SUMMER HOLIDAY ASSIGNMENT

ENGLISH

Answer the following questions in about 30 to 40 words:

1.

I. Why did the narrator want to run away and spend the day outdoor? Did he overcome his temptation?
II. Why did M. Hamel put on his fine Sunday clothes? What prompted the villagers to attend the last lesson by M. Hamel?
III. Whom does the teacher blame for ignoring the learning at School?
IV. What vicious circle are the bangle makers trapped in?
V. "Sahab is no longer his own master". What does Anees Jung mean by this statement?
VI. Where did the rag-picking families of Seemapuri come from? Why did they have to leave their native place?
VII. Why did Douglas avoid the pool whenever he could?
VIII. "I screamed, but only the water heard me". Why did Douglas scream? What does he mean by 'but only the water heard me'?
IX. Why does the tiger king not relent to the British officer's request for a photograph with a dead tiger?
X. How does the Infant Tiger King surprise the astrologers?
XI. What is the contrast between the scene inside the car and outside it?
XII. Why are the slum children 'stunted' and 'diseased'?

2. You are the Editor of your school magazine. Draft a notice for your school notice board inviting articles, sketches, etc. from the students for your school magazine. Sign as XYZ of ABC Senior Secondary School, Hyderabad.
3. You are working for an advertising agency. Draft an attractive advertisement for a company which is launching a new toothpaste. (50 words)
4. Draft a Poster for a Road Safety Week Campaign being organized by the traffic police of your area. Highlight the need of safe driving and some 'Do' and 'Don'ts for the drivers.
5. You are the President of the Red Cross society, Chandigarh. Draft a poster encouraging pulse polio immunization for children(50 words)

BIOLOGY

Q1. Write a short note on Sporulation and Budding.

Q2. Suggest a possible explanation why the seeds in a pea pod are arranged in a row whereas, those in tomato are scattered in the juicy pulp.

Q3. Draw a vertical section of a maize grain and label the following parts:

(i) Pericarp
(ii) Scutellum
(iii) Coleoptile
(iv) Radicle

Q4. Explain the steps that ensure cross pollination in an autogamous flower.

Q5. (a) Describe the endosperm development in Coconut.
(b) Why is tender Coconut considered a healthy source of nutrition?
(c) How are pea seeds different from castor seeds with respect to endosperm?

Q6. Are Parthenocarpy and Apomixis different phenomena, Explain it? Discuss their benefits.

Q7. With a neat and labeled diagram explain the structure of a typical Angiospermic Ovule.

Q8. Where are the Leydig cells present? What is their role in reproduction?

Q9. Draw a labeled section view of Seminiferous tubule of a human male.

Q10. Describe the hormonal control of menstrual cycle in humans.

Q11. Meiotic division during Oogenesis is different from that in Spermatogenesis. Explain how and why?

Q12. (i) Explain the Zygote Intra Fallopian Transfer Technique (ZIFT). How is Intrauterine Transfer Technique (IUT) different from it?
(ii) How does Cu-T act as an effective contraceptive for human females?

Q13. How does the gene "I" control ABO blood groups in humans? Write the effect the gene has on the structure of R.B.C.

Q14. Explain the Sex determination mechanism in humans. How is different from birds?

Q15. Inheritance pattern of flower color in garden pea plant and snapdragon differs. Why is this difference observed? Explain showing the crosses up to F_2 generation.

Q.16 Choose a topic of your choice for a investigatory project. After vacation, submit a short report related to your project. Submission of whole project will be done at the end of month july.

CHEMISTRY

(a)

1. Why the window glass of old buildings is look milky?
2. What happens when a ferromagnetic or anti-ferromagnetic or a ferromagnetic solid is heated?
3. (a) 'Stability of a crystal is reflected in the magnitude of its melting point'. Comment
   (b) The melting points of some compounds are given below:
   Water = 273K, Ethyl alcohol =155.7K, Methane =90.5K
   What can you say about the intermolecular forces between these molecules?
4. The vapour pressures of pure liquids A and B are 450 and 700mm Hg at 350K respectively. Find out the composition of the liquid mixture if total vapour pressure is 600mm Hg. Also find the composition of the vapour phase.
5. A solution of glucose in water is labeled as 10% w/w. What would be the modality and mole fraction of each component in the solution? If the density of the solution is 1.2g ml^{-1}, then what shall be the molarity of the solution?
6. What is meant by positive and negative deviations from Raoult's law and how is the sign of Δsol^{H} related to positive and negative deviations from Raoult's law?
7. Calculate the emf of the cell in the which the following reactions takes place:-
   $Ni(s) + 2Ag^{+}$ (0.002M) -----→ Ni^{2+} (0.160M) + 2Ag (s)
   Given that $E^{o}cell = 1.05V$.
8. Suggest a way to determine the $\wedge^{o}$ m value of water.
9. Calculate the standard cell potentials of galvanic cells in which the following reactions take place:
   a. $2Cr(s) + 3\ cd^{2+}(aq)$ ----→ $2Cr^{3+}(aq) + 3\ Cd(s)$
   b. $Fe^{2+}(aq) + Ag^{+}(aq)$ ---→ $Fe^{3+}(aq) + Ag(s)$

   Given $E^{o}_{cr^{3+},\ cr} = -0.74V$ $E^{o}_{Ag^{+},\ Ag} = 0.80V$

   $E^{o}_{cd^{2+},\ cd} = -0.40V$ $E^{o}_{Fe^{3+},\ Fe^{2+}} = 0.77V$

10. For the relation $2A+B \rightarrow A_2B$, rate=$K[A][B]^2$ with $K=2.0\times10^{-6}$ mol L^{-1} and [B]=0.2 mol L^{-1}. Calculate the rate of reaction after [A] is reduced to 0.06 mol L^{-1}.
11. A first order reaction has a rate constant $1.5\times10^{-3}s^{-1}$. How long will 5g of this reactant take to reduce to 3g?
12. For a first order reaction, show that the time required for 99% completion of a first order reaction is twice the time required for the completion of 90%.
13. Why the sun looks red at the time of setting? Explain on the basis of colloidal properties.
14. Why artificial rain can be caused by throwing common salt on the clouds?
15. Why is adsorption always exothermic?

(b)

Prepare an investigatory project as assigned Roll number wise:

1. Project on analysis of cold drinks

2. Project to study the quantity of casein in milk(different samples)

3. Project to test the (hardness) presence of ions F, Cl in drinking water (different samples)

4. Project to study the adulterants in food

5. Project on drugs and medicines

6. Project on antacids

7. Project to compare the foaming capacity of soaps

8. Project on analysis of comparative study of the rate of fermentation of fruits and vegetable juices.

9. Project on soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, taste etc.

10. Project on colloids and its applications

11. Project to study the constituents of an alloy

(C) Revision of chapters (1 to 5) from NCERT .

PHYSICS

(a)

1. What does $(q_1 + q_2) = 0$. Signify?
2. Can ever the whole charge of a body be transferred to the other? If yes, how and if not, why?
3. When is an electric dipole in stable equilibrium in an electric field?
4. The electric potential at 0.1 m from a point charge is 50 volt. What is the magnitude and sign of the charge?
5. How many electron volts make one joule?
6. The safest way to protect you from lightning is to be inside a car, comment.
7. Give the relation between drift velocity and electric field.
8. On what factors, does the potential gradient of the potentiometer wire depend?
9. How many 'faraday' of charge will be required to liberate 18 gram of trivalent aluminum through electrolysis if its weight is 27.
10. Why is sugar solution non – conducting?
11. The charge passing through an electrolyte in a voltmeter is reduced to one – fourth of its value. By what factor will the mass deposited charge?
12. Calculate the resistivity of the material of wire 1.0 m long, 0.4 mm in diameter and having a resistance of 2.0 Ω.
13. Calculate the magnitude of an electric field which can just balance a deuteron of mass 3.2×10^{-27} kg.
14. Why does an ebonite rod get negatively charged on rubbing with fur?
15. A parallel combination of three resistors take a current of 7.5 A from a 30 V supply. If the two resistors are 10Ω and 12Ω, find the third one.

(b)

Prepare an investigatory project on assigned topics:

1. Logic gate

2. AC Transformer

3. To study the variation of electrical resistance

4. Photoresistor

5. Tangent Galvanometer

6. Semiconductor

7. Full wave rectifier

8. Half wave rectifier

9. Electronic eye

10. Zener diode

11. Travelling microscope

PHYSICAL EDUCATION

1. Explain about any two asanas which are beneficial in preventing as well as curing asthma.
2. Elucidate about various Pit falls of dieting in detail.
3. What do you mean by the food myths? Explain any five food myths prevailing in contemporary Society.
4. Define and classify “fixtures” Draw a league fixture for 6 teams.
5. What do you mean by knock out tournament? Discuss the advantages and disadvantages of knock out tournament.

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