The Ambassadors College, Ota

S.S.S 1

SECOND TERM MID-TERM

HOLIDAY ASSIGNMENT

2025/2026 Academic Session

Name: _____

SSS1 REGULAR MATHEMATICS HOLIDAY ASSIGNMENT

1. (a) Construct a ΔXYZ in which $|YZ|=8.2$ cm, $\angle XYZ= 60^{\circ}$, and $\angle XZY=72^{\circ}$. Measure $|XY|$.
   (b) Using a ruler and compasses only, construct:
   (i) the locus of a point equidistant from Y and Z.
   (ii) a point Q on this locus, equidistant from $\overline{YX}$ and $\overline{YZ}$.
2. If $\frac{2\sqrt{3}-\sqrt{2}}{\sqrt{3}+2\sqrt{2}} = p + q\sqrt{6}$, find the value of $(p - q)$.

SSS1 HONOURS MATHEMATICS HOLIDAY ASSIGNMENT

1. State the equation of a straight line in the gradient-intercept form.
2. On a Cartesian plane, plot the following points
   (a) $A(3,2), B(4,6), C(-1,3), D(2,-7), P(5,-8), Q(-4,-2), S(-3,-2), T(1,-4)$
   (b) Use your knowledge of Pythagoras theorem to find the following distances:
   (i) $|AB|$ (ii) $|CD|$ (iii) $|PQ|$ (iv) $|DP|$ (v) $|ST|$
   (c) Hence, compute the equation for the distance between two points, given that the points a (x_1, y_1) and (x_2, y_2)
3. (a) With your result in number 1, state the equation with the following:
   (i) gradient: +3, intercept on y – axis: 2
   (ii) gradient: −2, intercept on y – axis: 3
   (iii) gradient: +4, intercept on y – axis: −1
   (iv) gradient: $-\frac{2}{3}$, intercept on y – axis: −2
   (b) Check your equations on www.desmos.com/calculator , observe and discuss the nature of each equation.

SSS1 REGULAR FURTHER MATH HOLIDAY ASSIGNMENT

1. The first three terms of the expansion of $(1 + mx)^n$ in ascending powers of x are $1 + 14x + 84x^2$
   (a) Find the values of m and n.
   (b) By using the values of m and n obtained in (a), calculate, correct to three significant figures, the value of $(1.06)^n$.
2. Express $\frac{2x-7}{(x^2-1)(x+1)}$ into partial fractions.

SSS1 HONOURS FURTHER MATH HOLIDAY ASSIGNMENT

1. (a) The function $f(x) = px^2 + qx + r$, where p, q and r are constants. If $f(1) = 0, f(-1) = 4$ and $f(2) = 7$, find the value of p, q and r.
   (b) Factorize $f(x)$.
2. Given that $A = \begin{pmatrix} 4 & 3 & 6 \\ 1 & 8 & -4 \end{pmatrix}$ and $A = \begin{pmatrix} 3 & 2 \\ 8 & 6 \\ 7 & 1 \end{pmatrix}$, find the product of: (a) AB (b) BA

ENGLISH LANGUAGE

Study the following underlined expressions carefully and identify their grammatical names and functions.

1. The comic <u>behind the sofa</u> belongs to Sam.
2. I think the light <u>over the table</u> has stopped working.
3. <u>Truly happy</u>, I gave him my answer.
4. <u>The eggs of the ostrich</u> are the largest in the world.
5. Recently, <u>guests at the new tourist hotel at Victoria Falls</u> have complained that trousers and other articles of clothing have been disappearing mysteriously.
6. Sola is <u>a soldier.</u>
7. Ghana, <u>the former Gold Coast country</u> is experiencing an economic boom in all its sectors.
8. Tommy worked under <u>the influential leader</u>.
9. I gave Sola <u>the luggage</u>.
10. Akpan received <u>an award</u> for excellence.
11. <u>The reader's frame of mind</u> is equally important.
12. Indeed, <u>before the second Term holidays</u>, we had a class.
13. The teacher raised <u>an instant alarm</u> and the neighbours came rushing to the scene.
14. She looked up from her typing <u>with surprise</u> .
15. <u>At the moment of impact</u>, the eye is left exposed.

LITERATURE-IN-ENGLISH

1. Complete the reading of Antony and Cleopatra.
2. In a tabular form, create four columns. In the first column, indicate the Act and Scene, second column indicate the location of the event, third column indicate the actors present on set and the fourth column summarize the action taking place.
   Note: This assignment must be submitted immediately after resumption.

CHEMISTRY

2(a) (i) Define Dative Covalent Bonding.
(ii) Using dots and crosses, show the formation of the Ammonium ion (NH_4^+) from Ammonia (NH_3) and a Hydrogen ion (H^+).

(b) A gas cylinder contains 15.0 dm^3 of gas at 2.5 atm and 25°C.

What will be the new pressure if the gas is compressed to 5.0 dm^3 and heated to 100°C?

(c) State the Law of Conservation of Mass.
If 20 g of Calcium Carbonate ($CaCO_3$) decomposes to produce 11.2 g of Calcium Oxide (CaO), calculate the mass of Carbon(IV) oxide released.

(d) Calculate the percentage by mass of Nitrogen in Ammonium Tetraoxosulphate(VI), $(NH_4)_2SO_4$. [N=14, H=1, S=32, O=16]

3(a) (i) Differentiate between Covalent and Metallic bonding.
(ii) Explain why metals are ductile.

(b) 200 cm^3 of a gas is collected at 27°C and 700 mmHg.
What will be its volume at s.t.p.?
(Standard pressure = 760 mmHg, Standard temperature = 273 K).

(c) Outline a suitable experimental procedure to separate a mixture of Iodine crystals, Iron filings, and Sand.
Mention the property of each substance that makes the chosen technique possible.

(d) (i) Define Relative Molecular Mass.
(ii) Calculate the mass of 0.2 moles of Sodium Trioxocarbonate(IV) (Na_2CO_3). [Na=23, C=12, O=16] (5 marks).

(HONOURS) GOVERNMENT MID-TERM HOLIDAY ASSIGNMENT

1a. What is a manifesto?

b. Outline five factors that determine the electoral success of of a political party.

2a. Define public opinion.

b. State five factors that make the conduct of public opinion unreliable in West Africa.

(REGULAR) GOVERNMENT MID-TERM HOLIDAY ASSIGNMENT.

1. Highlight six merits and demerits of a two party system.
2. Explain six ways by which the rights of a citizen can be protected.

CIVIC EDUCATION MID-TERM HOLIDAY ASSIGNMENT

Write short notes on the following agencies:

i. The Armed Forces ii. The Nigeria Police Force iii. The Nigerian Security and Civil Defence Corps iv. The Federal Road Safety Corps v. The Nigerian Customs Services

(REGULAR) CRK MID-TERM HOLIDAY ASSIGNMENT

1a. Explain Paul's teaching on the need for order in the society

b. State five ways you can show that you are a responsible student.

HISTORY MID-TERM HOLIDAY ASSIGNMENT

1a. What were the military restrictions imposed on Germany by the treaty of Versailles?

b. What problems did the treaty of Versailles cause Germany?

c. The treaty of Versailles was a fair settlement. How far do you agree with this statement? Explain your answers.

(HONOURS) CRK MID-TERM HOLIDAY ASSIGNMENT

1a. Differentiate between faith and world.

b. Explain Paul's teaching on faith and works.

AGRICULTURAL SCIENCE

1a. Define Drainage

b. State the TWO types of drainage.

c. Mention TWO advantages and TWO disadvantages of each drainage type stated above.

HONOURS COMMERCE

1a. List and describe FIVE ways by which the post office aid's business.
b. Explain THREE functions performed by NITEL.
2a. State THREE functions of each of the following communication agents.
i. Post Office. Ii. Tele-communications
iii. Courier Companies
b. Explain TWO ways by which registered mail differs from ordinary mail.

PHYSICS (HONOURS)

1(a). (i). What is simple harmonic motion?
(ii). Give **three** examples of simple harmonic motion.
(b). Differentiate mechanical oscillator and electrical oscillator
(c) The displacement of a simple mechanical oscillator is given as; $Y = 4.2\sin 100\pi t$, where y is in cm, t is in second. Determine the
(i). velocity equation of the oscillator
(ii). acceleration equation of the oscillator
(iii). maximum displacement
(iv). frequency and the period of oscillator
(v). maximum velocity at the middle and at the extremes
(vi). maximum acceleration at the middle and at the extremes
(d). Sketch the graph of energy interchange between the potential energy and kinetic energy in an energy – displacement graph.

PHYSICS (REGULAR)

1. A ball of mass 8kg falls from rest from a height of 100m. Neglecting air resistance, calculate it's total energy after falling a distance of 40m.
2. At what height above the ground must a body of mass 10kg be situated in order to have potential energy equal in value to the kinetic energy possessed by another body of mass 10kg moving with a velocity of $10ms^{-1}$?
3. A body is displaced through a certain distance x by a force of 30N. If the work done is 100J and the displacement is in the direction of force, what is the value of x?

ECONOMICS (HONOURS)

1a. Write short notes on the following
i. Middlemen ii. Retailer iii. Wholesaler
2a. Explain FIVE reasons for the elimination of the middlemen.
b. Explain FIVE ways of eliminating middlemen.

ECONOMICS (REGULAR)

1a. Write short note on the following
i. Capitalist ii. Socialist
iii. Mixed Economic System
b. Explain FIVE disadvantages of the socialist economic system.

COMMERCE

1. State FIVE differences between Public Limited Liability Company and Private Limited Liability Company.
2. Explain FIVE procedures to be following in the formation of Limited Liability Company.

BIOLOGY

1. Describe the characteristics features of the vegetation of the tropical rain forest.
2. Name TWO types of Savana found in Nigeria, giving one example in each case of a town where they occur.