

ST THOMAS SCHOOL INDIRAPURAM

Holiday Assignment 2019

CLASS-XI

ENGLISH

1. Revise the work done in the class.
2. The Literary Club of your school organised a visit to the 'Home for the Aged' in your city, where you interacted with the inmates and got an insight into their feelings. You were pained to hear about their loneliness and their craving for the company of their near and dear ones. In order to reach out to society you decide to write an article in 150 words on the topic 'Caring for Old during their Sunset Years.'
3. Make a chart of tenses in your register.
4. Enhance your communication skills by conversing with your friends and family members in English.

PHYSICS HOLIDAY HOMEWORK

SECTION 1

1. What is meant by dimensions of a physical quantity? What do you mean by dimensional equation?

2. Name at least seven physical quantities whose dimensions are ML^2T^{-2} .

3. Check the correctness of the relation

$$t = k \frac{\rho r^3}{S}$$

where ρ = density, r = radius and S = surface tension

4. Derive by the method of dimensions, an expression for the energy E of a body executing S.H.M, assuming that this energy depends upon the mass m , the frequency ν and the amplitude of vibration r .

5. According to Newton, the viscous force acting between liquid layers of area A and velocity gradient $\frac{dv}{dx}$ is given by

$$F = \eta A \frac{dv}{dx}$$

where η is a constant called coefficient of viscosity. Find the dimension of η .

6. In the gas equation

$$\left[P + \frac{a}{V^2} \right] [V - b] = R * \text{ absolute temperature .}$$

Find the dimensions of constant a and b .

7. The sides of a rectangle are 6.01 m and 12 m. Taking the significant figures into account find the area of the rectangle.

8. If energy, velocity and time are fundamental units, what will be the dimension of surface tension?

9. The refractive index of water μ has values 1.29, 1.33, 1.34, 1.35, 1.32, 1.36, 1.30 and 1.33. Calculate the mean value of μ , the mean value of absolute error, the relative error and the percentage of error.

- 10 . A motor car starts from rest and accelerates uniformly for 10seconds to a velocity of 20m/s.It then runs at a constant speed and is finally brought to rest in 40 m with a constant acceleration .Total distance covered is 640 m .Find the value of acceleration ,retardation and total time taken.
- 11 . Youngs modulus of steel is50 Newton/m .Express it in dyne/cm.Here dyne is CGS unit of force.
12. Determine the dimensional formula for k and w in the equation

$$x = a \sin (kx-wt)$$
where t is time and x is distance travelled.
- 13) A car starts from rest and accelerates uniformly for 10s to a velocity of 8m/s.It then runs at a constant velocity and is finally brought to rest in 64m with a constant retardation.The total distance covered by the car is 584m.Find the value of acceleration,retardation and total time taken
- 14) A body covers 4m in 3rd second and 12m in 5th second .If the motion is uniformly accelerated,How far will it travel in the next three seconds?
- 15) A ball is allowed to fall from the top of a tower 200m high.At the same instant,another ball is thrown vertically upwards from the bottom of the tower with a velocity of 40 m/s.When and where the two balls meet?
- 16) A jet plane travelling at a speed of 500km/h ejects the burnt gases at a speed of 1200km/h relative to the jet plane.Find the speed of the burnt gases with respect to a stationary observer on earth.
- 17) The displacement x of a particle moving in one dimension under the action of a constant force is related to time t by the equation

$$2t = \sqrt{x} + 3$$
where x is in metres and t in seconds .Find the displacement of the particle,when its velocity is zero.
- 18) The v-t graphs of two objects make angles of 30° and 60° with the time axis.Find the ratio of their acceleration.
- 19) If the distance covered by a moving object varies directly as the time ,what conclusions could you draw about the motion and the forces?
- 20) A particle moves in a straight line.Its displacement t seconds after leaving the fixed point is x metres,where $x = \frac{1}{2} t^2 + \frac{1}{2} t^3$. Find speed of the particle,when t= 10s and the value of t for which the acceleration of the particle is twice its initial acceleration.

SECTION 2

Write all the activities (as informed in the class) a separate interleaf copy .

Revise all the chapters taught in the class

BIOLOGY

1. Revise and learn chapters 5 and 6.Complete the exercise of chapter 6
Do Q. No-7,8 and 9 from the exercise of chapter 7.
2. Write Experiment No. 1 and 2 in your practical file

3. Make a herbarium of 6-10 plants from your locality. Write the common name and scientific name of the plant. Also write the floral characters and economic importance of the plant

CHEMISTRY

Do the worksheet uploaded on website-Structure of Atom

MATHEMATICS

Note: Attempt all questions. Attempt holiday assignment in your regular class register.

1. Let U be the universal set of all the students of class 11 of a school and A be the set of all girls in class 11. Find A'.
2. For all sets A, B and C. show that $(A-B) \cap (C-B) = (A \cap C) - B$.
3. If $A = \{1,3\}$, $B = \{2,4,6\}$, $C = \{0,2,4,6,8\}$. Find $(A \cup B) \cap (B \cap C)$.
4. Write down all the subsets of $\{1, 3, 5\}$.
5. Two finite sets have m and n elements. The total number of subsets of first set is 112 more than the total number of subsets of second set. Find the value of m and n.
6. In a group of 50 students, the number of students studying French, English, and Sanskrit are found to be as follows: French 17, English 13, Sanskrit 15, French and English 9, English and Sanskrit 4, French and Sanskrit 5, English, French and Sanskrit 3. Find the number of students who study : (i) French only (ii) French and Sanskrit but not English (iii) English only (iv) French and English but not Sanskrit (v) Sanskrit only (vi) At least one of the three languages (vii) None of the three languages .
7. Solve the following inequalities and show the graph on number line :

$$\frac{x}{4} < \frac{5x-2}{3} - \frac{7x-3}{5}$$
8. Solve the following system of linear inequalities graphically
 $4x + 3y \leq 60$, $y \geq 2x$, $x \geq 0$, $y \geq 0$, $x \geq 3$.
9. Draw an appropriate Venn diagram to show $A - (A \cap B)$.
10. A solution of 9% acid is to be diluted by adding 3% acid solution to it. The resulting mixture is to be more than 5% acid but less than 7% acid. If there is 460L of the 9% solution, how many litres of 3% solution have to be added.
11. Find the ratio in which the join of point A(2, 1, 5) and B(3, 4, 3) is divided by the plane $2x + 2y - 2z = 1$. Also find the co-ordinate of the point of division.
12. The mid - points of the sides of a triangle are (1,5,-1), (0, 4,-2) and (2,3,4). Find its vertices.
13. Solve the system of inequalities graphically:
 $3x+2y \leq 150$, $x + 4y \leq 80$, $x \leq 15$, $y \geq 0$, $x \geq 0$
14. Solve the inequalities and represent the solution on the number line
 $3x - 7 > 2(x - 6)$ and $6 - x > 11 - 2x$
15. Find all pairs of consecutive odd natural numbers, both of which are smaller than 18, such that their sum is more than 20.
16. Find the ratio in which XY – plane divides the joining of (2,4,-3) and (-3,5,4).

17. Show that the points $(4,7,8)$, $(2,3,4)$, $(-1,-2,1)$ and $(1, 2, 5)$ form a parallelogram.
18. If $A(3,2,0)$, $B(5,3,2)$, $C(-9,6,-3)$ are the three points forming a triangle. AD is the bisector of $\angle BAC$ meets BC in D . Find the coordinates of D and length AD.
19. Find the locus of a point which is equidistant from the point $(0,2,3)$ and $(2,-2,1)$.
20. Find the values of k so that the distance between the points $(7,1,-3)$ and $(4, 5, k)$ is 13units.

COMPUTER SCIENCE

Do the following programs in Python and write or paste the print out in practical file.

- 1) Ramesh's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write a program to calculate his gross salary.
- 2) The distance between two cities (in km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimeters.
- 3) Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a program to convert this temperature into Centigrade degrees.
- 4) In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write a program to find the total number of illiterate men and women if the population of the town is 80,000.
- 5) WAP to find greatest of three numbers entered from user using conditional operator.
- 6) WAP to test the validity of an character entered from user if it belongs to character set, digit or is a special symbol.
- 7) Write a program to find out whether no. entered is positive ,negative or zero.
- 8) Write a program to enter marks of 5 subjects from user. Find out the percentage and display the grade acc. to the criteria

Per	Grade
>90	A
60-89	B
41-59	C
<40	D

- 9) Write a program to calculate factorial of number using for and while loop both.
- 10) Write a program to find out number is prime or not.
- 11) Write a program to find whether no. entered is palindrome or not.
- 12) Write a program to display

a. 0, 1, 1, 2, 3, 5, 8, N terms.

b. 1, 3, 5, 7, 9, N

13) Write a program to calculate the sum of series

a. $1+3+5+7+\dots+N$

b. $1^3+2^3+3^3+4^3+5^3+6^3+\dots+N^3$

14). Write a program to present the user with menu

- a. Area of circle
- b. Area of rectangle
- c. Area of square
- d. Circumference of circle
- e. Exit

The program should perform acc. to user choice

➤ **Do the following questions from book-**

a) Chapter No-3-Unsolved Questions-Q5,Q6,Q7,Q8

ACCOUNTANCY

Note: 1. Attempt all questions.

2. Attempt holiday assignment in your regular class register/note copy.

Q1. You are a senior accountant of Ramona Enterprises Limited. What objectives of accounting will you follow in order to maintain your organisation accounts?

Q2. Discuss briefly accounting concepts/assumptions.

Q3. Explain the following accounting terms with example:

(i) Fixed assets **(ii)** Profit **(iii)** Gain **(iv)** Non-current liabilities **(v)** Capital

Q4. Mention the rules of debit & credit regarding modern approach & traditional approach.

Q5. Differentiate between cash basis & accrual basis of accounting. (five points at least)

Q6. Classify the following into Assets, Liabilities, Capital, Revenue & Expense:

(i) Building **(ii)** Wages **(iii)** Credit sales **(iv)** Credit purchase

(v) electricity charge due but not paid

(vi) Office rent paid in advance **(vii)** Depreciation **(viii)** Additional capital introduced in firm **(ix)** Drawings **(x)** Discount allowed

Q7. Prove that accounting equation is satisfied in all the following cases:

(i) Commenced business with cash Rs 100000.

(ii) Paid rent Rs 8000 including Rs 2000 as advance.

(iii) Bought goods for cash Rs 60000 and on credit Rs 40000.

(iv) Sold the goods bought on credit for Rs 50000.

(v) Purchased furniture worth Rs 20000 for office use & worth Rs 10000 for domestic use.

BUSINESS STUDIES

Visit a sole proprietor business or a partnership firm. Analyse and describe the form of organisations, name of owners ,location, difficulties in its formation etc

Prepare a project file as per C.B.S.E guidelines and instructions given in class.

PHYSICAL EDUCATION

1- Labelled diagram of 400M Track and Field with computation.

2-Computation of BMI of 10 family member or neighbourhood and graphical representation of data.

3- Labelled diagram of field and equipment of any one game of your choice out of the below list.

(1)- Athletic (2) Badminton (3) chess (4) Yoga

4- List of current National Sports Awardees (Arjuna Award, Dronacharya Award and Rajiv Gandhi KhelRatna Award)

ECONOMICS

The objective of HHW is to enable learners to probe deeper in to theoretical concepts learnt in class XI before summer break. Students should attempt answers on A-4 sheets and submit after summer break. HHW will be considered under half yearly exams practical.

Q1. Will you call the following as Statistics? Give reasons.

- a. Rajesh is 40 years old.
- b. Anshika is older than Parth by 6 years.
- c. Sakshi secured 50% marks , Mohan 40% and Suresh 60% in Statistics.
- d. Mahesh is more intelligent than Ramesh.

Q2. List different activities of your family. Would you call them economic activities? Give reasons.

Q3. Identify your wants. How many of them can you fulfill? How many of them are unfulfilled ? Why

you are unable to fulfill them?

Q4. Identify the following statements as positive or normative economics and give reason also.

- a. Economics is the study of choices.
- b. Govt. should be concerned with how to reduce unemployment.
- c. According to an estimate, inspite of severe shortage, more than 10% of houses in Indian citie are lying vacant.
- d. Accommodation of refugees is posing a big problem for Europe.

Q5. Are the following microeconomic studies or macroeconomic studies ?

- a. Inflow or outflow of foreign exchange.
- b. Supply of money.
- c. Household expenditure
- d. Market demand of apples.
- e. Supply of wheat,
- f. Aggregate of demand.
- g. Film industry of India.
- h. Factor price determination .
- i. Price determination of a product.
- j. Level of output of an economy.

Q6. Due to cyclone 'Fani' ,tentative loss of Rs. 12000 crore , killed 64 people and damaged more than 5 lakh dwelling units in state's coastal districts. What would be the impact on PPC of

'Odisha' ? Explain with the help of PPC.

Q7. Suppose your parents have offered three options:

- a. Watch 'End game' movie .
- b. Have dinner in hotel with family.
- c. Party with friends in mall.

What is your choice? What would be the opportunity cost of your choice.

Q8. Prepare your utility schedule if you consume 4 mangoes at a time and a separate schedule if you drink 3 glasses of lemon squash at a time. Observe whether the LDMU will be applicable or not?

OR

Visit the fruit market and ask the prices of mangoes , melon and watermelon if you would like to purchase 1kg. , 3kg. , 5kg. and 10 kg. of each fruit. Prepare demand schedule for each fruit and observe whether the law of demand will be applicable or not?

NOTE: a. *Work in fair note books should be complete.*

b. *Test of all the chapters done in class will be on 3-7-19.*

ENJOY HOLIDAYS

POLITICAL SCIENCE

1. PROJECT WORK:

- Prepare a project, details of which are shared in the classroom.

2. READING TASK

- Read the newspaper especially the editorial page daily.
- Revise Chapter 1 to 3 (Political Theory)

ग्रीष्मावकाश कार्य (सत्र-2019-20)

कक्षा-11 विषय-हिन्दी(केंद्रिक)

1. 'धर्म और राजनीति के क्षेत्र में साहित्य की भूमिका' विषय पर परियोजना कार्य तैयार कीजिए।
परियोजना कार्य के लिए फाइल तैयार की जाएगी। 10 से 12 पृष्ठों का यह सम्पूर्ण परियोजना होगी।

पृष्ठ- 1. आपका पूरा विवरण विषय सहित

2. परियोजना का मूल उद्देश्य

3. आभार (Acknowledgement)

4. विषय के उपविषय (Sub-Topics)

5 से 10. उपविषयों का स्पष्टीकरण

11. सार

12. संदर्भ-सूची(Bibliography)

2. पढ़ाए पाठों की पुनरावृत्ति करें।

GEOGRAPHY (2019-20)

DISASTER MANAGEMENT

PROJECT REPORT

CLASS - XI E

Guidelines for Preparation of Project Report:

1. The total length of the Project Report will not be more than 15 pages of A-4 size paper.
2. The project report will be handwritten and credit will be awarded to original drawings, illustrations and creative use of materials.
3. The project report will be presented in a neatly bound decorated folder with proper file cover.
4. The project report will be developed and presented in the following order:
 - Page- 1 **Cover Page**: Showing project title, school, session and student information.
 - Page- 2 **Contents**: List of contents with page numbers.
 - Page- 3 **Acknowledgements**: Acknowledging the institution, offices and libraries visited and persons who have helped.
 - Page- 4 **Project Overview**: Purpose, Aim, Methodology and experiences while doing the project.
 - Page- 5 onwards **Subject Matter**: Topic, Introduction, relevant headings, causes, effect, suggestions, case study and mitigation mechanisms.
 - Second Page- **Conclusions**: Based on findings. (Summary and Suggestions)
 - Last Page- **Bibliography**: It should have the title, pages referred, author, publisher, year of publication and if a website the name of the website with the specific website link which has been used.
5. Topics and file cover:
 - Cyclone (File cover: Blue)
 - Earthquake (Brown)
 - Drought (Yellow)
 - Volcano (Gray)
 - Flood (Blue or white)

All the photographs and sketches should be labeled and acknowledged.

Last date of submission: **8th July, 2019**

Note: Distribution of topics and briefing will be in the class by the subject teacher.

HISTORY

Complete the assigned project.

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