show the formation of the image by the lens in this case?

5. The radius of curvature of a convex mirror used on a moving auto mobile is 2m. A truck is coming behind it at a distance of 3.5m. Calculate the position and the size of image relative to the size of the truck. What will be the nature of the image?

6. At what distance should an object be placed from a convex lens of focal length 18 cm to obtain an image at 24 cm from it on the other side? What will be the magnification produced in this case?

7. Speed of light in medium is 2.4×10^8 m/s. What is the refractive index of the medium?

8. A concave lens of power -2.0 D is used to form an image of an object of size 9 cm kept at a distance of 25 cm from it. Find the nature, size and position of image formed.

9. The size of virtual image of an object by a mirror, having focal length of 30 cm is reduced to one-fourth of its size. At what distance the object has been placed from mirror? What is the nature of the mirror?

10. Absolute refractive index of crown glass is 1.52 and that of alcohol is 1.36. Calculate the refractive index of crown glass with respect to alcohol?

BIO CHEMISTRY Class 10

1. Write name and chemical formula of any 20 compounds that you have come across in chapter 1 and chapter 2

2.a. You use many food items in your kitchen. Find out any 10 food items that contain acid and name the acid present in them.

b. Explain the Importance of pH in your daily life.

3. Draw on a chart /Make PPT/video on any one of the following:

- a. Human heart
- b. Excretory system of human beings
- c. Respiratory system of human beings
- d. Digestive system of human beings

4. List any five things that you have done during vacations to -

- a) Conserve natural resources
- b) Increase pressure on natural resources

You can do this work in a notebook