Ambika Prasad Memorial Public School

(Winter Holiday Homework 2025-26) Class - 9

SUBJECTS	HOLIDAY HOMEWORK
English	Do the given sample paper in notebook.
Maths	*Chapter-10 Heron's Formula* Book page no.- 10.9 Section-C Short Answer Questions. *Chapter-11 Surface Areas and Volumes* Book page no.- 11.22 and 11.23 Section-C Short Answer Questions. *Chapter-12 Statistics* Book page no.- 12.15 and 12.16 Section-C Short Answer Questions. *Learn and write all chapters formulas.* *Note:- Do the given Holiday Homework in file pages.*
Physics	**WORK AND ENERGY** 1.Find the energy in kWh consumed in 10 hours by a machine of power 500 W. 2. A lamp consumes 1000 J of electrical energy in 10 s. What is its power? 3. When an arrow is shot from its bow, it has kinetic energy. From where does it get the kinetic energy? 4. Distinguish between work, energy and power. State the SI units for each of these quantities. 5.Illustrate the law of conservation of energy by discussing the energy changes which occur when we draw a pendulum bob to one side and allow it to oscillate. Why does the bob eventually come to rest? What happens to its energy eventually? Is it a violation of the law of conservation of energy? 6 a) Derive an expression for kinetic energy of a body having mass m and moving with a velocity v. (b)When velocity of a body is increased 5 times, what is the change in its kinetic energy? (c)Two masses m and 2m are dropped from heights h and 2h. On reaching the ground, which will have greater kinetic energy and why? 7(a)State the law of conservation of energy. (b)What is the work done to increase the velocity of a car from 36 km h^{-1} to 72 km $h^{\sim 1}$ if the mass of the car is 1500 kg. (c)Where does an oscillating pendulum have maximum PE and KE? 8. Justify giving proper reasoning whether the work done in the following cases is positive or negative: (a) Work done by a man in lifting a bucket out of a well by means of a rope tied to the bucket. (b) Work done by gravitational force in the above case. (c) Work done by friction on a body sliding down an inclined plane.

	(d) Work done by an applied force on a body moving on a rough horizontal plane with uniform velocity. (e) Work done by resistive force of air on a vibrating pendulum in bringing it to rest. 9. Define Positive, negative and zero work with an example. 10.What is the work done by a coolie walking on a horizontal platform with a load on his head? **SOUND** 1.What are mechanical waves? 2.Where is the density of air higher—at compressions or at rarefactions? 3. On what factor does the pitch of a sound depend? 4. What is intensity of sound? 5. Draw a graph for a wave representing wave disturbance and time for a sound changing from low pitch to high pitch, keeping the amplitude of the sound same. 6. What are longitudinal waves? Give two examples. 7.What are transverse waves? Give two examples. 8. Prove that $v = v\lambda$, where the symbols have their usual meanings. 9.Which wave characteristics determine the (a) loudness (b) pitch of sound? Draw two different waveforms and mark these characteristics on it. 10.In a ripple tank, 12 full ripples are produced in one second. If the distance between a crest and next trough is 10 cm, find (a) wavelength, (b) frequency and (c) velocity of the wave. 11.The wavelength of waves produced on the surface of water is 20 cm. If the wave velocity is 24 ms^{-1}, calculate (a) the number of waves produced in one second (b) the time required to produce one wave.
Chemistry	Complete notes of chapter 4 atomic structure. Also learn 1 Atomic Number (1 to 20) 2 Cations and Anions Also practice formation of formula of following compounds Ammonium carbonate, potassium sulphate , lead acetate , barium chloride , sodium hydroxide , Aluminium sulphate , ammonium hydroxide, etc.
Biology	Worksheet
Hindi	विषय: हिंदी व्याकरण भाग 1: परिभाषा और भेद नीचे दिए गए प्रश्नों के उत्तर संक्षेप में लिखिए: 1-शब्दालंकार किसे कहते हैं? 2-अनुप्रास अलंकार की क्या पहचान है? 3-यमक और श्लेष अलंकार के बीच का अंतर स्पष्ट कीजिए।

	भाग 2: अलंकार पहचानिए निम्नलिखित काव्य पंक्तियों को पढ़कर उनमें प्रयुक्त शब्दालंकार का नाम लिखिए: 1-"तरनि तनूजा तट तमाल तरुवर बहु छाए।" अलंकार: _____ 2-"कनक कनक ते सौ गुनी, मादकता अधिकाय।" अलंकार: _____ 3-"रहिमन पानी राखिये, बिन पानी सब सून। पानी गए न ऊबरै, मोती मानुष चून।" अलंकार: _____ 4-"काली घटा का घमंड घटा।" अलंकार: _____ 5-"मुदित महीपति मंदिर आए।" अलंकार: _____ भाग 3: रिक्त स्थानों की पूर्ति करें 1-जहाँ एक ही वर्ण की आवृत्ति बार-बार होती है, वहाँ _____ अलंकार होता है। 2-_____ अलंकार में एक शब्द के एक से अधिक अर्थ चिपके रहते हैं। 3-'माला फेरत जुग गया, फिरा न मन का फेर। कर का मनका डारि दे, मन का मनका फेर।' - इस पंक्ति में 'मनका' शब्द के दो अर्थ हैं, इसलिए यहाँ _____ अलंकार है।
Social Science	St – Complete chapter notes – His – Pastoralists in the Modern World Geography – Population Civis – Democratic Rights Economic – Poverty as a Challenge Do give worksheets in respective notebook
Computer	Write a Python program to print Hello World. Write a Python program to add two numbers entered by the user. Write a Python program to find the square of a number. Write a Python program to check whether a number is even or odd. Write a Python program to display your name, class, and school on the screen.