CASE STUDY QUESTIONS:

An asana is a body posture, originally and still a general term for a sitting meditation pose, and later extended in hatha yoga and modern yoga as exercise, to any type of pose or position, adding reclining, standing, inverted, twisting, and balancing poses. In the figure, one can observe that poses can be related to representation of quadratic polynomial.

(i) The graph of $x^2 + 1 = 0$ will be of which shape?

(ii) The graph of parabola opens downwards, if

_____.

(a) $a \geq 0$ (b) $a = 0$ (c) $a < 0$ (d) $a > 0$

Flipkart is an Indian e-commerce company, headquartered in Bangalore, Karnataka, India, and incorporated in Singapore as a private limited company. The company initially focused on online book sales before expanding into other product categories such as consumer electronics, fashion, home essentials, groceries, and lifestyle products

Flipkart sells 10 types of items which are packed into various sizes of cartons which are given below

Carton type	Inner Dimensions (L × W)cm²
Small	6 × 8
Medium	12 × 24
Large	24 × 36
Extra large	36 × 48
XXL	48 × 96

Flipkart places supporting thermocol sheets inside every package along the edges. The company thought of procuring same sized sheets for all types of cartons.   (i) What should be the maximum size of the sheet that fits into all type of cartons?

(ii) How many such sheet sizes are possible?

(iii) The company later introduced a new size of carton called semi large whose measurements are 14 x 15. Whether the existing maximum size sheet fits this shape?

(iv) What should have been the size of the semi large carton (which is larger than medium carton but smaller than large carton) so that the maximum sized sheet remains same?

Ashish supplies bread and jams to a hospital and a school. Bread and jam are supplied in equal number of pieces. Bread comes in a packet of 8 pieces and Jam comes in a pack of 6 pieces.

On a particular day, Ashish has supplied x packets of bread and y packets of jam to the school. On the same day, Ashish has supplied 3x packets of bread along with sufficient packets of jam to hospital. It is known that the number of students in the school are between 500 and 550.

(i) How many students are there in school?

(ii) How many packets of bread are supplied in the school?

(iii) How many packets of jams are supplied in the school?

(iv) How many packets of bread are supplied in the hospital?

(v) How many packets of jams are supplied in the hospital?

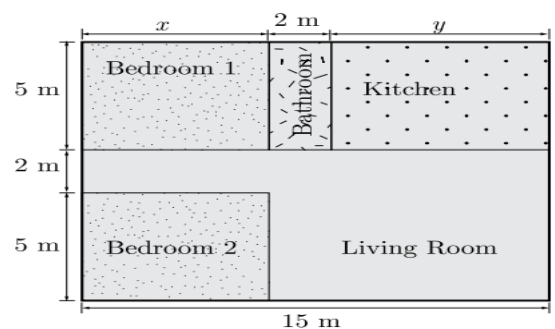|	
Box : For the box to satisfy certain requirements, its length must be three unit greater than the width, and its height must be two unit less than the width. 	(i) If width is taken as x , find the polynomial that represent volume of box. (ii) Find the polynomial that represent the area of paper sheet used to make box. (iii)If it must have a volume of 18 unit, what must be its length and height ? (iv) If box is made of a paper sheet which cost is Rs 100 per square unit, what is the cost of paper?
Actual Number of Calories : University of Arkansas researchers discovered that we underestimate the number of calories in restaurant meals. The next time you eat out, take the number of calories you think you ate and double it. The researchers concluded that this number should be a more accurate estimate. The actual number of calories in one portion of hamburger and fries and two portions of pizza is 4240. The actual number of calories in two portions of hamburger and fries and one portion of pizza is 3980.	The researchers concluded that this number should be a more accurate estimate. The actual number of calories in one portion of hamburger and fries and two portions of pizza is 4240. The actual number of calories in two portions of hamburger and fries and one portion of pizza is 3980. (i) Find the actual number of calories in one portions of hamburger and fries. (ii) Find the actual number of calories in one portions of pizza.
Architect : An architect is a skilled professional who plans and designs buildings and generally plays a key role in their construction. Architects are highly trained in the art and science of building design. Since they bear responsibility for the safety of their buildings' occupants, architects must be professionally licensed Varsha is a licensed architect and design very innovative house. She has made a house layout for her client which is given below. In the layout, the design and measurements has been made such that area of two bedrooms and kitchen together is 95 sq. m.	 (i) Which pair of linear equations does describe this situation ? (ii) What is the length of the outer boundary of the layout. (iii) What is the area of bedroom 1 ? (iv) What is the area of living room in the layout ? (v) What is the cost of laying tiles in Kitchen at the rate of Rs. 50 per sq. m ?

Mr. RK Agrawal is owner of a famous amusement park in Delhi. The ticket charge for the park is Rs 150 for children and Rs 400 for adult. Generally he does not go to park and it is managed by team of staff. © CanStockPhoto.com - csp72442690 One day Mr Agrawal decided to random check the park and went there. When he checked the cash counter, he found that 480 tickets were sold and Rs 134500 was collected.	(i) Let the number of children visited be x and the number of adults visited be y . Which of the following is the correct system of equations that model the problem ? (ii) How many children visited the park ? (iii) How many adults visited the park? (iv) How much amount collected if 300 children and 350 adults visited the park? (v) One day total visited children and adults together is 750 and the total amount collected is Rs 212500. What are the number of children and adults visited the park ?
Alumni Contributions : Alumni can help college sustain through their donations and voluntary help. Alumni can also be helpful in providing valuable financial, intellectual and human resource. If a big chunk of money that institutes require comes from alumni, it will help those institutes remain competitive. ALUMNI	Alumni association of NIT Kuruskhstra donated Rs 100,000 to his alma mater. The college used the funds to make a loan to a science student at 7% interest and a loan to a engineering student at 6% interest. That year the college earned Rs 6350 in interest. (i) How much was loaned to engineering student? (ii) How much was loaned to science student?

(Homework on file paper)

1. Write different articles like- self composed poems, reports on excursion, speech, diary entries, story writing, riddles, puzzles, etc. for School Magazine

Q 2. Interview your parents / grandparents to find out about their schools when they were of your age. Eg. Leisure time activities, Games, Customs practiced etc. Minimum 10 questions. Make it interesting. Your interview must have a lot of details for the reader to understand.

3. Write a short poem on any topic OR Your any experience which you want to express: (It must be your own creation, do not copy from any source)

4. Read story No.2, 3, & 4 from your Foot Prints Without Feet and write Summary of each story.

5. Learn Q/Ans and word meaning of all lessons which are completed till now.

6. Make a collage.

On the state 'Meghalaya'. (Its culture, vegetation, food and traditional dresses)
(Collect slogans, thoughts & pictures from newspapers and magazines etc.)

7. Letter Writing-(one example for each)

Business Letter- Complaint, Placing Order, Enquiry.
Official Letter- Editor, any Office/Department of Govt.

SUMMER VACATION HOME WORK

CLASS -X   SUBJECT – SCIENCE

Q1. Write symbols of elements and their name given in your textbook (chapter 1 to 4 and learn them)

Q2. Write the name of compounds and their name given in you r text book . Identify them into acids bases and salts and learn them .(cha.1 to 4)

Q3.Write law of mass of conservation.

Q4. What is a balanced chemical equation ? Why should chemical equations be balanced?

Q5.Write the balanced equation for the following chemical reactions.

(i)   Hydrogen + Chlorine → Hydrogen chloride
(ii)   )   (ii) Barium chloride + Aluminium sulphate → Barium sulphate + Aluminium chloride
(iii)   )   (iii) Sodium + Water → Sodium hydroxide + Hydrogen

Q6. Write a balanced chemical equation with state symbols for the following reactions.

(i)   Solutions of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.
(ii)   )   Sodium hydroxide solution (in water) reacts with hydrochloric acid solution (in water) to produce sodium chloride solution and water.

Q7. Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions.

Q8.What is the difference between displacement and double displacement reactions? Write equations for these reactions.

Q9. Make ten Assertion and Reason based questions from chapter 1 and chapter 10 and also write the answer.

Q.10. Revise ch 1 and ch 10

Q11. Prepare any one Project or activity (click on given link for detail)

(i) For inspire Manak Award

https://www.inspireawards-dst.gov.in/

(ii)) For National Children Science Congress

https://www.indiascienceandtechnology.gov.in/programme-schemes/human-resource-and-development/national-children%E2%80%99s-science-congress

(iii) Information about Vidyarthi Vigyan Manthan

https://vikaspedia.in/education/policies-and-schemes/vidyarthi-vigyan-manthan-vvm

(iv) For Jawaharlal Nehru National Science, Mathematics and Environmental Education

https://jnnsmee.ncert.org.in/index.php/theme/subtheme/2

(v) For National standard examination in Physics

https://iapt.org.in/?id=2431

ग्रीष्मकालीन अवकाश गृह कार्य

विषय – हिन्दी ,कक्षा – 10

निर्देश:-सभी विद्यार्थी यह कार्य ग्रीष्मकालीन अवकाश में फाइल में करेंगे।

1.गोपियों की जगह आप होते तो अपना तर्क किस प्रकार देते ?

2.किसी एक स्वतंत्रता सेनानी का सचित्र वर्णन कीजिए ।

3. गोस्वामी तुलसीदास का साहित्यिक जीवन परिचय लिखिए ।

4. आपके विद्यालय में शारीरिक रूप से चुनौतीपूर्ण विद्यार्थी हैं। उनके लिए विद्यालय परिसर और कक्षा-कक्ष में किस तरह के प्रावधान किए जाएँ प्रशासन को इस संदर्भ में पत्र द्वारा सुझाव दीजिए।

5.सूरदास जी की प्रमुख रचनाओं के बारे में संक्षेप में लिखिए ।

6.नेताजी सुभाषचंद्र बोस के व्यक्तित्व और आज़ादी के आंदोलन में उनके योगदान पर एक परियोजना तैयार कीजिए।

7.राम और लक्ष्मण की तीन –तीन विशेषताएं लिखिए ।

8.आप से किसी महापुरुष की मूर्ति लगाने के लिए कहा जाए तो आप किसकी मूर्ति लगाएंगे, और क्यों ?

9.क्षितिज भाग-2 के पाठ 1 से 2 एवं पाठ-10 से 12 एवं कृतिका के पाठ माता का अँचल और साना-साना हाथ जोड़ि पढ़ें । पढ़ते समय अपने साथ पेन्सिल रखें एवं कठिन शब्द जो आपको नहीं आते उसे अंडर लाइन करें एवं अपनी फाइल में लाईन वाले पृष्ठ पर 5-5 बार सुन्दर -सुन्दर सुलेख के रूप में लिखें।

HOLIDAY HOMEWORK(ARTIFICIAL INTELLIGENCE) CLASS X	
DATE: 8MAY TO 10MAY	Q1) DRAW COMMUNICATION PROCESS CYCLE AND EXPLAIN ITS ELEMENTS.[IN CLASS NOTEBOOK]
DATE:13MAY TO 17 MAY	Q2) SUPPOSE YOU HAVE ORDERED AN ARTIFICIAL INTELLIGENCE BOOK OF CLASS X FROM ANY POPULAR E-COMMERCE WEBSITE. AFTER RECEIVING THE BOOK YOU HAVE TO WRITE FORMAL AND DESCRIPTIVE FEEDBACK. [IN CLASS NOTEBOOK]
DATE:20MAY TO 30 MAY	Q3)WRITE SOME APPLICATION AREAS OF ARTIFICIAL INTELLIGENCE. EXPLAIN THE WORKING AND USES OF ANY TWO AI BASED MACHINES/MODELS/SOFTWARES [IN PRACTICAL FILE]
DATE:5 JUNE TO 10 JUNE	Q4) DESIGN CODES/SYMBOLS FOR A-Z AND 0-9 AND ENCODE YOUR MESSAGE (BY THE SENDER) AND DECODE IT USING SAME CODES/SYMBOLS (BY THE RECEIVER). MESSAGE: CHOOSE YOURSELF (WITHIN 80 WORDS) [IN PRACTICAL FILE]
DATE:12JUNE TO 15JUNE	Q5) MAKE A CHART OF DO'S AND DON'T S OF FORMAL COMMUNICATION. [IN PRACTICAL FILE]