H.C.J. ACADEMY
(Affiliated to ICSE/ISC (10+2) Board, New Delhi)
Janaura, Deokali Bypass Road, Ayodhya 224001
Summer Vacation Homework 2024-25

Class- 12th   **Date:- 18-May-2024**

English –Literature

Questions
1. What is reason of Macbeth's down fall?
2. Who Killed Macbeth and why ?
3. How did Lady Macbeth die ?
4. Who was Banquo and how was he killed ?
5. Why did Lady Macbeth wash her hand again and again ?

Project work

1. Make a project on Plays of willam shakes peare.

OR

2. Draw a figure of Lady Macbeth and write about it.

English –Grammar

Article Writing

Questions
1. (i) Animals in the wild are caught, tamed, caged, trained and conditioned to perform in set patterns and ultimately left to die. Write an article on "Their Life is not a Circus" for your school Magazine. You can use the following clues:
   Bear cubs _____ rope forced through their noses _____ made to perform Elephants chained by legs during training Sessions _____ injured feet, Cracked nails and infected cuticles _____ Sharp metal hook. Used to discipline elephants. { From Roll no. 1 to 24 }

Speech Writing

2. " Your school recently won a prestigious event after a gap of many years The entire team is being felicitated and on this occasion, as a captain of the team, you have been asked to speak. Write a Speech using the following hints:
   Name of the event in which you won _____ day, day of the event _____ the description of the event _____ the team's role in victory _____ your own Contribution _____ teachers' Guidance _____ why the win is special. { From Roll no. 25 onwards }

Question

2.Fill in each blank with a suitable word { do not write the sentence } [For all]

(a) Mohan has been accused _____ murder.

(b) She did not agree_____ me .

(c) I was astonished _____ his Success.

(d) This book belongs _____ Suresh.

(e) He is Superior _____ me.

Hindi

प्र0:1 'दासी' कहानी के प्रमुख पात्र का चरित्र – चित्रण कीजिए।

प्र0:2 गजनी में बैठा हुआ कौन क्या काम करता था ?

प्र0:3 माया के वषीभूत कौन – कौन है ?

प्र0:4 'जाग तुझको दूर जाना' पाठ में कवयित्री ने क्या संदेष दिया है ?

प्र0:5 पथ की बाधा कौन बनेगे ?

        (सभी प्रष्नोत्तर हिन्दी की कॉपी में लिखें)

प्र0:6 'सारा आकाष' उपन्यास का उद्देष्य लिखिए अथवा ' कोई मौलिक कहानी ' अथवा 'स्वरचित कविता लिखिएं ।

Math

1) A relation $\square$ on {1, 2, 3} is given by $\square$ = {(1, 1), (2, 2), (1, 2), (3,3), (2, 3)}. Then the relation $\square$ is:

A. Reflexive

B. Symmetric

C. Transitive

D. Symmetric and transitive

2) Let $\square(\square) = \square3$ be a function with domain {0, 1, 2, 3}. Then domain of $\square-1$ is:

A. {3, 2, 1, 0}

B. {0,−1,−2,−3}

C. {0, 1, 8, 27}

D. {0,−1,−8,−27}

3) Find the domain of the function cos−1 $\square$ + $\square\square\square\square$

4) Prove that cos [tan-1{cot (sin-1x)}] = x.

5) If a relation $\square$ on the set $\square$ = {1, 2, 3} be defined by $\square$ = {(1, 2), (2, 1)} then classify the function $\square$.

Section (B)

1) Using a graph, demonstrate a function which is one-one but not onto.

OR

2) Using a graph demonstrate a function which is invertible.

Physics

Q.1 State and proof gauss' theorem in electrostatic.

Q.2 Find the electric field intensity at broad-side position of an electric dipole.

Q.3 Define the term Linear charge density, surface charge density and volume charge density.

Q.4 Find the Electric Field Intensity due to a uniformly charged spherical shell.

Q.5 Define Electric dipole moment . Is it scalar or vector quantity.

          "PROJECT-WORK"

Draw a labelled diagram of Transformer on a chart paper.

        OR

 Draw the Half wave rectifier (H.W.R.) or Full wave rectifier (F.W.R) on a chart paper and prepare it's working and principle.

Chemistry

Questions

   1. What is colligative properties Explain with any Experimental data.
   2. Write short Note On Osmotic Pressure and Its Derivation.
   3. What is henrys' law. And Its application and Its application related to Experiments.
   4. Explain Electro Chemical Cell and Its Explanation.
   5. What is I^{st} law of Electrolysis Explain It.

        Make Chart paper of Solubility of gas. Dissolve in water.

Biology

Q .1 A flower of tomato plant, following the process of sexual reproduction produce 240 viable seeds.

Answer the following questions giving reasons: (a) What is the minimum number pollen grains that must have been involved the pollination of its pistil?

(b) What would have been the minimum number of ovules present in the ovary ?

(c) How many megaspore mother cell were involved ?

(d) What is the minimum number microspore mother cells involved in the above case ?

(e) How many male gametes were involved in this case ?

Q.2 Explain double fertilization and trace the post-fertilization events in sequential order leading to seed formation in a typical dicotyledonous plant.

Q.3 Describe the asexual and sexual phase of life cycle of plasmodium that cause malaria in human

Q.4 Draw a labeled diagram to show replication HIV in human cells

Q.5 (a) Cancer is one of the most dreaded diseases. Explain 'Contact inhibition' and 'Metastasis' with respect to the disease.

(b) Name the group of genes that have been identified in normal cells that could lead to cancer. How do these genes cause cancer?

(c) Name any two techniques that are useful in detecting cancers of internal organs.

Project

Drug addiction and community.

Format of project

(i) Content

(ii) Introduction

(iii) Presentation (graphs, tables, charts,

newspaper cuttings, diagrams, photographs,

statistical analysis if relevant)

(iv) Conclusion/ Summary

(v) Bibliography

History & Civics

A. 1. Make a list of all the previous year questions of chapter 1 and 2 and write it in your copy.

2. What was the impact of Kisan sabha movement on India

3. What was the role of provincial autonomy at the time of general election.

4. What were the conflicts between Mahatma Gandhi and Muhammad Ali Jinnah

5. What was the problem that arose after the partition of India and Pakistan.

B. 1. Study the largest mass migration in human history, the challenges faced by refugees, and the establishment of refugee camp. And make a diary on this.

OR

Make a history kit by adding important timeline , dates , important leaders and their contributions , etc this all should be from your entire syllabus only

Political Science

Q.1 (a) Explain the main features of Confederation ?
    (b) What are the problems of a federation?
    (c) Distinguish between federation and Confederation.
    (d) Draw Parliamentary form of the government
    (e) Define Presidential form of the Government ?

<div align="center">Project Work</div>

Q.1 Draw " The High courts: Respective seats and jurisdiction Area.

Name	Birth year	Jurisdictional	Seat	Area

Computer Science

Qus- 1 Simplify the expression: $(A + B)(A' + B')(A + C)$
Qus-2 Define the duality principle in Boolean algebra.
Qus-3 Explain the commutative law in Boolean algebra with an example.
Qus-4 Explain the concept of Boolean function in Boolean algebra.
Qus- 5 Explain the operation of the AND gate with a truth table.

PROJECT WORK
Design and Implement a Digital Combination Lock using Logic Gates.

Objective: To design and implement a digital combination lock using logic gates to demonstrate their application in digital circuits.

Requirements:
Breadboard
Logic gates (AND, OR, NOT, XOR, etc.)
LEDs
Resistors
Push buttons
Wires
Power supply (e.g., 5V)

Physical Education

1- Explain the role of physical education in the development of personality and individual.
2- Explain how game and sports are helpful in promoting National integration among the players.
3- Explain the role of culture in modern game and sports.
4- Mention any five duties of a scorer and assistant is coral in basketball.
5- Differentiate between popping crease and bowling crease.

Project Work:
1- draw a diagram showing the dimension of playing field from one of these games on cardboard or chart with all measurement
   a) Basketball
   b) Volleyball
   c) Cricket

Economics

A. All the questions are compulsory
1. What is the business environment? Write the features of the business environment.
2. Difference between micro and macro environments.
3. Write the limitations of SWOT analysis.
4. Write the importance of finance for business.
5. Write the advantages of equity shares on the perspective of company and shareholders

B) Project work:
Write the difference between equity shares and preference shares on the chart paper.

Commerce

A. All the questions are compulsory
1. What is the business environment? Write the features of the business environment.
2. Difference between micro and macro environments.
3. Write the limitations of SWOT analysis.
4. Write the importance of finance for business.
5. Write the advantages of equity shares on the perspective of company and shareholders

B) Project work:
Write the difference between equity shares and preference shares on the chart paper.

Accounts

1. Solve the practical as well as additional questions of Complex Pro Rata of Shares and questions Financial Statements of Companies