CLASS:- 12th

Dear Parents

The much awaited summer break is here! This is the time that children enjoy the most. Along with all the fun activities that they will do, we would also like to keep them productively occupied with some academic work. Our goal is to provide continuous educational opportunities and practice for students. We believe, together, we will write the best story for our children! "Each child is an individual and must be allowed to bloom, express his feelings and ideas.

Wishing all the children 'HAPPY HOLIDAYS'!

SPECIAL INSTRUCTIONS :

1. Do every work neatly and in a clean manner.
2. Read and revise the course covered in the class.
3. Parents are requested to guide their children while doing the activities.
4. Homework will be assessed on the basis of neatness, creativity and originality of ideas.

Subject: Accountancy

1. Complete the practical numerical questions of Ch-1 and Ch-2 in the fair notebook.

2. Solve out the book exercise of chapters including MCQs and Assertion-Reason Questions.

3. Do prepare both the chapters thoroughly.

4. Prepare the Project File of Accountancy on the financial statements of a renowned company e.g. AIRTEL, Tata etc.

Subject: Business Studies

1. Practice all the case studies related to the units which are done in class.

2. Solve the MCQ'S of the units -1,2,3.

3. Do solve the questions which have appeared in the previous year related to unit-1,2 and 3.

4. Do prepare an assignment on the Principles of Management given by Fayol and Taylor. Initiate with the biographies of both the personalities.

Subject: Economics

a) Prepare short notes, after reading and understanding chapters with help of any suitable online learning platform, of first five chapters of INDIAN ECONOMIC DEVELOPMENT.

b) Make minimum 10 MCQs from each chapter of first five chapters of INDIAN ECONOMIC DEVELOPMENT.

c) Write and learn glossary of INDIAN ECONOMIC DEVELOPMENT Text book for class XII Economics

d) Compare the Indian Budget of 2023 and 2024. Make a list of Maharatna and Navratna Companies.

Do this work in scrap book.

Subject: Information Practice

1. Frame out internal MCQs from Unit-3 (Computer Networks)

2.Learn and write the back exercises with Question answers of Unit -3 (Computer Networks)

3. Find out the answers of these Questions given below in worksheet. Worksheet is on page no- 4.49 and 4.50

Note- write down MCQs and Question answers part in a fair notebook.

UNSOLVED QUESTIONS

1. What is internet?

2. What is network?

3. What are the various types of topologies?

4. Describe bus topology and star topology.

5. Define the following terms:
   (a) Baud
   (b) Communication channel
   (c) Hubs
   (d) Repeaters

6. What is modem? Define the functioning of internal modem and external modem.

7. Expand and explain the following terms:
   (a) PPP   (b) POP3
   (c) VoIP   (d) IRC

8. Describe the following networking devices:
   (a) Hubs   (b) Repeaters
   (c) Routers   (d) Bridges
   (e) Gateways

9. Name the device for the following:
   (a) It stands for Modulator Demodulator.
   (b) It regenerates the signals.

10. Differentiate between:
    (a) MAN and WAN
    (b) Website and Web page
    (c) Router and Gateway
    (d) Bus and Star topology
    (e) Static and Dynamic web pages

11. Identify the type of topology from the following:
    (a) Each node is connected with the help of a single cable.
    (b) Each node is connected with central switching through independent cables.

12. Ravi, a Class X student, has just started understanding the basics of internet and web technologies. He is a bit confused between the terms 'World Wide Web' and 'Internet'. Help him understand both the terms giving suitable examples of each.

13. Mani wants to send a report on his trip to the North-East to his mentor. The report contains images and videos. How can he accomplish his task through the internet?

14. Ram is planning to open a company that deals with rural handicrafts. He wants to advertise about handicrafts on a social platform. Which internet service should he use and why?

15. What are Wi-Fi cards? Explain.

16. What is https? How does it work?

17. What are hubs? How are active hubs different from passive hubs?

18. What are the facilities provided by the Server in a network environment?

19. Which network is easy to expand?

20. Which device filters the data and which device can handle different protocols?

21. What is a network? What are its goals and applications?

22. What is the role of a switch in a network?

23. Briefly discuss the role of the following devices in the context of networking:
    (a) Repeater
    (b) Router
    (c) Bridge
    (d) Gateway

24. When Rinku typed a URL in the address bar of her browser, Error 404 was displayed. Why did this happen? What can she do to avoid it?

25. When would you prefer (i) hubs over repeaters, (ii) bridges over hubs, and (iii) switches over other networking devices?

26. Shubham wants to play a video in his browser but is not able to do so. A message on the screen instructs him to install Adobe Flash Player plugin. Help him to add it in his browser.

27. Write the steps to install add-ons in google chrome web browser.

28. What are cookies? Why are cookies created?

29. What are the different components of email address?

30. Identify the URL and domain name in the following:
    www.cbse.gov.in/question_paper.html

Subject- Fine Arts

1. Project Title: "Artificial Intelligence Collaborative Art"

Objective:

Create collaborative artworks with the assistance of artificial intelligence (AI), exploring the intersection of technology and creativity.

Materials Needed:

- Digital drawing software or apps

- Access to AI tools or platforms (such as neural style transfer, image generation, etc.)

- Optional: Traditional art supplies for additional hand-drawn elements

Instructions:

1. **Select AI Tools:**

   - Research and choose AI tools or platforms that can assist in generating or enhancing artwork. Look for tools that offer features like neural style transfer, image generation, or artistic filters.

2. **Generate Initial Artwork:**

   - Use AI tools to generate a base image or elements for your collaborative artwork. Experiment with different styles, effects, and parameters to create visually interesting starting points.

3. **Collaborative Process:**

   - Share the generated artwork with your classmates or friends who are also participating in the project. Collaborate remotely by exchanging digital files or working together in real-time using collaborative drawing software.

4. **Iterative Enhancement:**

   - Each participant adds their creative touch to the artwork, whether it's adding hand-drawn elements, modifying AI-generated layers, or incorporating additional digital effects.

5. **Feedback and Iteration:**

   - Provide feedback to each other and iterate on the artwork collaboratively. Experiment with different combinations of AI-generated and hand-drawn elements to achieve the desired aesthetic and narrative.

6. **Finalization and Presentation:**

   - Once the collaborative artwork is complete, finalize it by integrating all contributions and polishing the overall composition. Prepare to present the artwork,

highlighting the collaborative process and the innovative use of AI in the creative workflow.

Tips:

- Encourage experimentation and exploration with AI tools to push the boundaries of creativity.

- Emphasize the collaborative aspect of the project, fostering communication and teamwork among participants.

- Reflect on the implications of using AI in art creation, discussing topics such as authorship, creativity, and the role of technology in the artistic process.

This project combines cutting-edge technology with traditional artistic collaboration, offering students a unique opportunity to explore new creative possibilities and engage with contemporary issues in art and technology.

2. Project Title: "Start Making

- Objective:

Explore various artistic techniques, including still life drawing with pencil shading and oil pastels, creating watercolor landscapes, and producing innovative artworks inspired by contemporary artists

- Materials Needed:

1. - Drawing paper

2. - Pencils and erasers

3. - Oil pastels

4. - Watercolor paper

5. - Watercolor paints and brushes

6. - Optional: Additional mixed media materials for contemporary artworks (collage elements, acrylic paints, etc.)

Instructions:

1. Still Life Drawing with Pencil Shading and Oil Pastels:**

2. Choose a simple still life setup with objects like fruits, flowers, or household items.

3. Start by sketching the basic shapes and outlines of the objects lightly with a pencil.

4. Use pencil shading techniques to add depth and dimension to your drawing, paying attention to light and shadow.

5. Once the shading is complete, enhance the colors and textures of the objects using oil pastels, layering and blending them to create a vibrant and realistic representation.

3. Project: Watercolor Landscapes

- Select a landscape scene as your reference or inspiration, such as a serene countryside, a bustling cityscape, or a majestic mountain range.

- Begin by lightly sketching the main elements of the landscape on watercolor paper using a pencil.

- Use watercolor paints to fill in the sky, land, and other areas of the landscape, applying washes of color and blending them to create smooth transitions.

- Add details and textures to the landscape, such as trees, buildings, or rock formations, using a combination of wet-on-wet and wet-on-dry techniques

- Innovative Contemporary Artist-Inspired Artworks:

- Research contemporary artists whose work inspires you and select one or more to serve as inspiration for your own creations.

- Study the techniques, themes, and artistic approaches used by these artists, and consider how you can adapt and reinterpret them in your own artwork.

 - Experiment with mixed media techniques, such as collage, acrylic painting, or digital art, to create innovative and expressive artworks that reflect your personal style while drawing inspiration from contemporary art trends.

Presentation:

- Prepare to present your artworks in class, discussing the techniques, materials, and inspirations behind each piece.

- Reflect on your artistic process, challenges faced, and discoveries made throughout the creation of the artworks.

- Encourage feedback and discussion among classmates to foster a supportive and collaborative artistic environment.

Additional Tips:

 - Take your time to observe and study the details of your subjects when creating still life drawings and landscapes.

 - Experiment with different textures and blending techniques to achieve desired effects in your oil pastel and watercolor artworks.

- When creating contemporary-inspired artworks, allow yourself to explore and push the boundaries of traditional techniques to create unique and innovative compositions.

Subject: English

It is Mandatory to Buy Sharp Insights Workbook. It is available at Amazon and Nearby bookstore so make sure you buy it do all the prescribed Worksheets.

INSTRUCTIONS:

- Listen to podcasts, documentaries, interviews etc. on the given topics.
- Do a thorough research on the topic assigned.
- Prepare a report/essay in about 800-1000 words describing the topic/issue/ giving your own opinion/ suggestions/measures/ viewpoints/its impact on people/your learning experience.
- The project should be neat, legible, with an emphasis on quality of content, accuracy of information, creative expression, proper sequencing and relevance as per the assigned topic.

Use coloured practical sheets.

Solve the worksheets from module -2 Notice Writing & Module 3 Invitation & Reply Writing

Solve the worksheets from Module-7 & 8 of Literature I & II of all the Chapters done till now in the class

- **ENGLISH PROJECT**

INTRODUCTION

The project consists of 10 MARKS out of which, 5 MARKS will be allotted for the PROJECT FILE and the remaining 5 MARKS for the VIVA based on the file.

CONTENT OF THE PROJECT FILE:

The project file should include the following:

Cover page, with the title of the project, school details and details of the student

Certificate of Completion under the guidance of the teacher

Objectives of the topic:

Essay/report should be written in 800-1000words.

Student reflections (the new learning experience/outcome achieved after completing the project)

Photographs that capture positive learning experience of the students (collages/pics from various online sources) can be pasted.

List of Resources/Bibliography (Last page of the project file)

Select any one of the given topics for your English Project.

Topic 1: CHILD LABOUR IN INDIA

"Child labour perpetuates poverty, unemployment, illiteracy, population growth and other social problems." Kailash Satyarthi

You have studied the lesson 'Lost Spring' by Anees Jung. It deals with child labour in India. Based on your understanding of the lesson and the problem it mentions, make a project titled 'CHILD LABOUR IN INDIA'

Include the following sub-headings:

- Causes of child labour
- Effects on the social environment
- Laws on child labour
- National child labour policies & schemes
- Prevention and elimination of child labour
- Industries employing children- Make a case study (800-1000 words) on any 1 industry that employs child labour. Furnish all relevant details and statistics. Attach 3-4 pictures.

Topic 2: SAY NO TO WAR

"An eye for an eye only ends up making the whole world blind." Mahatma Gandhi

You have studied the lesson 'The Last Lesson' by Alphonse Daudet. It deals with war and the long-lasting effects it has on the society at large. Based on your understanding of the lesson and the problem it mentions, make a project titled 'SAY NO TO WAR'

Include the following sub-headings:

Definition of war

Effects on social, economic environment

Cost, in terms of money and lives

Important international treaties

Prevention and elimination of wars

Any 1 war – Make a case study (800 - 1000 words) and furnish all details and statistics. Attach 3-4 pictures.

| Class: 12th Humanities |
| Subject: Political Science |

Topics for project

* End of Bipolarity

* New centres of power

* Challanges of Nation Building.

Worksheet`

2 Marks

Q 1 Mention any two characteristics of the Soviet political system.

Q 2 What is meant of 'Shock Therapy?

Q 3 Mention any two characteristics of the Soviet economy during the Cold War days.

Q 4 Why is it said that the collapse of the Berlin Wall signified the collapse of the bipolar world?

Q 5 Mention any two negative effects of 'Shock therapy.

Q 6 Mention any two negative effects of 'Shock therapy.

Q 7 State any two features of the European Union that make it an influential organisation.

Q 8. When was the ASEAN regional forum established? What were its main objectives?

Q 9 Explain India's improving relationship with China.

Q 10 What is the meaning of Panchsheel ?

4 Marks

Q 11 What were the two major policy decisions taken by the Chinese leadership in the 1970s?

Q 12 In spite of the improvement in the Chinese economy, there have been negative consequences affecting the people of China. Mention any four such consequences.

Q 13 Assess the role of ASEAN as an economic association.

Q 14 What were the objectives behind the formation of the ASEAN in 1967?

Q 15 What was Shock Therapy? Was this the best way to make a transition from communism to capitalism?

Q 16 Describe any four consequences of the disintegration of Soviet Union.

Q 17 Why did Soviet system become so weak and Soviet economy stagnant?

Q 18 Why did Gorbachev's reform policy fail in spite of his accurate diagnosis of the problem?

Class: 12th Science
Subject: Physics

1.) Complete your project file and practical file.

2.) Do the assignments.

Chapter-Two ELECTROSTATIC POTENTIAL AND CAPACITANCE

Q1. (a) Calculate the potential at a point P due to a charge of 4×10^7 C located 9 cm away.

(b) Hence obtain the work done in bringing a charge of 2×10^9 C from infinity to the point P.

Does the answer depend on the path along which the charge is brought?

Q2.(a) A comb run through one's dry hair attracts small bits of paper. Why?

What happens if the hair is wet or if it is a rainy day?

(Remember, a paper does not conduct electricity.)

(b) Ordinary rubber is an insulator. But special rubber tyres of aircraft are made slightly

conducting. Why is this necessary?

(c) Vehicles carrying inflammable materials usually have metallic ropes touching the ground during motion. Why?

(d) A bird perches on a bare high power line, and nothing happens to the bird. A man standing on the ground touches the same line and gets a fatal shock. Why?

3. Two charges 5×10^{-8} Ç and -3×10^{-8} Care located 16 cm apart. At what point(s) on the line joining the two charges is the electric potential zero? Take the potential at infinity to be zero.

4. A regular hexagon of side 10 cm has a charge 5 C at each of its vertices. Calculate the potential at the centre of the hexagon.

5. A charge of 8 mC is located at the origin. Calculate the work done in taking a small charge of -2×10^{-9} Ç from a point P (0, 0, 3 cm) to a point Q (0, 4 cm, 0), via a point R (0, 6 cm, 9 cm).

6. A hollow metal sphere of radius 5 m is charged such that the potential on its surface is 10 V. what is the potential at the centre of the sphere?

7.What is the area of the plates of a 2 Farad parallel plate air capacitor, given that the separation between the plates is 0.5 cm?

8. At a point due to a point charge, the values of electric field and potential are 32 N/C: and 16 J/C respectively. Calculate magnitude of charge and distance of the charge from the point of observation?

9. At a point due to a point charge, the values If electric field and potential are 20 N/C: and 10 J/C respectively. Calculate magnitude of charge and distance of the charge from the point of

10. Three point charges +q,+2q and Q are placed at the three vertices of an equilateral triangle. Find the value of charge Q (in term of q), so that electric potential energy of the system is zero.

Assignment 2:

1. A polythene piece rubbed with wool is found to have a negative charge of 3×10^{-7} C.

(a) Estimate the number of electrons transferred (from which to which?)

(b) Is there a transfer of mass from wool to polythene?

2. Four point charges q_A=2µC, q_B=-5µC, q_C=2µC and q_D=-5µC are located at the corners of a square ABCD of side 10cm. What is the force on a charge of 1µC placed at the centre of the square?

3. (a) Two insulated charged copper spheres A and B have their centres separated by a distance of 50cm. What is the mutual force of electrostatic repulsion if the charge on each is 6.5 x 10^{-7} C? The radii of A and B are negligible compared to the distance of separation.

(b) What is the force of repulsion if, each sphere is charged double the above amount, and the distance between them is halved?

4. Suppose the spheres A and B in the above problem have identical sizes. A third sphere of the same size but uncharged is bought in contact with the first, then brought in contact with the second, and finally removed from both. What is the new force of repulsion between A and B?

5. Two point charges +16µC and -9µC are placed 8cm apart in air. You are asked to place a +10 µC charge at a third position such that the net force on +10 µC charge is zero. Where will you place the charge? Make necessary calculations.

6. A system has two charges q_A=2.5 x 10^{-7} C and q_B=-2.5 x 10^{-7} C located at points A (0,0,-15cm) and B (0,0,+15cm), respectively. What are the total charge and electric dipole moment of the system?

7. An electric dipole with dipole moment 4 x 10^{-9} C m is aligned at 300 with the direction of a uniform electric field of magnitude $5x10^4$NC-1. Calculate the magnitude of the torque acting on the dipole.

8. Consider a uniform electric field E=$3x10^3$ N/C.

(a) what is the flux of this field through a square of 10cm on a side whose plane is parallel to the yz plane?

(b) What is the flux through the same square if the normal to its plane makes a 600 angle with the x-axis?

9. What is the net flux of the uniform electric field of above problem through a cube of side 20 cm oriented so that its faces are parallel to the coordinate planes?

10. A spherical conducting shell of inner radius r1 and outer radius r2 has a charge 'Q'. A charge 'q' is placed at the centre of the shell.

(a) What is the surface charge density on the

(i) inner surface, (ii) outer surface of the shell?

(b) Write the expression for the electric field at a point x>r2 from the centre of the shell.

Assignment 3:

1) The resistance of a wire is R ohm. What will be it's new resistance if it is stretched to n times its original length?

2) A cylindrical wire is stretched to increase it's length by 10%. Calculate the percentage increase in resistance.

3) Draw graph to show the variation of resistance of a metal wire as a function of it's diameter, keeping length and temperature constant.

4) Show on graph variation of resistivity with temperature

(I) for a typical semiconductor (ii) copper.

5) Define the term 'electrical resistivity' of a material. How is it related to its ' electrical conductivity'? Of the factors length, area of cross section, nature of material and temperature, which one controls the resistivity value of a conductor?

6) Derive the expression for the resistivity of a conductor in terms of number density of free electrons and relaxation time.

7) Draw the V-I graph to a metallic wire at two different temperatures T1 and T2 (T1 >T2).

8) Explain with the help of a graph, the variation of conductivity with temperature for a metallic conductor.

9) A carbon resistor is marked in coloured bands of red, black, orange and silver. What is the resistance and tolerance value of the resistor?

10) A standard coil marked 2 ohm is found to have a resistance of 2.118 ohm at 30 °C. Calculate the temperature at which the marking is correct. The temperature coefficient of the resistance of the material of the coil is 0.0042 $°C^{-1}$.

Subject: Chemistry

1.) Complete your project file and practical file.

2.) Do the assignments on the topic of electrochemistry and solution.