

ST. JOSEPH'S SCHOOL, MAHARAJGANJ

SESSION: 2024-25

Have a Happy
Vacation!
Stay safe and enjoy!



HOLIDAY HOMEWORK-CLASS XI(MATHS)



ST. JOSEPH'S SCHOOL, MAHARAJGANJ PREFACE

Dear students! Summers are here in all its glory and if summers are here holidays can't be too far behind. It's time to enjoy your vacations with family and friends. It is also time to learn new things from your surroundings and experiences. Explore new places, try new skills, draw and colour, play both indoor and outdoor games and keep yourself fit. We wish you an enjoyable and fun packed summer break from May 18th, 2024. We will meet again after the vacation on June 24th, 2024.

Remember to bring all your assignments.

Happy Holidays!

CHEMISTRY

1. Prepare a chart of-
 - a. Periodic table
 - b. Atomic model (Bohr's model).
2. Solve the NCERT exercise from chapter 1.
3. Prepare a 3D model of-
 - a.) sp^3 -tetrahedral
 - b.) sp^3d -trigonal by pyramidal
 - c.) sp^3d^2 -octahedral
 - d.) dsp^3 -square pyramidal.
4. Write down the experiment 1,2&3 from lab manual in practical notebook.

PHYSICAL EDUCATION

1. Take part in any two form of physical activity for one week (the activity can be any sports, simple jogging/walking, recreational activity, football, volleyball, cricket etc.) after a week fill the table given below.

- * Name of the activity.
- * Historical background and introduction about that particular game.
- * What motivated you to choose this activity?
- * How do you feel after participating in this activity?
- * Would you like to continue participation in this activity?

ENGLISH

1. Newspaper Activity

Reading the newspaper is a habit that will help you throughout your life, because of the many benefits it has. This vacation, use the newspaper to enhance your vocabulary. As you read the newspaper, pick out a new word that you come across. Cut out the portion of the paper that contains the word. Paste it in your copy and highlight that word. Look up the meaning and usage and frame 2 sentences using the new word you have learnt. You have just made friends with a new word!!

Do these activities till you have at least 15 new words in your repertoire.

2. The lesson 'The Portrait of a Lady' suggests a growing distance between the younger and older generation. Write a speech in about 150 words to be delivered in the morning assembly of the school on the above topic, on the basis of your reading of the text.

MATHEMATICS

LONG ANSWER TYPE QUESTIONS

1. Let A, B and C are sets. Then show that $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

2. Find the range of the following functions given by

$$f(x) = \frac{x^3}{x^2 - 6x + 8}$$

3. Find the domain and Range of the function $\frac{1}{\sqrt{x-5}}$

4. Let $A = \{9, 10, 11, 12, 13\}$ and let $f: A \rightarrow N$ be defined by $f(n) =$ the highest prime factor of n , find the range of f .

5. Let A and B be sets. If $A \cap X = B \cap X = \phi$ and $A \cup X = B \cup X$ for some set X , shows that $A = B$.

ACTIVITIES

ACTIVITY : To represent set theoretic operations using Venn

diagrams. MATERIAL REQUIRED:

Hardboard, white thick sheets of paper, pencils, colours, scissors, adhesive.

METHOD OF CONSTRUCTION

1. Cut rectangular strips from a sheet of paper and paste them on hardboard. Write the symbol U in the left/right top corner of each rectangle.
2. Draw circles A and B inside each of the rectangular strips and shade/colour different portions as shown in Fig. 3.1 to Fig. 3.10.

DEMONSTRATION

1. U denotes the universal set represented by the rectangle.
2. Circles A and B represent the subsets of the universal set U as shown in the figures 3.1 to 3.10.
3. A^c denotes the complement of the set A , and B^c denote the complement of the set B as shown in the Fig. 3.3 and Fig. 3.4.
4. Coloured portion in Fig. 3.1. represents $A \cup B$

5. Coloured portion in Fig. 3.2. represents $A \cap B$.

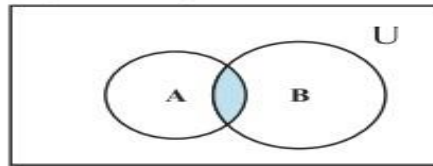


Fig. 3.2

6. Coloured portion in Fig. 3.3 represents A^c

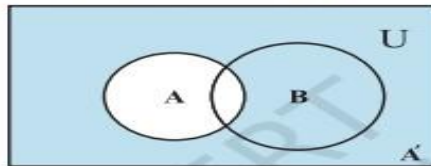


Fig. 3.3

7. Coloured portion in Fig. 3.4 represents B^c

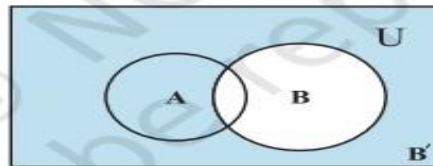


Fig. 3.4

8. Coloured portion in Fig. 3.5 represents $(A \cap B)^c$

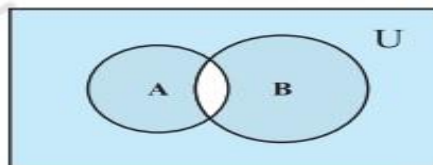


Fig. 3.5

OBSERVATION

1. Coloured portion in Fig. 3.2, represents _____
2. Coloured portion in Fig. 3.3, represents _____
3. Coloured portion in Fig. 3.4, represents _____
4. Coloured portion in Fig. 3.5, represents _____

PHYSICS

1. Lab manual work

- a) From section A of lab manual, complete experiment no. 1 and 2
- b) From activity section, complete activity

2. Project work on any one the topics allotted in classroom

3. Make a separate copy of 200 pages and complete exercises of chapter 1 and 2