The Ambassadors College, Ota

GRADE 9 (HONOURS)

First Term Holiday Assignment

HOLIDAY ASSIGNMENT

2025/2026 Academic Session

Name: _____

MATHEMATICS

1. Construct a quadrilateral LMNO in which LM =4.2cm, MN = 6cm, NO = 5.2cm, OL = 5cm and LN = 8cm

2. Factorize the following:

   a. $5a^2-45$

   b. $18 - 27y^2$

   c. $3(a+b)^2 - 27$

   d. $144t^{16} - 16$

BASIC SCIENCE

PHYSICS

1. a. Define power.

   b. An electric car is powered by a motor. The car is travelling at a constant speed of 35 m s−1 along a straight horizontal road, as shown in Fig. 3.1. 35 m s−1 1750 N road car
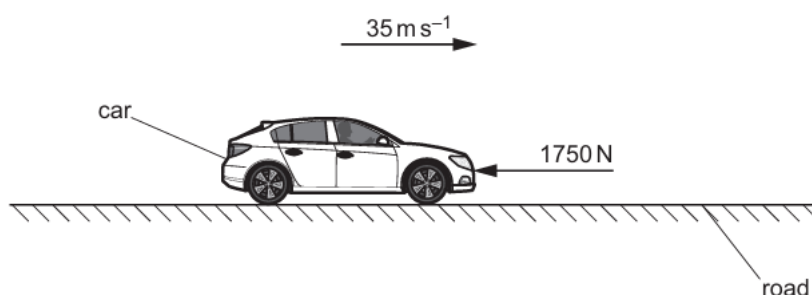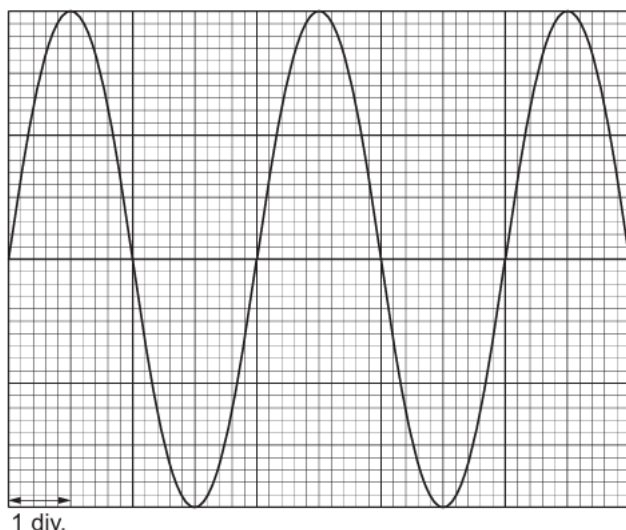

Fig. 3.1 There is a total resistive force of 1750 N acting on the car.

   i. Calculate the power transmitted to the wheels of the car by the motor.

   ii. Calculate the useful work done by the motor when the car travels a distance of 17 km.

(a)   Use the definitions of speed v, frequency f and wavelength v = f λ

(b)   A source of sound waves of frequency 236 Hz is travelling at a constant velocity of 20 m s−1. A stationary observer has a microphone connected to a cathode-ray oscilloscope (CRO). The microphone detects the sound waves as the source moves directly towards the observer. The resulting trace on the CRO is shown in Fig. 5.1

1 div.

The time-base on the CRO is set to 1.0 ms div−1

Calculate the frequency of the sound waves detected by the microphone

Determine the speed of the sound in air

CHEMISTRY

Cambridge lower checkpoint science workbook 9, page 85-89

BIOLOGY

Cambridge Science Workbook 9, pages 80 to 83, Exercise 4.3; 4.4A.

BASIC TECHNOLOGY

1. What is vulcanization?
2. Write down five (5) examples of softwood and hardwood
3. Mention five woodwork machines
4. List five metalwork machines.

BUSINESS STUDIES

1 Write out any Ten (10) printer correction signs and state its uses.
2 Differentiate between business letter and Memo with its features.

NATIONAL VALUE EDUCATION

1 Write the history behind the current Nigeria Constitution.

COMPUTER STUDIES

Warning: This is a research work and will serve as two times continuous assessment test (CA) of 5 marks. Don't just do it, study it for you will defend it in the presence of the entire class before you obtain the 5 marks.

1. Define the term Network Topology?
2. With the aid of a well labelled diagram, explain the meaning of star topology.
3. Logic gate is the elementary building blocks of a digital circuit. All logic gates are created using the three basic logic gates which are the AND gate, the OR gate and the NOT gate. With the aid of a diagram, differentiate these three basic logic gates mention. (Do not draw their TRUTH TABLES)