STEPHENS

INTERNATIONAL PUBLIC SCHOOL

Holidays' Homework

Session – 2024-25

Class : 9th

General Instructions:

1. **Use assignment sheets to do all the written work.**
2. **Use a separate file (use A4 sheets) for project and activity work.**
3. **Make separate file for each subject.**
4. **Do your work neatly and beautify it.**
5. **Revise Pre Mid Term Syllabus.**

Subject : English

Q1. You are going on a school picnic with your classmates and teachers. You are very excited. The night before the trip you sit down to write your diary. Describe what you have planned for the picnic and how you hope to enjoy yourself there. You are Rajesh. Write your diary in 100-150 words.

Q2. You are Ankiit living in Punjab. You had to attend a wedding ceremony in Mumbai. Your father took you there by airplane. You are very excited as it was your first journey by plane. Write a diary entry in 100-150 words sharing your experience.

Q3. Read the chapter "Iswaran The Storyteller" and write the character sketch of Iswaran.

Q4. Write a motivational story/ an inspirational article or a descriptive paragraph of your choice. The writing should be original, reflecting your imagination, creativity and writing skills.

Q5. Write a script for a Nukkad Natak or street play on the theme *Importance of Mother Tongue.*

विषय - हिन्दी

1. आप इस ग्रीष्मावकाश में जहाँ भी घूमने जाएँ वहाँ का यात्रा वृतांत चित्र सहित लिखें।
2. साक्षरता अभियान के अंतर्गत अपने घर या पड़ोस में काम करने वाले हमारे सहायक (हेल्पर्स) का साक्षात्कार करें और संवाद के रूप में लिखें।
3. भारत की कोई पाँच प्रमुख महिला पर्वतारोहियों के बारे में चित्रों सहित जानकारी एकत्रित करें।
4. पत्र के लिए ऐनवल्प बनाकर उसमें अपने छोटे भाई को सत्संगति का महत्त्व बताते हुए पत्र लिखकर डालें।
5. कोई एक स्वयं रचित कहानी को चित्रों सहित दर्शाएँ। (8 से 10 चित्र)

Subject : Mathematics

Q1. Every whole number is a natural number write true or false.

Q2. If $x = \frac{(\sqrt{3}-\sqrt{2})}{(\sqrt{3}+\sqrt{2})}$ and $y = \frac{(\sqrt{3}+\sqrt{2})}{(\sqrt{3}-\sqrt{2})}$, find the value of $x^2 + y^2 + xy$.

Q3. Find the product of $(2x + 3y)(2x - 3y)$

Q4. If $\frac{x^2+1}{(x^2)} = 27$ find $\frac{x+1}{x}$.

Q5. Simplify: $\left(\frac{3^n \times 9^{n+1}}{3^{n-1} \times 9^{n-1}}\right)$

Q6. Rationalise: $\frac{4\sqrt{3}+5\sqrt{2}}{\sqrt{48}+\sqrt{18}}$

Q7. Express 15.7121212..... as $\frac{p}{q}$ form.

Q8. Factorise: $4(x - y)^2 - 12(x - y)(x + y) + 9(x + y)^2$

Q9. AB, CD and EF intersect at O. Find the measure of $\angle AOC$, $\angle COF$, $\angle DOE$ and $\angle BOF$.

Q10. Find the complement of 36°.

Q11. Find the measure of an angle which is 26° more than its complement.

Q12. If m and n are two plane mirrors perpendicular to each other, show that the incident ray CA is parallel to the reflected ray BD.

Activity - (To be done on lab manual)

1. To make a square root spiral by using paper folding
2. To verify $(a + b)^2 = a^2 + 2ab + b^2$ by paper cutting and pasting
3. To find Intercepts of equidistant parallel lines

Subject : Science

PHYSICS

Section – A

A. Very short answer type questions:-

Q1. What are scalar and vector quantities?

Q2. Define:-

(a) Distance (b) Displacement

(c) Newton's three laws of motion (d) Linear momentum

(e) Force

Q3. A device used to measure the distance travelled be a vehicle is _____.

Q4. Write three equations of motion.

Q5. Differentiate between speed and velocity.

B. Short Answer type questions:-

Q1. _____ is unit of time occurs twice, in unit is of a of acceleration, why?

Q2. Is the motion of the second hand of a clock a uniform circular motion? Explain.

Q3. Displacement of a body may be zero even when distance travelled is not zero. Is it true? Is the reversal also true?

Q4. What is uniform circular motion? Show that it is an accelerated motion in spite of being uniform.

C. Numericals:-

Q1. A ship is moving at a speed of 56km/h. One second later, it is moving at 58km/h. What is acceleration?

Q2. Length of the minute hand of a clock is 5cm. Calculate its speed in completing one round.

Q3. A train starting from rest attains velocity of 72km/h in 5 minutes. Assuming that the acceleration is uniform, Find:-

(a) the acceleration

(b) the distance travelled by the train for attaining this velocity.

Q4. An artificial satellite is moving in a circular path of radius 42250 km. Calculate its speed if it takes 24 hrs to revolve around the Earth.

Section – B

Write down the following practicals in your practical lab manual:-

1. Determination of the speed of the pulse propagating through a stretched string
2. Verification of the laws of reflection of sound

CHEMISTRY

Q1. Osmosis is a special kind of diffusion. Comment.

Q2. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment.

Q3. Tabulate the difference between solid, liquid and gases.

Q4. Fill in the blanks:-

(a) Evaporation of liquid at room temperature leads to a _____ effect.

(b) At room temperature, the forces of attraction between the particles of a solid substance are _____ than those in the gaseous state.

(c) _____ is the change of gaseous state directly to solid state without going through the _____ state.

(d) The basic arrangement of particles is less than ordered in the _____ state. However, there is no order in the _____ state.

(e) The phenomenon of the state of change of a liquid into the gaseous state at any temperature below its boiling point is known as _____.

Q5. Seema visited the Natural Gas Compressing Unit to discover that the gas can be liquefied at specific temperatures and pressures. She shared her experience with her friends but got confused. Help her identify the right set of conditions.

(a) Low temperature and low pressure

(b) High temperature, low pressure

(c) Low temperature and high pressure

(d) High temperature and high pressure

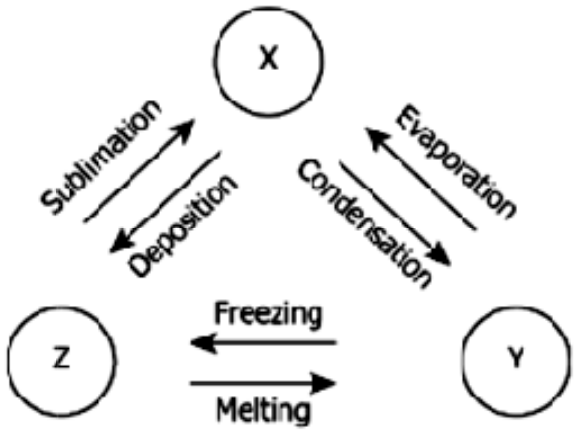
Q7. Comment on the following statements:

(a) Desert cooler cools better on a hot dry day.

(b) Water kept in an earthen pot (matka) becomes cool during summer.

(c) Doctors advise putting strips of wet cloth on the forehead of a person having a high temperature.

Q8. The image shows three substances that can change from one physical state to another by different processes.



What is X, Y, Z ?

Write down the following practicals in your practical lab manual:-

Preparation of (a) mixture & (b) compound, using iron fillings and sulphur powder and distinguish between these on the basis of appearance, behaviour towards a magnet and effect of heat.

BIOLOGY

Q1. Write the contribution of following scientists in the study of the cell.
- (a) Robert Hooke (b) Purkinje
- (c) Robert Brown (d) Schleiden and Schwann

Q2. State the main functions of each of the following components of the cell.
- (a) Plasma membrane. (b) Mitochondria
- (c) Nucleus (d) Ribosome

Q3. What are the different types of endoplasmic reticulum? Write the function of each.

Q4. Name the following:-
- (a) An organelle which has its own genetic material
- (b) An organelle rich in digestive enzymes.
- (c) Nucleic acid present in nucleus.

Q5. How is nucleoid different form nucleus?

Q6. What are genes? Where are they located?

Q7. A unicellular algae put in distilled water does not burst whereas an Amoeba would burst. Why?

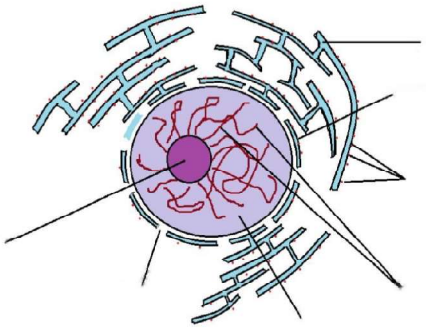
Q8. How is a bacterial cell different from an onion peel cell?

Q9. Differentiate between:-
- (a) Cytoplasm, Nucleoplasm and Protoplasm
- (b) Chromatin and Chromosome

Q10. List three distinguishing features between Prokaryotic cells and Eukaryotic cells in terms of
- (i) size of the cells
- (ii) number of chromosomes in the cell
- (iii) nuclear region

Q11. Draw a plant cell and label the parts which
- (a) determine the function and development of the cell
- (b) packages materials coming from the endoplasmic reticulum
- (c) provides resistance to microbes to withstand hypotonic external media without bursting
- (d) is site for many biochemical reactions necessary to sustain life
- (e) is a fluid contained inside the nucleus

Q12. Draw the diagram and label the following parts.
- (a) Nucleolus
- (b) Chromatin
- (c) Nuclear pore
- (d) Nucleoplasm
- (e) Endoplasmic Reticulum
- (f) Ribosomes
- (g) Nuclear Envelope



MULTIPLE CHOICE QUESTIONS

1. Which cell organelle plays a crucial role in detoxifying many poisons and drugs in a cell?
   (a) Golgi apparatus (b) Lysosomes
   (c) Smooth endoplasmic reticulum (d) Vacuoles
2. The undefined nuclear region of prokaryotes are also known as
   (a) nucleus (b) nucleolus
   (c) nucleic acid (d) nucleoid
3. Which out of the following is not a function of vacuole?
   (a) Storage (b) Providing turgidity and rigidity to the cell
   (c) Waste excretion (d) Locomotion
4. A cell will swell up if
   (a) The concentration of water molecules in the cell is higher than the concentration of water molecules in surrounding medium
   (b) The concentration of water molecules in surrounding medium is higher than water molecules concentration in the cell
   (c) The concentration of water molecules is same in the cell and in the surrounding medium
   (d) Concentration of water molecules does not matter
5. Which of these options are not a function of Ribosomes?
   (i) It helps in manufacture of protein molecules
   (ii) It helps in manufacture of enzymes
   (iii) It helps in manufacture of hormones
   (iv) It helps in manufacture of starch molecules
   (a) (i) and (ii) (b) (ii) and (iii)
   (c) (iii) and (iv) (d) (iv) and (i)

Write down the following practicals in your practical lab manual:-

Prepare a temporary mount and stain (a) onion peal & (b) human cheek cells and to record observations and draw their labeled diagram.

Subject : Social Science

On an A4 size sheet.

1. Write down the steps that can be taken by Central Government of India to ensure and tackle food security in India during pandemic [Refer to chapter – 4 (Economic) Food Security in India]
2. Explain the meaning of Poverty and what are its causes.
   Make a photo collage on the chapter – 'Poverty as Challenge'.
3. Prepare 3D model of the map showing
   (i) Ganga
   (ii) Satluj
   (iii) Narmada
   (iv) Godavari

Project– Prepare a detailed project report on the given topic.

Disaster Management

Q1. General Questions

HOTS

1. From which place does river Ganga originate?
2. What do Himalayan rivers do in the middle and lower course?
3. Why are peninsular rivers called seasonal river?
4. What are the regulations of Indus Water Treaty of 1960?

Q2. Write a note on five programmes that have been developed for the eradication of poverty in India.

Subject : Computer

Task 1

The School is organizing an Educational Trip. Imagine you are the Team Head of your club. You are organizing a workshop for students along with some other members of your club. The name of your club is “Tripadvisor”. Design a template in OpenOffice writer to inform the students of the school about the event.

Include following details in your document:

i. Name of the Event

ii. Date & Time of the Event

iii. Any Logo/motto you want to give

iv. Create a table which includes

v. 5 Tourist places & Tour package

vi. Contact details of organizers

Use all the possible formatting features of digital documentation of OpenOffice software

Task 2

Prepare a Document on various keys present on the Keyboard.

Note:-Take print out of all the pages and compile it in a folder. Design an attractive cover for your file / folder.

Subject : Art

- **Create a beautiful picture on canvas board.**

  Choose <u>any one</u> of the following:-

  - **African Art**
  - **Terrible Art**
  - **Silhouette Art**