

Mathematics

(a) Find the sum of the Arithmetic Progression (AP) 1, 3, 5, ..., 101.

(b) Out of the 95 travelers interviewed, 7 travelled by bus and train only, 3 by train and car only and 8 travelled by all 3 means of transport. The number, x , of travelers who travelled by bus only was equal to the number who travelled by bus and car only. If 47 people travelled by bus and 30 by train :

(i) Represent this information in a Venn diagram;

(ii) Calculate the

(1) value of x ; (2) number who travelled by at least two means.

(2) The weight (in kg) of 50 contestants at a competition is as follows:

65 66 67 66 64 66 65 63 65 68 64 62 66 64 67 65 64 66 65 67 65 67 66 64 65 64 66 65
64 65 66 65 64 65 63 63 67 65 63 64 66 64 68 65 63 65 64 67 66 64.

(a) Construct a frequency table for the discrete data.

(b) Calculate, correct to 2 decimal places, the;

(i) mean ; (ii) standard deviation of the data.

Chemistry

1(a) (I) Consider the following reaction equation: $C_{12}H_{26} \rightarrow X + C_8H_{18}$

Write the molecular formula of X.

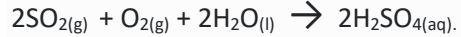
(ii) What type of reaction is represented by the equation

(iii) Draw the structure of two isomers of X.

(iv) Name the isomers drawn in (a)(iii).

(v) Write a balanced equation for the reaction between X and hydrogen.

(b) Sulphur (IV) oxide is converted to tetraoxosulphate (VI) acid according to the following equation:



If 1.5 moles of oxygen reacts with sulphur (IV) oxide, calculate the mass of tetraoxosulphate (VI) acid produced. [H = 1.0; O = 16.0; S = 32.0].

(c) A gaseous hydrocarbon R of mass 7.0 g occupies a volume of 2.24 dm³ at s.t.p. If the percentage composition by mass of hydrogen is 14.3%, determine its:

(i) empirical formula;

(ii) molecular formula.

[H = 1.00, C = 12.0, Molar volume of gas at s.t.p, = 22.4 dm³]

ICT

1a. Explain the following

- i. Array
- ii. Loop
- iii. String

1b. Write a BASIC programming language to find the average of five numbers

1c. What is the difference between high level language and low level programming language?

CRS

1a) What is Skill Acquisition?

1b) List 5 skills an individual can acquire

1c) List 4 benefits of learning a skill

2a) What is Civic Responsibility?

2b) Summarise Paul's teaching on ' Respect for constituted authorities '(Romans 13:1-7)

Book Keeping

1. What is capital?

2. List and explain the different types of capital

Visual Arts

Depict the theme 'Joy of the Season'

Economics

1. Explain the formation, functions and objectives of the European Economic Community.
- 2a. List and discuss the organs of ECOWAS
- 2b. Discuss the achievements and problems of ECOWAS.

Agricultural Science

1. Define the following
 - i. Farm mechanisation
 - ii. Farm power
 - iii. Plant disease
 - iv. Malnutrition
 - v. Balance diet
2. Mention four important internal organs of farm animals and one function of each of them.

Further Mathematics

Page 206, Exercise 12, Number 6, 7a, 8a, 11 and 12.

Page 227, Exercise 13, Number 2 and 5.

Food and Nutrition

Your uncle is visiting you for weekend.

- (a) Prepare, cook and serve a two course lunch
- (b) Prepare a snack and a nourishing drink
- (c) Set a table for two

Biology

- 1) Define evolution
- 2) List five evidence of evolution and explain them

English Language

1. Write out ten idiomatic expressions and the meanings.

2. In 450 words, write a story that ends with a stitch in time saves nine.

Literature in English

Read "The Invisible Man" and summarize its plot in four pages.

Commerce

1. Write short notes on the following

(a) Shares

(b) Stock

(c) Debentures

(d) Bonds

(e) Stockbroker

2. Define stock exchange.

2b. State four functions of stock exchange