

SACRED HEART SCHOOL

Jhumri Telaiya, Koderma

ASSIGNMENTS FOR SUMMER VACATION (2025-26)

Class – XI (Science)

SUBJECT- ENGLISH

- 1. Share a happy picture of yourself and describe yourself briefly. (Answer in about 100 words) Who are you as a person? What are your dreams or goals? What are your strengths and weaknesses? Also, what are the little things that keep you happy in life?
- What do you love most about the English language? (Answer in about 100 words) (It could be a specific part of the subject like prose, poetry, drama, or grammar. Describe why you enjoy it and how it connects with you personally.)
- 3. Have you read any story book or novel apart from your coursebook? (Answer in about 200 words) If yes, briefly describe the book and share what you liked most about it—whether it's the characters, storyline, message, or writing style.
- 4. What qualities do you admire most in other people, and why? (Answer in about 100 words) It could be honesty, kindness, confidence, creativity, or anything else. Explain what draws you to those traits.

(above 1,2,3 and 4 to be done in a separate note book)

(Following to be done in English Notebook) Write each of the following questions in 100-120 words.

- Q1. Discuss the values highlighted in the chapter The Portrait of a Lady.
- Q2. Identify the poetic devices used in the poem A Photograph and discuss their meanings.
- Q3. Human life is short-lived in contrast to nature. Comment on the statement in the light of the poem A Photograph.
- Q4. Can the act of stealing be ever justified? Give your views in the context of reading of The Summer of the Beautiful White Horse.

SUBJECT- PHYSICS

- 1. Equation of motion by calculus method
- 2. right dimension formula of the following
 - (a) momentum (b) gravitational constant (c) work (d) torque (e) force
- 3. $\left(P + \frac{a}{v^2}\right)(v b) = RT$ find the dimension of a and b.

SUBJECT- CHEMISTRY

1. What mass of carbon monoxide required to contain same number of oxygen atom as present in 88 gram of carbon dioxide.

2. How many photons are present in producing one joule of energy of wavelength 4000 pm.

3. Calculate the molarity of 37% HCL solution whose density is 1.36 g/ml. What volume of this solution required to form 0.1M HCl solution of 250 ml4. Write the experiment, observation ,conclusion and the theory of ratherford's model of atom.

5. What are electromagnetic waves what are the characteristics of electromagnetic waves and write the frequency and wavelength of all electromagnetic waves.

SUBJECT- BIOLOGY

- 1. Write a short biography about famous scientist, Carolus Linnaeus as father of taxonomy & binomial nomenclature in 300 words.
- 2. Illustrate the taxonomical hierarchy with suitable examples of a plant and an animal.
- 3. Write briefly about TMV and Bacteriophage with suitable labelled diagram.

SUBJECT- MATH

1. Consider a unit circle with centre 0. Let A be any point on the circle. Consider OA as the initial side of an angle. Then the length of an arc of the circle will give the radian measure of the angle which the arc will subtend at the centre of the circle. A circle subtends an angle at the centre whose radian is 2π and its degree measure is 360°



(a) The radian measure of 240° is

(i)
$$\frac{4\pi}{3}$$
 (ii) $\frac{2\pi}{3}$ (iii) $\frac{5\pi}{3}$ (iv) $\frac{\pi}{3}$

- (b) A wheel makes 360 revolutions in one minute. Through how many radians does it turn in one second?
 - (i) 6π (ii) 4π (iii) 3π (iv) 12π
- (c) The degree measure of 1.2 radian is
 - (i) 68° (ii) 68° 43′ 37.8″ (iii) 68° 45′ 36″ (iv) 58° 46′ 27″
- 2. Consider SinA = $\frac{4}{5}$ and CosB = $\frac{5}{13}$ where 0 < A, B < $\frac{\pi}{2}$
 - (i) Find the value of CosA +SinB
 - (ii) Find the value of Cos(A+B)
 - (iii) Find the value of Sin(A-B)
- 3. In a class test of class XI, a teacher asked to students to consider $A+B=\frac{\pi}{4}$, where A and B are acute angles.

Based on the above information, answer the following questions

- (i) Find the value of (1+tanA) (1+tanB)
- (ii) Find the value of (CotA-1)(CotB-1)
- (iii) Find the value of Sin(A+B) (Cos(A+B) + tan(A+B)
- 4. Exercise 3.2
- 5. Miscellaneous Exercise on chapter 3
- 6. Graph of all trigonometric functions

SUBJECT- PHE

1. Practical Record File

SUBJECT- COMPUTER SCIENCE

- 1. Ravi's school is donating old computers to a rural school. Ravi ensures all personal data is erased before donation.
 - a. What values does Ravi demonstrate?
 - b. Why is it important to erase data before donating computers?
- 2. Neha advises her classmates to lock their systems when leaving their desks. What values is she promoting?
- 1. A developer uses only open-source and legal software for building applications. What values are being shown and why is this important?
- 4. A system has 4 GB RAM, 512 MB cache, and a 1 TB hard disk. Classify these memory types.
- 5. Identify the software in each case:
 - a) Converts code to machine language
 - b) Used to write letters
 - c) Helps delete unnecessary files