



# **BRILLIANTS' CONVENT**

## **CLASS-XI**

2023-24

# **Summer Holiday Homework**



## Class-XI

### Physics

- Q1. Prepare an innovative model on theme “One earth, one family, one future” closely ties with LIFE (Lifestyle for environment).
- Q2. Complete your physics investigatory project and practical file.
- Q3. Revise all the syllabus covered so far.

### Chemistry

- Q1) Prepare an innovative model on the
- Roll No.- 1-15  
Topic- “Sustainability and Science with New Research Techniques”
  - Roll No.- 16-30  
Topic- “Sustainability in Chemistry and innovation”
- Q2. Complete chemistry investigatory project and practical file.
- Q3. Revise Ch-1 Basic Concepts of Chemistry and Ch-2 Structure of Atom.

### Biology

- Q1. Prepare a science model based on theme “clean energy and technology “
- Q2. Complete your biology investigatory project and practical file.
- Q3. Revise all the syllabus covered so far.

### Mathematics

#### Ch -1 SETS

- Q. 1: Write the following sets in the roster form.
- i.  $A = \{x \mid x \text{ is a positive integer less than } 10 \text{ and } 2^x - 1 \text{ is an odd number}\}$
  - ii.  $C = \{x : x^2 + 7x - 8 = 0, x \in \mathbb{R}\}$
- Q. 2: Write the following sets in roster form:
- i.  $A = \{x : x \text{ is an integer and } -3 \leq x < 7\}$
  - ii.  $B = \{x : x \text{ is a natural number less than } 6\}$
- Q. 3: Given that  $N = \{1, 2, 3, \dots, 100\}$ , then
- i. Write the subset A of N, whose elements are odd numbers.

ii. Write the subset B of N, whose elements are represented by  $x + 2$ , where  $x \in N$ .

Q. 4: Let  $X = \{1, 2, 3, 4, 5, 6\}$ . If n represent any member of X, express the following as sets:

- i.  $n \in X$  but  $2n \notin X$
- ii.  $n + 5 = 8$
- iii. n is greater than 4

Q. 5: Let  $U = \{1, 2, 3, 4, 5, 6\}$ ,  $A = \{2, 3\}$  and  $B = \{3, 4, 5\}$ . Find  $A'$ ,  $B'$ ,  $A' \cap B'$ ,  $A \cup B$  and hence show that  $(A \cup B)' = A' \cap B'$ .

Q. 6: Use the properties of sets to prove that for all the sets A and B,  
 $A - (A \cap B) = A - B$

Q. 7: Let  $U = \{1, 2, 3, 4, 5, 6, 7\}$ ,  $A = \{2, 4, 6\}$ ,  $B = \{3, 5\}$  and  $C = \{1, 2, 4, 7\}$ , find  
(i)  $A' \cup (B \cap C')$                       (ii)  $(B - A) \cup (A - C)$

Q.8. Make a questionnaire on **G20 SUMMIT** of atleast 2 questions related to chapter SETS.

### Ch 3 TRIGINOMETRY

Q. No.1: Find the value of  $\tan 225^\circ \cot 405^\circ + \tan 765^\circ \cot 675^\circ$ .

Q.No.2: Find the radius of the circle in which a central angle of  $60^\circ$  intercepts an arc of length 37.4 cm (use  $\pi = 22/7$ ).

### Economics

Q1. Revise the chapters covered in class.

Q2. Collect details about G-20 and prepare a brochure explaining details of how Indian Economy would be affected by this initiative of India in G -20.

- XI C students also have to prepare chart related to same topic

Q3. Prepare project file according to your roll numbers

Goods and service tax

- XIB (Roll No. 1,7)
- XI C (Roll No. 1,7)

Self help groups

- XI B (Roll No. 2,8)
- XI C (Roll No. 2,8)

E -rupee

- XI B (Roll No. 3,9)
- XI C (Roll No. 3,9)

Environmental crisis

- XI B (Roll No. 4,10)
- XI C (Roll No. 4,10)

G-20

- XI B (Roll No. 5,11)
- XI C (Roll No. 5,11)

Make In India

- XI B (Roll No. 6,12)
- XI C (Roll No. 6,12)

Environmental crisis

- XI A
- XI C (Roll No. 13,14)

### **Accountancy**

Q1. Revise the chapters covered in class.

Q2. What is the budget of G-20 which is being done under the presidency of India? State the expected incomes and expenses incurred in G-20.

Mention the finance track of G-20.

(Do the above question on A4 size sheet.)

3. Prepare charts on the following topics

ROLL NO.      TOPIC

1 to 4      Accounting Process

5 to 8      GST

9 to 12      Financial Statements

4. Prepare project file consisting of comprehensive problem.

### **Business Studies**

Q1. Revise the chapters covered in class.

2. Explain the effect of G-20 on the upcoming business scenario?

Do the above question on A4 size sheet.

3. Prepare a chart on the following topics

ROLL NO.      TOPIC

1 to 4.      Forms of Business Organisations

5 to 8. Industry and its types

9 to 12 Business Services

4. Prepare project file according to your roll numbers

ROLL NO. TOPIC

1 to 4 Insurance

5 to 8 Warehousing

9 to 12. Banking

### **English**

Q1. Compose a poem on any topic of your interest using one or two literary devices.

Q2. Write a story in about 120-150 words on India's theme of G-20 highlighting the idea of sustainable growth and development for the society.  
Do the above questions on the A-4 size sheet.

Q3. Revise all the work done in the class so far.

### **Political Science**

**Attempt all the questions in your Political Science register:**

1. What is the G20?
2. What is the theme of the G20 summit happening in India?
3. In which one of the following groups are all the four countries members of G20?
4. What are the Outcomes of the Summit?
5. What are the Challenges before the G-20 Member Countries?
6. What is the purpose of the G20?
7. What is the role of the G20 in global economic governance?
8. How are G20 countries chosen?
9. What is the G20's position on climate change?
10. Who is G20 president?

### **REVISION QUESTIONS**

#### **Introduction to Political Theory**

#### **Short Answers**

1. For whom is Political Theory relevant, and why should we study it?
2. Discuss whether Political science is a science or not.
3. Politics is a study of class struggle. Comment
4. Politics is a study of power. Comment

5. Is Political Science is a Science?

6. Is Political Science is an art?

7. Name a political thinker.

### **Long Answers**

1. What is the underlying philosophy of our constitution?

2. What do we study in Political theory? Identify some ways in which political theory is relevant for us.

3. What is the need and significance of political theory?

### **FREEDOM**

#### **Short Answers**

1. Law is a condition of liberty". Comment

2. What is liberalism? Analyze its influence on the Indian constitution.

3. What are self and other regarding actions?

4. Why do we need constraints to enjoy liberty?

5. What is negative liberty?

6. Who is Aung Saa Suu Kyi? What is she fighting for and from where?

7. Discuss the characteristics of liberty?

8. Mention two ways of safeguarding freedom?

### **Constitution : Why and How?**

#### **Short Answers**

1. Define the term Constitution?

2. How does the Indian Constitution limit the powers of the government?

3. What is the importance of the preamble?

4. "Our constitution is neither perfect nor flawless "mention 2limitations seen

in our constitution.

5. What has been the debate in Nepal over making of the constitution?
6. How has our constitution helped fulfilling aspirations and goals of a just society?
7. What was the ideological divide in our constitution?
8. What is the mode of promulgation of a constitution?
9. What features did India adopt from the Canadian constitution?
10. Describe the main points of the Objective resolution?
11. Name one feature that has been borrowed from the Irish constitution.

### CS & IP

Q1. Visit the website "Code.org" Complete two online courses available on the website. Submit the completion certificate of the same.

Using the above knowledge create an APP providing the details of G-20 Summit 2023 (like its purpose, agenda, lists of countries involved etc.)

Q2. Complete the below given worksheet

1. Write Python program to display your personal details in separate lines.
2. Write Python command to display your school name, class, and section, separated by ' - ' .

Q3. Evaluate the following expressions manually:

- (i)  $(2 + 3) ** 3 - 6 / 2$
- (ii)  $(2 + 3) * 5 // 4 + (4 + 6) / 2$
- (iii)  $12 + (3 * 4 - 6) / 3$
- (iv)  $12 + (3 * * 4 - 6) // 2$
- (v)  $12 * 3 \% 5 + 2 * 6 // 4$
- (vi)  $12 \% 5 * 3 + (2 * 6) // 4$

Q4. Evaluate the above expressions by using IDLE as a calculator and verify the results that you got manually.

Q5. Identify invalid variable names from the following, give reason for each:  
int, total marks, s.I., volume, tot\_strength, #tag, tag\$, 9a

Q6. Find the output of the following code:

```
(i) x=3
    y=x+2
    x+=y
    print(x,y)
```

```
(ii) x=-2
    y=2
    x+=y
    y-=x
    print(x,y)
```

```
(iii) a=2
    b=2*a
    a+=a+b
    b*=a+b
    print(a,b)
```

Q7. Write Python expressions to represent the following situations:

- \* Add remainder of 10/7 to the product of 10 and 7.
- \* Find the square root of the sum of 8 and 43.
- \* Find the sum of the square roots of 8 and 43.
- \* Find the integral part of the quotient when 63 is divided by 29.

8. Write a Python program to accept two integers and print their sum.

9. Write a Python program that accepts radius of a circle and prints its area.

10. Write a Python program to accept length and width of a rectangle and compute its perimeter and area.

### Hindi

प्रश्न-1. G20 शिखर सम्मेलन पर एक निबंध 400 से 500 शब्दों में लिखिए।

प्रश्न-2. ग्रीष्मावकाश गृह कार्य प्रत्येक छात्र/ छात्रा अपने अनुक्रमांक के अनुसार दिए गए कवि अथवा लेखक का जीवन परिचय, कृतियां, पुरस्कार, साहित्य परिचय आदि की संक्षिप्त जानकारी देते हुए एक परियोजना कार्य तैयार कीजिए।

1-अनुक्रमांक - 1, 5, 9, 13

लेखक प्रेमचंद अथवा कवि कबीर दास

2-अनुक्रमांक-2,6,10,14

लेखक अमरकांत अथवा कवि सूरदास

3-अनुक्रमांक-3,7,11

लेखक हरिशंकर परसाई अथवा कवि पद्माकर

4- अनुक्रमांक -4,8,12,

लेखक रांगेय राघव अथवा कवि नागार्जुन



प्रश्न-3. कराए गए पाठों का पुनः अभ्यास कीजिए।

**Physical Education**

Q1. Make the project files as per the topics discussed in the class.

Q2. Revise the entire syllabus covered so far in the class.