

Class: XI SCI

Dear Parents,

Winter vacation has begun and it's time to have a new learning experience. We have compiled a set of sheets and some activities to keep our child creatively engaged during these holidays. Creativity is a part of our makeup, as we all agree that without it the purpose of work seems to go nowhere. Children must buckle down and satisfy themselves and exhibit their creativity. These sheets are not just fun but will also help our child to learn and observe new things. You must help your child in doing these sheets. You need to read the instructions to help them wherever necessary. There are some activities in which you can also join your child and make the activity more meaningful for him/her. Some points to keep in mind:

• Holiday homework is to be done in the sheets provided. In case any activity requires any extra sheet, please use an A-4 size sheet only.

• Homework has to be submitted on the first day of school after vacation.

• Make sure your child completes the homework before coming back to school and submits the same to the subject teacher.

• Please take care of the neatness of the work.

Have a very happy and fruitful vacation!!!



"Creativity is when sights

that everyone sees arouses thinking that nobody else has thought."

Anonymous Senior Section Educator



HOLIDAY HOMEWORK Session 2019-2020

Class: XI SCI

Subject: English

- Q1) a) Change from Active to Passive
 - 1 Cats catch mice.
 - 2. They are picking some flowers.
 - 3. Ashok has written this letter.
 - 4. Hari stole my book.
 - b) Fill in the blanks with the correct form of the verb given in brackets.
 - 1.I-----(write) a letter to her yesterday.
 - 2. The train -----(left) before I arrived.
 - 3. We -----(play) when you came.
 - 4. They -----(reach) the station before the train starts.
 - c) Fill in the blanks with the correct determiner.
 - 1. Did you buy -----stamps?
 - 2. Will you give me -----sugar?
 - 3. He is -----honest man.
 - 4. I met -----interesting people last night.
- Q2) Write a letter to your friend telling him how you spent your winter vacations.
- Q3) Write a letter to the Commissioner of Chennai Corporation, complaining about the poor sanitary conditions in your locality.
- Q4) You are Vinod/Vimla. You are worried about the increase in the prices of essential commodities like gas, pulses, vegetables etc. Write an article on this in about 150-200 words for publication in a local daily.
- Q5) Mention the ways in which the sparrows expressed their sorrow when the author's grandmother died.
- Q6) List the steps taken by the captain
 - (1) to protect the ship when rough weather began.
 - (2) to check the flooding of the water in the ship.
- Q7) What is the Green Movement?
- Q8) Who had the crazy streak in the family and who was the natural descendant of that streak in the tribe?
- Q9) Describe Ranga's village.
- Q10) What advice did Yuri give to Albert before meeting Dr. Weil?
- Q11) Compare and contrast Mrs Pearson and Mrs Fitzgerald on the basis of the play,"Mother's Day."
- Q12) Do you think the title of the story "Birth" is apt? If so, why?
- Q13) How did the idiot choose the next king?
- Q14) What impressions of Shahid do you get from the lesson?
- Q15) What do you understand by the terms "Outsider art" and "Art Brut"? and "Art Brut"?

Subject Teacher: Mr. Shailendra Rikki



Class: XI SCI

Subject: Mathematics

GENERAL INSTRUCTIONS:

- There are 20 questions in all.
- Question 1 to 5 carries 1 mark each and 6 to 20 carries 3 marks each.
- 1. Find the value of $\tan\left(\frac{13\pi}{12}\right)$.
- 2. Find the coefficient of x^5 in $(x + 3)^8$.
- 3. Line through the points (-2,6) and (4,8) is perpendicular to the line through the points (8,12) and (x,24). Find the value of x.
- 4. If $C_{18}^n = C_{12}^n$, then find the value of C_{32}^n .
- 5. From a class of 25 students, 10 are to be chosen for an excursion party. There are three students who decided that either all of them will join or none of them will join. In how many ways can the excursion party be chosen?
- 6. Find the number of arrangements of the letters of the word INDEPENDENCE. In how many of these arrangements: i) do all vowels occur together.

ii) do the word begins with I and ends in P?

- 7. If A and G be AM and GM respectively between the two positive numbers, prove that the numbers are A $\pm \sqrt{(A+G)(A-G)}$.
- 8. Convert the given complex number $z = \frac{i-1}{\cos\frac{\pi}{3} + i \sin\frac{\pi}{3}}$ in polar form.
- 9. Prove by using principle of mathematical induction,

$$1+3+3^2+\dots+3^{n-1}=\frac{3^{n-1}}{2}$$
, for all $n \in \mathbb{N}$.

- 10. If pth, qth and rth terms of a GP are a,b and c respectively. Prove that: $a^{q-r}b^{r-p}c^{p-q} = 1.$
- 11. The vertices of \triangle PQR are P (2,1), Q(-2,3) and R(4,5). Find the equation of the median through the vertex R.
- 12. Find the coordinates of the foot of perpendicular from the point (-1,3) to the line 3x 4y 16 = 0.
- 13. Solve for $x : 2 \cos^2 x + 3 \sin x = 0$.
- 14. Find the domain and range of the real function f defined by $f(x) = \sqrt{x-1}$.
- 15. Find the equation of the circle which passes through the points (1,3) and (2,-1) and has its centre on the line 2x+y 4 = 0.

- 16. Find: i) the length of major and minor axis ii) coordinate of the vertices iii) Coordinates of foci iv) eccentricity v) length of latus rectum of the ellipse $\frac{x^2}{49} + \frac{y^2}{36} = 1$.
- 17. Find the ratio in which the line segment, joining the points P (2,3,4) and Q (-3,5,-4) is divided by the yz plane. Also, find the point of intersection.
- 18. Find the sum to n term of the series whose nth term is $(n^2 + 2^n)$.
- 19. Using binomial theorem, prove that $6^n 5n$, when divided by 25, always leaves remainder 1, where $n \in N$.
- 20. Show that: $\cos 6x = 32\cos^6 x 48\cos^4 x + 18\cos^2 x 1$.

Subject Teacher: Ms. Saswati Roy

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HOLIDAY HOMEWORK Session 2019-2020

Class: XI SCI

Subject: PHYSICS

Prepare a detailed hand-written report in separate folder/file on the project topic which we have already discussed in the classroom. You have to prepare all according to the guidelines given and submit the same on the first day of school after winter vacation. Your project report should contain following pages:

- 1) Front Page
- 2) Certificate
- 3) Acknowledgement
- 4) Project topic
- 5) Index
- 6) Introduction
- 7) Theory/Concepts
- 8) Derivations if required
- 9) Paste photographs/diagrams if required
- 10) Demonstration model if necessary
- 11) Conclusion
- 12) Bibliography
- 13) Thank you

Subject Teacher: Mr. Kuldeep Kumar Verma



Class: XI SCI

Subject: Chemistry

General instructions:

- 1. Complete the homework in a separate notebook.
- 2. Questions of one chapter must be done at one place. Answers of next chapter must start after the completion of one chapter.
- 3. Write all the necessary steps required in the question.

CHAPTER 1 Page no. 25 and 26 question no. 1.1 to 1.12

CHAPTER 2 Page no. 69 to 73, question no. 2.5 to 2.21, question no. 2.32 to 2.61

CHAPTER 5 Page no. 158, question no. 5.1 to 5.19

CHAPTER 6 Page no. 189 to 191, question no. 6.7 to 6.20

CHAPTER 7 Page no. 233 to 238, question no. 7.8 to 7.24, question no. 7.41 to 7.73

Note: Page no. may vary according to new or old book but the question numbers are same.

ALL THE BEST, HAPPY HOLIDAYS.

Subject Teacher: Mr. Avinash Divedi



Class: XI SCI

Subject: Biology

General instructions-

- 1. Do your work in a separate note book.
- 2. Work should be neat and clean

Short answer type questions-

- 1. List significant features of a respiratory surface.
- 2. Why is it dangerous to sleep in a close room with an open burning heating stove?
- 3. What is nephridiophore?
- 4. What is dialysis?
- 5. Which products are eliminated by serum?
- 6. What is the role of liver in excretion?
- 7. What are thin & thick filaments of a skeletal muscle made up of?
- 8. Differentiate between spinal nerves & cranial nerves?
- 9. Name the photosensitive cells of eye. What is their role?
- 10. Which part of the nose helps us to smell? Name the important glands present there?
- 11. What happens during repolarisation?
- 12. Why is insulin considered to be an anabolic hormone?
- 13. What is the co-relation between goiter& thyroid?
- 14. What kind of genetic material is found in viruses?
- 15. What is a mesosome in a prokaryotic cell? Mention the functions that it performs?
- 16. Multicellular organisms have divisor of labour.Explain?
- 17. What are the characteristics of prokaryotic cells?
- 18. Explain the formation of ATP?
- 19. Compare the structure of mRNA and tRNA?
- 20. Compare cellulose and chitin?

- 21. Define 'Lock & Key' hypothesis?
- 22. What is the role of minerals in animals?
- 23. Why are proteins important for us?

Draw the diagram of the followings-

- 1- Bones of rib cages
- 2-Detailed structure of malphigian tubule.
- 3-L.S.Heart.
- 4- Diagrammatic view of human respiratory system.
- 5. Arrangement of different types of teeth in the jaw.
- 6. Eye ball.
- 7. Diagrammatic presentation of mitosis & meiosis
- 8. Structure of brain.

Subject Teacher: Mr. Deepak Sharma



HOLIDAY HOMEWORK Session 2019-2020

Class: XI SCI

Subject: Physical Education

GENERAL INSTRUCTIONS:

Follow the Cbse guidelines to complete the project file.

Only hand written project file will be accepted.

Prepare your note book with All chapters in a good handwriting.

Note:-

- During the winter break students have to practice AAHPER FITNESS TEST.
- After Completing the winter break test will be conducted in school campus.
- This All Item shell include on project file.
- Record file shall include Labeled diagram of 400m track & Field with computations And Pictorial presentation of any five Asanas for improving concentration.

Practice Physical fitness (AAHPER TEST) shall include:-

- Standing Broad Jump
- Sit & Reach
- Shuttle Run
- 100 mtr Run
- 600mtr Run
- Madison- ball throw

Complete the project file only following topics

Skill of any one individual Game of Choice from the giving list.

- Archery
- Badminton
- Gymnastics
- Judo
- Swimming
- Table Tennis
- Taekwondo
- Bocce
- Tennis

Labelled diagram of field and equipment of any one game of your choice out of the above list.

Health Check up Computation of BMI from Family or neighbourhood and graphical representation of the data.

The following research work are include in project file:- Explanation and list of current national awardees 2019. (Dronacharya Award, Arjuna Awards & rajiv Gandhi khel ratna Awards.

Subject Teacher: Mr. Kamal Sharma



HOLIDAY HOMEWORK Session 2019-2020

Class: XI SCI

Subject: Computer Science

Instructions:

- You need to submit your **Winter Break Assignment** on the first day of the re-opening of the school in file.
- 1. Calculate the area of rectangle
- 2. Calculate Grade on the basis of marks obtained
- 3. Factorial of a number
- 4. Sum of digits of a number
- 5. Product of digits of a number
- 6. Find the largest and smallest numbers in a list.
- 7. Test for prime Number.
- 8. Find whether a string is a palindrome or not.
- 9. Find whether a Number is a palindrome or not.
- 10. Given two integers x and n, compute xn.
- 11. Compute the greatest common divisor and the least common multiple of two integers.
- 12. Test if a number is equal to the sum of the cubes of its digits. Find the smallest and largest such numbers.
- 13. Find the sum of squares of the first 100 natural numbers.
- 14. Test if a number is equal to the sum of the cubes of its digits. Find the smallest and largest such numbers in the range of 100 to 1000.
- 15. Program to print Fibonacci Series
- 16. Print using loop



- 17. Program for arithmetic calculator according user choice
- 18. Write a python program to calculate the length of a string.
- 19. Write apython program to count the number of characters (character frequency) in a string.
- 20. Write a program to get a string from a given string where all occurrences of its first char have been changed to'\$', except the first char itself.
- 21. Write a program to remove the nth index character from a nonempty string.
- 22. Write a python program to print the index of the character in a string.
- 23. Write a python program to count and display the vowels of a given text.
- 24. Write a python program to sum all the items in a lsit.
- 25. Write a python program to get the largest number from a list.
- 26. Write a python program to remove duplicate from a list.

Subject Teacher: Mr. Akash Saxena