

HARDAYAL PUBLIC SCHOOL, BAHADURGARH
CLASS X – HOLIDAY HOMEWORK (2019-20)

ENGLISH

Create a Literary Newspaper (1 cartridge sheet folded twice so that there are 4 sides)

Page 1: Describe the following in 500 words each with illustrations.

- (i) Apartheid (ii) Holocaust

Page 2: Description of an event (250 words each)

- (i) Lok Sabha Elections (ii) International Mother Earth Day

Page 3: Article (150 words each)

- (i) Social Media and Youth (ii) Qualitative Education vs Quantitative Education
(iii) Coping with stress (iv) Role of youth in making new India

Page 4: Story Writing on any one of the following: (250 words each)

Prompts:

- (i) You answer the door-bell only to find an intricate envelope on the ground – an invitation.
(ii) John was up for a big promotion in his company. He had put everything on hold for it, including his love life. But an outsider is hired and
- (iii) They didn't mean to, but in an attempt to build a time travelling machine, they discovered an alternate universe, and were accidentally trapped there.
(iv) Jack and his friends take a boat trip to a tiny, vacant, off-limit island for a night of celebration. When the sun goes down, they realize just how occupied the island actually is and there's a reason it's off-limits.

HINDI: Learn all the topics covered in class and do vayakaran work also.

Prepare the advertisement on the topic - "Har samasya ka samadhaan Mahatma dwara"
"Samwaad Lekhan" topic "Do mitron ke beech pani ki samasya" in note book.

HOLIDAY HOME WORK 2019-2020

MATHEMATICS

CLASS-IX

Specific Instruction: To be done in a separate thin register.

Do as directed -

LEVEL - 1

1. Prove that the sum of all angles of a triangle is 180° . Also, find the angle of a triangle if they are in the ratio 5:6:7.
2. Prove that the sum of all angles of a hexagon is 720° .
3. Write $\frac{54}{100}$ in decimal form and state its kind.
4. Identify $(\sqrt{2} + \sqrt{3})^2$ as rational or irrational number. Justify.
5. If $a = 3$ and $b = 2$, then find the value of: $(a^a + b^b)^{-1}$.
6. Find three irrational numbers between $\frac{5}{6}$ and $\frac{9}{10}$.

LEVEL - 2

7. Factorise:
 - $2a^7 - 128a$
 - $4p^2 + 9q^2 + 16r^2 + 12pq - 24qr - 16rp$
 - $64a^3 - 27b^3 - 144a^2b + 108ab^2$
8. Find the value of a , if $(x - a)$ is a factor of the polynomial $x^3 - (a^2 - 1)x + 2$.
9. Simplify: $\frac{6}{3\sqrt{2} + 2\sqrt{3}}$.
10. If the polynomials $az^3 + 4z^2 + 3z - 4$ and $z^3 - 4z + a$ leave the same remainder when divided by $z - 3$, find the value of a .
11. If two parallel lines are intersected by a transversal, then prove that bisectors of the interior angles form a rectangle.
12. The lengths of perpendiculars PM and PN are drawn from a point P on x -axis and y -axis are of lengths 3 and 2 units respectively. Find the co-ordinates of points P , M and N .
13. Express $0.\overline{245}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.
14. Locate $\sqrt{13}$ on the number line.

15. ACTIVITY: Advik purchases a ticket for the movie “An Evening in Paris”. The position of his seat is written on the ticket by using the two items of information.

(i)The row number is 4 in which he has to sit.

(ii)Number of seat is 6 in that row.

Holiday homework

Chemistry:. Class 9

Chapter 1

1. A rubber band can change its shape on stretching. Will you classify it as solid or not? Justify?
2. Sponge, though compressible, is a solid?
3. Gases completely fill the vessel in which they are kept. Give reasons.
4. Under what conditions gases can be liquefied? In which form LPG is filled in gas cylinder?
5. Liquid generally have lower density as compared to solids, but ice floats on water. Find out, why.
6. What is dry ice?
7. Explain why temperature remains constant during interconversion of states of matter?
8. Give reason to explain why it takes longer time to dry wet clothes in humid weather?
9. Why should we wear cotton clothes during summer?
10. Why does a desert cooler cool better on a hot dry day?
11. Why do people sprinkle water on the roof after a hot sunny day?
12. Write any three differences between evaporation and boiling?
13. Why does ice at 0°C appear colder than water at same temperature?
14. Why mixture does not have a fixed melting point or a fixed boiling point? Give two reasons?
15. On suffering from fever which will lower down your body temperature, more ice or ice cold water?

Chapte 2

1. Which process can purify the impure sample of potash alum?
2. Name the solutions which show the Tyndall effects
3. What is centrifugation? Explain briefly.
4. Name some homogenous as well as heterogeneous mixtures.
5. What are the differences between a physical change and a chemical change?
6. What is the procedure to obtain different gases from air?
7. How is fog different from smoke?
8. Is water a compound? Prove your answer.

9. Calculate the concentration of 45 g salt present in 500 g of solution.
10. A girl is given naphthalene balls powder and common salt. Help her by explaining how to separate the mixture.

Physics:

Chapter 8

1. (a) Identify the kind of motion in the following cases:
- (i) A car moving with constant speed turning around a curve.
 - (ii) An electron orbiting around nucleus.
- (b) An artificial satellite is moving in a circular orbit of radius 36,000 km. Calculate its speed if it takes 24 hours to revolve around the earth.
2. (a) Define average speed.
- (b) A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. Calculate the average speed for the entire journey.
3. Define uniform and non-uniform motion. Write one example for each.
4. What does the odometer of an automobile measure? Which of the following is moving faster? Justify your answer.
- (i) A scooter moving with a speed of 300 m per 1 minute.
 - (ii) A car moving with a speed of 36 km per hour.
5. A car travels from stop A to stop B with a speed of 30 km/h and then returns back to A with a speed of 50 km/h. Find
- (i) displacement of the car.
 - (ii) distance travelled by the car.
 - (iii) average speed of the car.
6. Velocity-time graph for the motion of an object in a straight path is a straight line parallel to the time axis.
- (a) Identify the nature of motion of the body.
 - (b) Find the acceleration of the body.
 - (c) Draw the shape of distance-time graph for this type of motion.
7. Draw the shape of the distance-time graph for uniform and non-uniform motion of object. A bus of starting from rest moves with uniform acceleration of 0.1 ms^{-2} for 2 minutes. Find
- (a) the speed acquired.
 - (b) the distance travelled.
8. (a) Define uniform acceleration. What is the acceleration of a body moving with uniform velocity?
- (b) A particle moves over three quarters of a circle of radius r . What is the magnitude of its displacement?
9. A bus accelerates uniformly from 54 km/h to 72 km/h in 10 seconds Calculate
- (i) acceleration in m/s^2
 - (ii) distance covered by the bus in metres during this interval.
10. A car moves with a speed of 30 km/h^{-1} for half an hour, 25 km/h^{-1} for one hour and 40 km/h^{-1} for two hours. Calculate the average speed of the car.
11. Derive the equation for velocity-time relation ($v = u + at$) by graphical method.

12. A car is travelling at 20 km/h, it speeds upto 60 km/h in 6 seconds. What is its acceleration?
13. A car accelerates from 6 ms^{-1} to 16 ms^{-1} in 10 sec. Calculate
 - (a) the acceleration and
 - (b) the distance covered by the car in that time.
14. A circular track has a circumference of 3140 m with AB as one of its diameter. A scooterist moves from A to B along the circular path with a uniform speed of 10 m/s. Find
 - (a) distance covered by the scooterist,
 - (b) displacement of the scooterist, and
 - (c) time taken by the scooterist in reaching from A to B.
15. (a) Differentiate between uniform linear and uniform circular motion.
 (b) Write any four examples of uniform circular motion.
 (c) Is uniform circular motion accelerated motion?
16. (a) Differentiate between speed and velocity.
 (b) When is a body said to have uniform velocity?
 (c) How can we describe the position of an object?
 Illustrate with suitable example

Chapter 9

1. What do you mean by law of conservation of momentum?
2. Why do roads on mountains have inward inclination at sharp turns?
3. Why is it dangerous to jump out of a moving bus?
4. How do safety belts of cars help in preventing accidents?
5. Explain how momentum gets conserved in collision of two bodies?
6. How are Newton's three laws of motion related?
7. Explain inertia and momentum in detail.
8. Define force and its various types. What is its unit?
9. Give three examples exhibiting inertia in our daily life
10. What change will a force bring in a body?
11. From a rifle of mass 5kg, a bullet of mass 50gram is fired with an initial velocity of 50m/s. Calculate the initial recoil velocity of the rifle.
12. Explain how Newton's second law of motion is used in sports?
13. Why does one get hurt on jumping from a great height to the floor?
14. What is a balanced force?

Biology

Chapter: 5

1. What is cell theory? Who formulated it?
2. Write the full form of DNA and ATP.
3. What is the importance of nucleus?
4. Explain the process of osmosis through an example.
5. Draw and label a Plant cell neatly.
6. Why is Plasma Membrane a selectively permeable membrane?
7. What is the function of chromosome?
8. Name the cleansing organelle in the cell.
9. How does amoeba consume food?

Chapter: Tissue

1. What is the function of cartilage and bone?

2. What are the different types of tissues present in plants?
3. What are the different types of tissues present in animals?
4. Draw a neat labeled diagram of nervous tissue.
5. What is the function of stomata?
6. What is the role of epidermis?
7. What are complex tissues? Explain their types.
8. Define the structure of neuron.
9. What are guard cells?
10. Explain various types of blood cells.

HARDAYAL PUBLIC SCHOOL, BAHADUARGAH
SUMMER HOLIDAY HOME WORK

Class - IX

“We cannot stop natural disasters but we can arm ourselves with knowledge: so many lives wouldn't have to be lost if there was enough disaster preparedness.” - Petra Nemcova

Social Science Project – Disaster management

General Instructions:

1. The project should be hand written.
2. It should be well presented, researched, and pictorial.
3. Cover page, Index, table of contents, headings and sub – headings ,acknowledgements, bibliography, are a must.
4. Each section should be done on white/colored A4 size sheets.
5. The project should be presented in a file.
6. The project should not exceed 15 pages.
7. Do not exceed **700 - 1000 words**.

Keeping the above statement in mind, prepare a project on **Disaster Management** as per the following guidelines:

1. **Highlight the following:**

- Definition of ‘Disaster’.
- What is a disaster management cycle?
- What are the types of Disasters?
- What is vulnerability and risk?
- What is a Hazard? How is it classified?
- Differentiate between hazard and disaster.
- Contrast and compare physical, chemical and biological hazard. Use the given table as a reference.

2. Complete the following table with the relevant information:(Any one physical, chemical, biological disaster)

Hazard	Elements Of Hazard	Vulnerable groups	Prevention	Examples
Physical				
Chemical				
Biological				

3a. Prevention and Mitigation of Common Disasters in India. Select **any One** for your project.

- Tsunami - The killer sea waves
- Flood
- Earthquake
- Volcanic eruption
- Landslide

3b. Based on your selection in **Point 3a** above, enumerate the following in your project:

- Meaning
 - Causes
 - Do's and don'ts
 - Prevention and mitigation measures
 - Your emergency Kit
 - Latest means of forecasting Disasters.
 - Prepare a **case study** on any one of the Disasters that you have chosen to research.
4. Being a young student of H.P.S, you are familiar with your school building. According to you, What precautions should you take in evacuating from your classroom in case of a Disaster.



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SUMMER HOLIDAY HOMEWORK

CLASS – IX

Subject – Computer Applications

- Q. 1 Draft a report about Elections held in 2019 , Using 10 features
(Shapes , Images Word Art etc.....) of MS- Word.
- Q.2 Do all applications based questions of Chapter 1 to 3 in Computer Notebook.

Follow the link for drawing homework

https://youtu.be/7_1n4B7pnxQ