H.C.J. ACADEMY
(Affiliated to ICSE/ISC (10+2) Board, New Delhi)
Janaura, Deokali Bypass Road, Ayodhya 224001
Summer Vacation Homework 2025-26

Class- 11ᵗʰ   **Date:- 31-May-2025**

English Language

From Roll No. 01 to 15.

(1). The ability to cooperate with others to accomplish a task is an important skill. Think of a time when you had to use teamwork to complete a task or project. Who did you work with? What aspect of the project went smoothly and what aspects were more difficult? Write a composition/essay describing the task your team pet out to accomplish and describing your experiences working as part of a team.

Form Roll no. 16 towards-

(2). 'Participation in sports keeps teens out of troubles'. Argue either for or against the given statement.

English –Literature

1. What do you know about Macbeth? Explain it in about 300 words.
2. Compare Macbeth and Banquo, who had seen three witches first of them? Write in about 300 words.
3. Make a list of plays of William Shakespeare.

Hindi

1. 'हर बच्चे के जीवन में उसके माता–पिता बहुत महत्व रखते है वे उसके लिए आदर्श होते है।' अपने–माता–पिता के त्याग का वर्णन करते हुए लिखिए कि आप उनके लिए क्या–क्या करना चाहते है?
2. 'आज की बचत कल का सुख'– उपर्यक्त विषय पर प्रस्ताव लिखिए। (लगभग तीन सौ से चार सौ शब्दो मे लिखिए)

Maths

Q.1-* Draw venn Diagram. $A \sqcap B$, $A \cup B$, $A - B$, $B - A$, $A \triangle B$, A^1, B^1

Q.2- IF $u= \{1, 2, 3, 4, 5, 6, 7, 8\}$, $A=\{1, 2, 3, 5, 6\}$, $B=\{2,3,4,7,8\}$ than find $(A \cup B)^1$, $(a - B)^1$

Q.3- IF $n(\cup) =50$, $n(A) =20$, $n(B) =26$, $n(A \cup B)^1 = 6$ find $n(A \sqcap b)$, $A^1 \sqcap B^1$, $(A-B)$

Q.4- If $A = \{1, 2, 3, 4, 5, 6\} \ and \ B = \{2, 4, 5, 6, 8, 9, 10\}$ then find $A \triangle B$.

Q.5- Define, set, subset, proper set, super set, empty set, singleton set, cardinal number with example.

Q.6- If $A = \{x: x \in N \ and \ x \le 3\}$, $B = \{n: x \in I, -1 \le x \le 1\}$ and $C= \{1, 2\} \ verify$

(i) $A \times (B \ C) = (A \times B) \ (A \times C)$ (II) $(A - B) \times C = A \times C - B \times C$

Q.7- Define relation, function write formula of number of relation and function with example.

Q.8- Draw graph and write domain and range – (i) constant function   (ii) exponential function
(iii) logarithmic function   (iv) greatest integer function   (v) signum function .

Q.9- Write domain and range of all trigonometry function.

Physics

Q.1. wright to all formula mathematical tools.

Q.2. Define percentage error.

Q .3. find the radius of atom by using Avogadro number .

Q.4.Derive the equation of motion.

Q.5. Define the retardation .

Q.6.Prove with the help of dimensional analysis that the equation $h = \frac{1}{2} * gt$ for the distance travelled by a body
falling freely under gravity in time t is incorrect. Find the correct equation with the help of dimensions.

Q 7.Show dimensionally that the equation of the time-period of a simple pendulum of length I, given by
$t = 2pi*l / g$ is incorrect. Find its correct form.

Q.8.Check the correctness of the relation for the height of a liquid of density p and surface tension S, raised in
a capillary tube of radius r and angle of contact zero with the liquid. If incorrect, then deduce the correct form.
$H = (rpg)/(2s)$

Q.9.A particle of mass m is tied to a string and swung around in a circular path of radius r with a constant speed v.

Derive a formula for the centripetal force F exerted by the particle on our hand, using the method of dimensions. Q.10. The energy E of a particle oscillating in S.H.M. depends on the mass m of the particle, frequency n and

amplitude a of oscillation. Show dimensionally that $E \propto m * n^2 * a^2$

Chemistry
Q.1- Explain significant figures rule with example & exponential notation. (Minimum 5 example)

Q.2- Empirical formula & molecular formula explain with example.

Q.3- Limitation of a chemical equation and modification made for Improvement explain with the help of example.

Q.4- What do you understand by the strength of a solution. Define the terms morality and formality used for expressing the strength of a solution.

Q.5- In basic chemistry mole concept related minimum 20 numerical solve it.

Q.6- make a periodic table on a chart & prepare it.

Bio
Q.1- If the dog canines familiarise of the family conical has certain resemblances with cat family Filidae, both will be put together in the same order.

Q.2- A plant may have different names in different regions of the country of world. How do Botanist solve this problem.

Q.3- Describe the structure of lichen, and name the three different types .What is the mature of this fungal association .

Q.4- Give the brief account of virus with respect to their structure and nature of genetic martial. Also name four common viral decease?

Q.5- Explain how the plasma membrane is secretively permeable, and tell how that is related to the movement of materials across the membrane?

Q.6- What is the major ullybar difference between prokaryotic and Eukaryote organism?

History
- Prepare a case study (with real-life example or impaired interviews) of a peasant of artisan whose life was affected by the British revenue policy or colonial forest Acts.
- Create a visual timeline of important events between 1857-1910 caressing nationalism , colonial economy changes, and reform movements.
- Create a comparative table of the Brahmo Samaj, Arya samaj, and Aligarh movement mention their founders, ideologies & reforms.
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Political Science
Q.1- List of first Prime Minister, President, and Chief Minister of up.

Q.2- Make a list in present time, exacters, legislation and Judiciary. like- Chief Justice- S.C.

Q.3- Make a list which types of state.

Economic
Task -1 Topic related to curriculum.
1) Form 25 MCQ from lesson (1 to 4) .
2) Write the biography of Lionel Robbins and state the name of the economics definition which is given by him.
3) Write the features of Utility and explain the concept of Total and marginal utility with the help of table.

Task- 2 search and collect the information.
   (i)   Five year plan (Replaced by NITI aayog).
   (ii) Economic Reforms 1991.
   (iii) Study in detail the south Asian association for regional cooperation (SAARC) and its impact on Indian Economy.
   (iv) Prepare report on the various poverty allevation and employment generation programmes started in India, with special focus on (MGNREGA).

Commerce

- Case studies about types of business just like-
  Business
  Profession
  Employment
- Explain a 'sole proprietorship business' from your point of view by providing 'A business modal'.
- Show your point of view about 'profession' & give a professional example to explain.

Accounts

Physical Education

- Make a project on any two topics-
- Fitness Assessment Report: Measure and record personal fitness parameters (e.g. BMI, flexibility, strength tests). Reflect on findings.
- Injury Management Chart: Make a chart of common sports injuries and basic first aid measures.

Computer

Java program to create banking system (mini-version) using the information provided below.

Description: Create an account, deposit Withdraw, and show palace.

Concept: Class and Objects file handling (opticcual), mouse device.

HAPPY SUMMER VACATION