OLIDAY HOMEWORK CLASS XI

SCIENCE STREAM

ENGLISH	1. A photograph captures a moment in time. Describe one of your favourite photographs in the form of a poem or a paragraph and if possible, paste that photograph with the description. 2. Prepare a creative comparative study of Delhi, Anadaman & Nicobar (scrap book, brochures, etc.).
PHYSICS	Q. Submit a write-up on a noble prize winner in Physics along with his/her photograph Q.1. Prepare an Investigatory Project on any topic from NCERT Q.2. Define fundamental forces in nature. Arrange these forces in their order of increasing strength. Q.3. How is physics related to society? Q.4. Write down some advance inventions in physics. Who discovered the following (i) Absolute temperature (ii) Quantum theory of radiation Q.5. Which of these is largest astronomical unit, light year and parsec. Q.6. Name various systems of units and discuss them briefly. Q.7. The Sun's angular diameter is measured to be 1920". The distance of the sun from the earth is 1.496x1011m. What is the diameter of the Sun ? Q.8. Explain the applications and limitations of dimensional analysis. Q.9. Convert 1 joule into ergs. Q.10. Assuming that the mass 'm' of the largest stone that can be measured by a flowing river depends on velocity 'v' of water, its density 'd' and acceleration due to gravity 'g'. Show that the mass varies directly as the sixth power of velocity of flow. Q.11. Write the dimensions of a/b in the relation: P=(a-t2)/bx. Where 'P' is the pressure, ' x' is the distance and 't' is the time. Q.12. The escape velocity from the surface of the earth is given by v=√2GM/R, where m is the mass, R is the radius of the earth. Check the correctness of the given formulae. Q.13. Write the dimensions of stress, universal gravitational constant, surface tension, impulse, thrust, pressure, work, angular momentum, power, coefficient of viscocity. Q.14. Draw Position – time graph and Velocity – time graph with positive acceleration, negative acceleration and zero acceleration. Q.15. Write the dimension of a and b in the relation P= where P is power, x is distance and t is time. Q.16. Pressure is defined as momentum per unit volume. Is it true? Q.17. A person travels along a straight road for the first half length with a velocity v1 and the second half length with velocity v2, what is the mean velocity of the person? Q.18. Define relative velocity of an object w.r.t. another. Draw position time graphs of two objects moving along a straight line, when their relative velocity is (i) zero (ii) non-zero. Q.19. A ball thrown vertically upwards with a speed of 19.6m/s from the top of a tower returns to the earth in 6 second. Find the height of tower. Q.20. Derive the equations of uniformly accelerated motion in one dimension by calculus method. (i) v=u+at (ii) s=ut+ at2 (iii)v2 = u2 + 2as
CHEMISTRY	CHEMISTRY ASSIGNMENT CHAPTER 1 BASIC CONCEPT OF CHEMISTRY Multiple Choice Questions (Type-I) 1. Two students performed the same experiment separately and each one of them recorded two readings of mass which are given below. Correct reading of mass is 3.0 g. On the basis of given data, mark the correct option out of the following statements. (i) Results of both the students are neither accurate nor precise. (ii) Results of student A are both precise and accurate. (iii) Results of student B are neither precise nor accurate. (iv) Results of student B are both precise and accurate. 2. A measured temperature on Fahrenheit scale is 200 °F. What will this reading be on Celsius scale? (i) 40 °C (ii) 94 °C (iii) 93.3 °C (iv) 30 °C 3. What will be the molarity of a solution, which contains 5.85 g of NaCl(s) per 500 mL? (i) 4 mol L–1 (ii) 20 mol L–1 (iii) 0.2 mol L–1 (iv) 2 mol L–1 4. If 500 mL of a 5M solution is diluted to 1500 mL, what will be the molarity of the solution obtained? (i) 1.5 M (ii) 1.66 M (iii) 0.017 M (iv) 1.59 M 5. The number of atoms present in one mole of an element is equal to Avogadro number. Which of the following element contains the greatest number of atoms? (i) 4g He (ii) 46g Na (iii) 0.40g Ca (iv) 12g He 6. If the concentration of glucose (C6H12O6) in blood is 0.9 g L–1 , what will be the molarity of glucose in blood? (i) 5 M (ii) 50 M (iii) 0.005 M (iv) 0.5 M 7. What will be the molality of the solution containing 18.25 g of HCl gas in 500 g of water? (i) 0.1 m (ii) 1 M (iii) 0.5 m (iv) 1 m 8. One mole of any substance contains 6.022 × 1023 atoms/molecules. Number of molecules of H2SO4 present in 100 mL of 0.02M H2SO4 solution is _____ (i) 12.044 × 1020 molecules (ii) 6.022 × 1023 molecules (iii) 1 × 1023 molecules (iv) 12.044 × 1020 molecules 9. What is the mass percent of carbon in carbon dioxide? (i) 0.034% (ii) 27.27% (iii) 3.4% (iv) 28.7% 10. The empirical formula and molecular mass of a compound are CH2O and 180 g respectively. What will be the molecular formula of the compound? (i) C9H18O9 (ii) CH2O (iii) C6H12O6 (iv) C2H4O2 11. If the density of a solution is 3.12 g mL-1, the mass of 1.5 mL solution in significant figures is _____. (i) 4.7g (ii) 4680 × 10-3 g (iii) 4.680g (iv) 46.80g 12. Which of the following statements about a compound is incorrect? (i) A molecule of a compound has atoms of different elements. (ii) A compound cannot be separated into its constituent elements by physical methods of separation. (iii) A compound retains the physical properties of its constituent elements. (iv) The ratio of atoms of different elements in a compound is fixed. 13. Which of the following statements is correct about the reaction given below: 4Fe(s) + 3O2 (g) → 2Fe2O3(g) (i) Total mass of iron and oxygen in reactants = total mass of iron and oxygen in product therefore it follows law of conservation of mass. (ii) Total mass of reactants = total mass of product; therefore, law of multiple proportions is followed. (iii) Amount of Fe 2 O 3 can be increased by taking any one of the reactants (iron or oxygen) in excess. (iv) Amount of Fe 2 O 3 produced will decrease if the amount of any one of the reactants (iron or oxygen) is taken in excess. 14. Which of the following reactions is not correct according to the law of conservation of mass. (i) 2Mg(s) + O2(g) → 2MgO(s) (ii) C3H8(g) + O2(g) → CO2(g) + H2O(g) (iii) P4(s) + 5O2(g) → P4O10(s) (iv) CH4(g) + 2O2(g) → CO2(g) + 2H2O (g) 15. Which of the following statements indicates that law of multiple proportion is being followed. (i) Sample of carbon dioxide taken from any source will always have carbon and oxygen in the ratio 1:2. (ii) Carbon forms two oxides namely CO2 and CO, where masses of oxygen which combine with fixed mass of carbon are in the simple ratio 2:1. (iii) When magnesium burns in oxygen, the amount of magnesium taken for the reaction is equal to the amount of magnesium in magnesium oxide formed. (iv) At constant temperature and pressure 200 mL of hydrogen will combine with 100 mL oxygen to produce 200 mL of water vapour. Multiple Choice Questions (Type-II) In the following questions two or more options may be correct. 16. One mole of oxygen gas at STP is equal to _____. (i) 6.022 × 1023 molecules of oxygen (ii) 6.022 × 1023 atoms of oxygen (iii) 16 g of oxygen (iv) 32 g of oxygen 17. Sulphuric acid reacts with sodium hydroxide as follows : H2SO4 + 2NaOH ⟶ Na2SO4 + 2H2O When 1L of 0.1M sulphuric acid solution is allowed to react with 1L of 0.1M sodium hydroxide solution, the amount of sodium sulphate formed and its molarity in the solution obtained is (i) 0.1 mol L-1 (ii) 7.10 g (iii) 0.025 mol L-1 (iv) 3.55 g 18. Which of the following pairs have the same number of atoms? (i) 16 g of O2 (g) and 4 g of H2(g) (ii) 16 g of O2 and 44 g of CO2 (iii) 28 g of N2 and 32 g of O2 (iv) 12 g of C(s) and 23 g of Na(s) 19. Which of the following solutions have the same concentration? (i) 20 g of NaOH in 200 mL of solution (ii) 0.5 mol of KCl in 200 mL of solution (iii) 40 g of NaOH in 100 mL of solution (iv) 20 g of KOH in 200 mL of solution 20. 16 g of oxygen has same number of molecules as in (i) 16 g of CO (ii) 28 g of N2 (iii) 14 g of N2 (iv) 1.0 g of H2 21. Which of the following terms are unitless? (i) Molality (ii) Molarity (iii) Mole fraction (iv) Mass percent 22. One of the statements of Dalton's atomic theory is given below: "Compounds are formed when atoms of different elements combine in a fixed ratio" Which of the following laws is not related to this statement? (i) Law of conservation of mass (ii) Law of definite proportions (iii) Law of multiple proportions (iv) Avogadro law Short Answer Type Questions 23. What will be the mass of one atom of C-12 in grams? 24. How many significant figures should be present in the answer of the following calculations? 25. What is the symbol for SI unit of mole? How is the mole defined? 26. What is the difference between molality and molarity? 27. Calculate the mass percent of calcium, phosphorus and oxygen in calcium phosphate Ca3(PO4)2. 28. 45.4 L of dinitrogen reacted with 22.7 L of dioxygen and 45.4 L of nitrous oxide was formed. The reaction is given below: 2N2(g) + O2(g) → 2N2O(g) Which law is being obeyed in this experiment? Write the statement of the law? 29. If a given mass of a gas occupies a definite volume, then the mass of one element that combine with a fixed mass of the other element, are in whole number ratio
BIOLOGY	Prepare a portfolio as an art integrated activity described in class for the diversity in living organisms found in Andaman and Nicobar Island

COMPUTER SCIENCE	1. Which is the correct operator for power(xy)? a) X^y b)X**y c)X^^y d)None of the mentioned 2. Which one of these is floor division? a)/ b)// c)% d)None of the mentioned 3. What is the order of precedence in python? i) Parentheses ii) Exponential iii) Multiplication iv) Division v) Addition vi) Subtraction a) i,ii,iii,iv,v,vi b)iii,i,iii,iv,v,vi c) ii,i,iv,iii,v,vi d)ii,iii,iii,iv,vi,v 4. What is answer of this expression, 22 % 3 is? a) 7 b)1 c)0 d)5 5. Mathematical operations can be performed on a string. State whether true or false. a) True b)False 6. Operators with the same precedence are evaluated in which manner? a) Left to Right b)Right to Left c)Can't say d)None of the mentioned 7. What is the output of this expression, 3*1**3? a) 27 b)9 c)3 d)1 8. Which one of the following has the same precedence? a) Addition and Subtraction b) Multiplication and Division c) Both Addition and Subtraction AND Multiplication and Division d) None of the mentioned 9. The expression Int(x) implies that the variable x is converted to integer. State whether true or false. a) True b)False 10.Write a function called calculate_area ( ) that takes base and height as an input argument and returns an area of a triangle as an output. 11. Write a short program that asks for your height in centimeter and then converts your height in feet and inches.(1 foot = 12 inches , 1 inch = 2.54 cm). 12. Write a program to compute simple interest and compound interest. 13. Write a program to compute area and circumference of a circle. 14. Write a program that asks the user for a year and print whether it is a leap year or not. 15. Explain the different types of operators in python .
COMMERCE STREAM	
ENGLISH	1. A photograph captures a moment in time. Describe one of your favourite photographs in the form of a poem or a paragraph and if possible, paste that photograph with the description. 2. Prepare a creative comparative study of Delhi, Anadaman & Nicobar (scrap book, brochures, etc.).
ACCOUNTANCY	1. Project work Prepare a Comprehensive project . 2.Solve the Assignment of Ch-2(Basic Accounting Terms), Ch-5 (Accounting Equation).
BUSINESS STUDIES	1. Collect information on any five sectors of the company that Make in India focuses on. Find out the amount of investment in these sectors in the past two years. What were the possible reasons that led to an interest of investors in these sectors? Present your report in the following format: Sector Investment in Year I Investment in Year II Possible reasons for the change 2. To study the profiles of any five neighboring grocery/ stationery store. And write a report on them. 3. Kiran is a sole proprietor. Over the past decade, her business has grown from operating a neighborhood corner shop selling accessories such as artificial jewellery, bags, hair clips and nail art to a retail chain with three branches in the city. Although she looks after the varies functions in all the branches. She is wondering whether she should form a company to better manage the business. She also has plans to open branches countrywide. a) Explain two benefits of remaining a sole proprietor. b) Explain two benefits of converting to a joint stock company. c) What role will her decision to go nationwide play in her choice of form of the organization?
ECONOMICS	Make a project from the following (any one): 1. Effect on PPC due to various government policies 2. Opportunity Cost as an Economic Tool (taking real life situations) 3. Effect on Equilibrium Prices in Local Market (taking real life situation or recent news) 4. Solar Energy, a Cost-Effective Comparison with Conventional Energy Sources 5. Any other newspaper article and its evaluation on basis of economic principles 6. Invisible Hand (Adam Smith) 7. Effect of Price Change on a Substitute Good (taking prices from real life visiting local market) 8. Effect of Price Change on a Complementary Good (taking prices from real life visiting local market) 9. Bumper Production- Boon or Bane for the Farmer
HUMANITIES STREAM	
ENGLISH	1. A photograph captures a moment in time. Describe one of your favourite photographs in the form of a poem or a paragraph and if possible, paste that photograph with the description. 2. Prepare a creative comparative study of Delhi, Anadaman & Nicobar (scrap book, brochures, etc.).
HISTORY	Case study – Britain or Iraq I – Britain – Read the novel Oliver Twist Write a summary of working conditions in the period of industrial revolution specially in the context of young children. II – Iraq – Read novels on contemporary Iraq – Post 1980 Write a summary of the political changes and its impact on the people of Iraq during the civil war and attack on Saddam Hussain's regime.
POLITICAL SCIENCE	1. Make a project on Constituent assembly of India. 2 Complete the assignment of Chapter 1.
EONOMICS	Make a project from the following (any one): 1. Effect on PPC due to various government policies 2. Opportunity Cost as an Economic Tool (taking real life situations) 3. Effect on Equilibrium Prices in Local Market (taking real life situation or recent news) 4. Solar Energy, a Cost-Effective Comparison with Conventional Energy Sources 5. Any other newspaper article and its evaluation on basis of economic principles 6. Invisible Hand (Adam Smith) 7. Effect of Price Change on a Substitute Good (taking prices from real life visiting local market) 8. Effect of Price Change on a Complementary Good (taking prices from real life visiting local market) 9. Bumper Production- Boon or Bane for the Farmer
HINDI	(क) जी 20 और भारत की भूमिका पर परियोजना कार्य बनाएं।
	(ख) भक्तिकाल के किन्हीं तीन कवियों की साहित्यिक पृष्ठभूमि का तुलनात्मक अध्ययन करते हुए परियोजना कार्य बनाएं।
	(ग) प्रतिदिन समाचार पत्र पढ़े व नए शब्दों के अर्थ लिखे।