

yl:office administration

HYACINTH TUGMAN NTRIBUTOR

sure that the right quantity/number of each type of product is always available. This is important, or else the firm might find itself out of stock, and lose sales as a result. Too high a stock level means money is tied up unproductively, and valuable space wasted.

Several steps must be followed to ensure that an accurate picture of the current stock position is always at hand; therefore, proper records must be kept for the ordering, receiving and issuing of goods. Stocktaking must be carried out at regular intervals.

RECORDING INCOMING STOCK

This may be done either centrally, through the use of a stock record card, or computer system, or locally. A local system means that a card (sometimes called a bin card) is attached to the rack where the product is stored; the date and quantity of incoming stock is recorded on the card.

After goods have been checked, the storeroom should be arranged in an orderly manner to expedite efficient handling of storeroom content.

RECORDING OUTGOING STOCK

Whenever stock is issued, the date, quantity and requisition number must be recorded on the stock record card. Keeping a running balance is important so one can know how much stock is held. The final column of the stock record card shows this.

TRIBUTOR HE PURPOSE of stock control is to make Sure that the right quantity/number of

REORDERING WHEN STOCKS RUN LOW

A well-organised storeroom has a reordering procedure that goes into effect whenever an item reaches the minimum stock level. Usually, the storeroom notifies the purchasing department. which in turn places the order with the supplier.

STOCKTAKING

This is done reaularly, so as to ensure that the balances on the stock cards

are accurate. The firm's auditors may make spot checks to make sure that products are not unaccountably disappearing. Regular check detects slow-moving items and poor buying practices.

An annual stocktaking is done at the end of the financial year, which involves the assessment of the value of the goods on hand. A physical count of each item is done and its value calculated. At the end of the financial year, the totals are then added to give the closing stock figure, which appears in the final accounts.

COMPUTERISED STOCK CONTROL

The computer with a special software can also assist with stock control. The computer can record all the items avail-

able for sale, and then deduct each item that is sold from the total stock. Some retailers use what is called barcoding for printing receipts. This makes it easier for the establishment to keep a tab on their stocks, as the computer will show when it's time for reordering. Here is an example: when you go to a large bookshop to purchase a textbook, the item is passed over a scanner (the section with the barcode facing the scanner); the computer reads the description and price of the item and automatically deducts the total from the stock figure.

STOCK LEVELS

- Minimum level
- Maximum level

MINIMUM LEVEL

The minimum stock level is the point at which there is just enough stock to take care of the normal demand until the new stock is delivered. The storeroom supervisor establishes the minimum levels for all items.

The minimum stock level is determined by: ■ The delivery period.

Amount and frequency with which an item is used.

Can you say what the storeroom clerk does on noticing that the minimum stock level is approaching? A minimum stock level for each item is fixed at a level, which allows for the item to be reordered before it runs out.

MAXIMUM LEVEL

The maximum stock figure is the largest quantity of stock. The purchasing staff should be able to decide upon the amount of goods to be ordered. However, if the stocks are too high for the needs of the firm, then the rate of turnover would be lowered and the profits reduced. Of course, if stocks are perishable they will deteriorate

This is all for this week, continue to revise.

Hyacinth Tugman is an independent contributor Send questions and comments to kerry-ann.hepburn@gleanerjm.com

yl:principles of business

Role of government – Part 3

YVONNE HARVEY CONTRIBUTOR

ELLO AGAIN. This is our third and final lesson on the role of government. At the end of the lesson you will find two essay-type questions. Use the information in this lesson as well as in previous lessons to answer the questions. These questions should prove to be very useful to you as you prepare for the external external examination.

FORMS OF GOVERNMENT ASSISTANCE TO BUSINESSES

One of the roles of government is to assist businesses. In doing so, these businesses will be able to expand and produce more. As they produce more and accumulate a surplus, this excess or surplus can be exported and earn foreign exchange which will, in turn, benefit the country, as they will be able to pay for their imports and perhaps have a surplus to go towards economic growth and development of the country. Governments assist in a number of ways.

They lend some businesses money/capital. This is especially true if the business is a small one. Government institutions for lending include the Small Businesses Association of Jamaica, (Micro Investment Development Agency) and JAMPRO. These loans are usually at low rates of interest and, therefore, are cheaper than elsewhere.

They are involved in training and technical assistance. For example, they have HEART and NYS.

Governments set up research and information centres to assist businesses in getting accurate and timely information that may benefit them. For example, the Statistical Institute of Jamaica and Jamaica Information Service.

Governments also give subsidies and grants to businesses, both of which help them to cut costs of production and, ultimately, to produce more. Subsidies can be in the form of money or materials, while a grant is a money gift that does not have to be repaid. For businesses that have just been set up, governments may grant tax concessions for a while until they can 'stand firmly on their own two feet'.

THE IMPACT OF SOCIAL SERVICES PROVIDED BY GOVERNMENT

A large proportion of government revenue is used to provide social services for the country. These social services have a positive impact on the country in that the welfare or well-being of individuals, families and businesses is improved. Social services are usually granted according to the need, i.e., low-income families



Students from Caribbean Maritime University arrive at Duke Street, Kingston, to assist with administrative duties at St Aloysius Primary and St George's Girls' Primary and Infant as mass teacher absence shut down schools for three days.

and families with persistent difficulties. These services are often regarded as merit goods and result in lessening the inequalities between the rich and the poor. In welfare states such as Sweden, there is no extreme poverty. Let us consider some specific social services and the positive impact that they may have.

GOVERNMENT HEALTHCARE

This results in a larger portion of the population being healthy as a result of general health, dental, optical and medical care. These are provided through government clinics and hospitals. A healthy population means a healthy future labour supply and, ultimately, increased efficiency and greater production.

NATIONAL INSURANCE SCHEME

One positive effect is the provision of pensions and security for the elderly. There are also widow's benefits, funeral grants and assistance given in cases of loss of earnings through illness. All of these benefits help to maintain the standard of living of people and prevent them from falling into a state of poverty.

EDUCATION

Government provides public schools and assists them through ministry grants. The result is that a greater portion of the population becomes informed and literate than if education was entirely through private means. More persons will be able to get jobs through being educated and this will reduce the unemployment rate.

ROADS AND TRANSPORTATION

Improved roads and transportation by government will mean increased access to goods and services. Greater access means improved standard of living for persons on a whole.

Now for your homework.

QUESTIONS

1. (a) Define the term 'government'. (2 marks)

(b) Outline THREE responsibilities of governments in your economy. (6 marks)

- (c) Discuss the functions of THREE government agencies involved in the protection of the environment. **(6 marks)**
- (d) Explain THREE ways in which the government may regulate business activity in your country. **(6 marks)**

Total marks: 20

(a) Distinguish between the terms, 'tax' and 'taxation'. (4 marks)

(+ Indiks)

(b) Discuss THREE purposes of taxation. (6 marks)(c) Distinguish between a 'proportional tax' and a 'regressive

tax'. (4 marks)

(d) Define 'Direct taxes' and 'indirect taxes'. (4 marks)
(e) Give ONE example of EACH type of tax named in (d) above.

(2) Give one example of EACH type of tax harried in (0) above (2 marks)

Total marks: 20

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yl:principles of accounts

Non-profit organisation

ROXANNE WRIGHT CONTRIBUTOR

HE NON-TRADING organisations are non-profit-earning entities. They were not set up to earn a profit but, instead, to provide services to members at cost.

ACCOUNTING PROCEDURES

The main difference between a trading entity and a non-trading organisation's records are:

Trading entities have:	Non-profit entities call it:
Capital	Accumulated fund.
Net Profit	Surplus OR Excess of income over expenditure.
Cash Book	 Receipts & Payment Account. This account records all cash and bank transactions. It is prepared in the "T" account format with debits for receipts and credit for payment. it is easily understood even by persons who know little or have no accounting knowledge.
Net Loss	Deficit OR Excess of expenditure over income
Trading Profit and Loss Account	Income & Expenditure Account

In the non-profit organisation there is no drawings, simply because there is no owner.

How to prepare the final accounts:

1. Calculate accumulated fund.

2. (All non-trading organisations have ancillary activities, for example, refreshment, bar, etc.) Calculate in the form of a trading account:

i. Sales

- ii. Purchases
- iii. Expenses
- 3. Balance OR draw out a cash and bank summary.

Now that I have given some important concepts and information, I will make the presentation one of a worked example. I recommend that you follow the principles I have applied. It is always important for you to understand and retain them as best as possible, since you will need them in the future.

WORKED EXAMPLE

Question:

The treasurer of Sawyers Social Club did not keep accounting records. The following information was available at April 30, 2016:

1. At May 1, 2015, subscriptions paid in advance amounted to \$420 and subscriptions in arrears were \$300.

2. Receipts during the year ended April 30, 2016:

i. Subscriptions for year ended:

	On	Advance	Arrears
	time		
		\$	\$
April 30, 2015			300
April 30, 2016	2800		
April 30, 2017		150	

ii. sale of refreshments, \$9,240

3. Payments during the year ended April 30 2016:

		\$
a.	Purchase of refreshments	6500
b.	Rent	2400
c.	insurance	480
d.	Any other expenses are to be treated as sundry	
	expenses.	

Additional information:

	May 1, 2015	April 30 2016
	\$	\$
Stock of refreshments		
Balance at bank		

All receipts and payments were made through the bank account.

You are required to:

a. Prepare the subscriptions accounts for the year ended April 30, 2016.

b. Calculate the profit made on the sale of refreshments.c. Prepare the receipts and payments account for the year

ended April 30, 2016.

d. Explain why the figure for subscriptions in the receipts and payments account might be different from the subscriptions figure in the income and expenditure account.

WORKING [w1] \$300 + 2800 + 150 = \$3250

SOLUTION

a. Sawyers Social Club

SUBSCRIPTION ACCOUNT

20015/2016		\$	20015/2016		\$
May 1	Balance b/d	500	May 1	Balance (advance)	420
April 30	Balance (Advanced) c/d	150	April 30	b/d	3250
April 33	Income & Expenditure	3220		Bank [w1}	
	A/c	3670			3670

b. Trading account for the year ended April 30, 2016.

	\$	\$
Sales		9240
Opening stock	540	
Add: Purchases	6500	
	7640	
Less: Closing Stock	660	6380
Profit on Sale of refreshment		2860

c. Receipts & payments for the year ended April 30, 2016.

2015/2016		\$	2015/2016		\$
May 1	Bal. b/d	1580	May 1	Purchase of	
May 1	Subscription	3250	May 1	refreshments	6500
May 1	Sale of refreshment	9240	May 1	Rent	2400
			May 1	Insurance	480
				Sundry expenses	3010
				Balance c/d	1680
		14070			14070
2016/2017		1680			

d. The total amount received in the form of cash is posted on the debit side of receipt and payment account, whereas income of the current year is transferred to income and expenditure account. Subscriptions can be in advance or in arrears.

This is where we will end for this week. Join me next week as we continue to complete the syllabus. Grasp the concepts and retain them; you will need them as you progress to excellence. See you next week.

Roxanne Wright teaches at Immaculate Academy. Send questions and comments to kerry-ann.hepburn@gleanerjm.com

yl:chemistry

Introduction to organic chemistry

FRANCINE TAYLOR-CAMPBELL CONTRIBUTOR

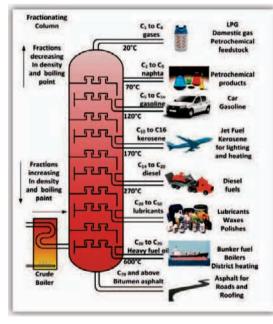
CRUDE OIL consists of a mixture of hydrocarbons.

Hydrocarbons are organic compounds containing carbon and hydrogen only.

The compounds in crude oil can be separated by fractional distillation, where a fractionating column is used to separate the fractions based on boiling points and the length of the carbon chain.

Smaller molecules with lower boiling points are collected at the top of the column, while larger molecules with higher boiling points are collected at the bottom.

The fractions are mainly used as fuels with refinery gas, gasolene and diesel oil being the most important ones.



Typical Fractionating Column

Crude oil is fed at the bottom. As you go up the column, the temperature decreases. Hydrocarbons with smaller carbon chains are very flammable and volatile (low boiling points) and are removed at the top.

Long-chain hydrocarbons are highly viscous and are not very flammable and volatile. They are collected nearer to the bottom of the column.

The smaller-chain hydrocarbons are more useful, so longer-

chain hydrocarbons are usually cracked to produce these smaller chains.

Cracking – is the decomposition reaction of breaking up large hydrocarbons (alkanes) into smaller more useful products. Thermal cracking involves heating to very high temperatures. Catalytic cracking involves passing the hydrocarbon over hot ceramic catalyst. The products of cracking are smaller alkanes and an alkene.

Most of the hydrocarbons in crude oil are saturated compounds such as methane, ethane, propane and butane.

When hydrocarbons are completely burnt in oxygen, they produce carbon dioxide and water. Incomplete combustion leads to the formation of carbon monoxide. Carbon dioxide is a greenhouse gas and causes global warming.

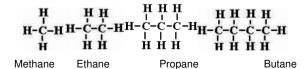
Other products of burning fossil fuels and coal include oxides of sulphur and nitrogen. These pose several environmental risks, including the formation of acid rain.

A homologous series represents a family of organic compounds with its members having a general formula and showing similar physical and chemical properties.

Carbon forms a large variety of compounds based on its ability to bond with itself and form single, double and triple bonds. It can also form ring structures.

HOMOLOGOUS SERIES	GENERAL MOLECULAR FORMULA
Alkanes	C _n H _{2n+2}
Alkenes	C _n H _{2n}
Alcohols	C _n H _{2n+1} OH
Carboxylic Acids (Alkanoic Acids)	C _n H _{2n+1} COOH

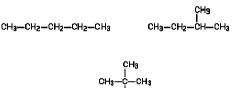
Alkanes, alkenes, alcohols and alkanoic (carboxylic) acids are some examples of different homologous series. Members are named based on the number of carbon atoms present ('meth' - 1 carbon, 'eth' - 2 carbons, 'prop' - 3 carbons) and ending in the parent name of the series ('ane' - alkane, 'ene' - alkene, 'ol' - alcohol, 'oic' - alkanoic acid).



The large variety of carbon compounds that exist is based on the presence of different homologous series. Members of the same series have similar chemical properties and the same functional group. Physical properties such as melting and boiling points increase as the size of the molecule increases (addition of a $-CH_2$ - group). Density also increases. For example, as you go down the alkane series, the compounds change from gas (methane) to liquid (hexane) to solid.

Isomers occur when compounds have the same general formula but differ in their structural formula.

Structural isomers differ in the arrangement and linkage of atoms. For example, let us examine the isomers of pentane C_5H_{12} . The branching of groups from off the longest chain allow other



isomers to be formed. They differ in how the atoms are displayed but they all have the same molecular formula of $C_{3}H_{12}$. The first molecule is called pentane, the second molecule is called 2-methylbutane because the branch is a methyl group (CH₃) placed on the second carbon in the longest chain. The third molecule has two methyl groups (CH₃), both attached to the second carbon. It is named 2,2- dimethylpropane.

Please note that there is a specific method used to name organic compounds using the IUPAC system.

Other structural isomers differ in the position of the functional group. In alcohols, the functional group is -OH. When this group is placed in different positions, different isomers are formed as shown.

The positioning of substituents such as a halogen atom (CI, Br) can lead to the formation of isomers.

These isomers normally differ in physical properties such as melting and boiling points and even physical state. However, they would all undergo the same chemical reactions.

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yl:biology

Human activities on natural resources – Cont'd

MONACIA WILLIAMS CONTRIBUTOR

"What you do makes a difference and you have to decide what kind of difference you want to make."

– Jane Goodall

AST WEEK, we began our study of the impact of human activities on the environment by looking at how these activities impacted two of the four resources that were listed for study. Do you remember what these resources are? Of course you do! Did you say energy, minerals, forests and the resources of the seas and the oceans? If you did, you are correct. Now, which ones did we look at last week? If your answer was energy and minerals, then you are, again, correct! This week we will continue our study by looking at the remaining two, forests and the resources of the oceans and seas.

FORESTS

The human population depends on the trees in the forests to maintain the balance of carbon dioxide in the atmosphere. Do you know how the trees are able to do this? The trees take in carbon dioxide which they use in the process of photosynthesis. This continuous removal of carbon dioxide from the atmosphere serves to keep the level of carbon dioxide at 0.03%. Remember that carbon dioxide is being continuously returned to the atmosphere due to respiration, so if it is not removed the levels would increase.

WHAT ARE THE CONSEQUENCES OF DESTROYING THE FORESTS?

The destruction of the forest is known as deforestation. Many Caribbean countries are suffering from the effects of rapid rates of deforestation.

As said before, trees help to maintain the carbon dioxide levels in the atmosphere, so if the trees are cut down then the amount of carbon dioxide in the atmosphere will increase. Carbon dioxide is a greenhouse gas and increased levels will contribute to global warming.

■ Deforestation can contribute to soil erosion. The roots of trees help to bind the soil together, preventing soil erosion.

If trees are growing close together, their



Students from Kemps Hill High School in Clarendon sample different types of oranges on display at the Bodles Research Station in St Catherine, during the Citrus Day Exhibition on March 2. The students are being served by greenhouse manager at Bodles, Dwayne Clarke (left).

leaves will form a canopy which will serve to break the force of the water when there is heavy rain. This also helps to prevent erosion of the soil and flooding.

■ Transpiration from the leaves helps to maintain the transpiration stream so when deforestation occurs, it can lead to a reduction in the amount of water vapour going to form clouds. Transpiration plays a role in the water cycle.

Trees provide food and shelter for many organisms, so deforestation can endanger the survival of these organisms.

■ Many endemic organisms live in areas such as tropical rainforests; destruction of these forests can lead to their extinction. These include animals like the giant citrus swallowtail butterfly in Jamaica, the parrots of St Lucia and Jamaica, and the Iguana which used to be found in large numbers in many Caribbean islands but whose numbers have now dwindled.

If trees are so important, why then are we trying our best to get rid of them? Well, unfortunately, man is not known for thinking long term, so we continue to use what we want, when we want to, without spending much time to think of the consequences. Let us look now at some of the reasons why forests are destroyed.

We use lumber to make houses and furniture and as populations increase, the need for lumber grows.

Trees provide pulp to make paper for newsprint, photocopiers, printers and general uses in offices, homes and schools.

Trees are removed to provide land for farming and cattle ranching.

Trees are removed to provide for the construction of roads and housing schemes.

Trees are also used to provide fuel, either as charcoal or as firewood. In some areas of the world this is the only source of fuel.

MARINE RESOURCES

Most times when we think of the seas and the oceans, we think only of the fish, large and small, that are found there; but these two vast expanses of the earth's surface are much more than providers of fish, and their ecosystems are also threatened by human activity.

We are going to look briefly at the impact of human activities on the coral reefs that form an

important part of our lives as island states.

■ Coral reefs are vibrant, delicate structures that provide food such as fish, shrimp, lobsters, sea urchins and sea weeds for humans, and shelter for a wide array of organisms.

■ They also provide avenues for recreational activities such as swimming, snorkeling and scuba diving for tourists; and don't forget that they were the providers of the beautiful, white sand beaches that form the coastline of many Caribbean states.

■ The reefs protect the island coastlines from erosion, since they act as breakers for the waves coming to shore.

■ It follows, then, that we ought to take care of them; unfortunately, it does not always happen, as with the forests, we use and abuse.

The following gives a list of the destructive activities that are carried out on the reefs.

■ Divers collect the living corals which they then sell to tourists – corals take a very long time to grow; it takes approximately one thousand years for a reef to grow one metre.

■ Fishing for reef fishes has caused a lot of damage to the reefs. Some fishermen use traps that damage the structure of the reef. These traps catch fish indiscriminately, i.e., young and mature, small and large. Populations of conch, sea urchin and lobsters have been depleted and some island states have had to restrict the periods when they can be fished for.

■ Unsupervised ecotourism activities can also cause damage to the reefs, e.g., if humans are allowed to walk and snorkel on them freely.

Dredging of lagoons and the destruction of reefs to create harbours for ocean vessels, reclaiming of land to build coastal roads and hotels all serve to destroy the reefs.

Discharge of untreated sewage into the sea provides excessive supplies of nutrients which lead to algal blooms, causing the deaths of other marine organisms due to oxygen depletion.

Run-off of fertiliser into the sea also causes algal blooms, resulting in the death of other organisms.

Interesting, isn't it? See you next week! Take care!

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The development of the peasantry, 1838 to 1900 – Part 1

DEBBION HYMAN CONTRIBUTOR

OBJECTIVES

At the end of the lesson, you should be able to: 1. List three British Caribbean territories which developed an active peasantry.

2. Describe three factors that facilitated the development of a Caribbean peasant population and the growth of the free village movement in the Caribbean towards the end of the 19th century.

One of the defining tenets of the British Caribbean peasantry was the ability of the people to control the land that they used and the time and labour they employed on that land. As a consequence of this requirement, the peasantry in the Caribbean began after 1838 with the freed people who moved off the estates and who established their own small holdings of an average size of about two acres. The reasons for the setting up of the peasantry are many but, at the root, they all reflect the freed people's desire to move off the plantations, which had been their place of abuse, and to seek out lives for themselves which they controlled.

Additionally, by being skilled agriculturalists, the move to an agriculturally based subsistence lifestyle was one that gave them comfort. The development of the peasantry in the British Caribbean, in terms of its growth and in terms of the ability of the freed people to engage in it, was, however, limited by the unavailability of land. Hence, the peasantry developed only in a few of the territories, such as Jamaica, Trinidad, the Windwards and British Guiana. These places had available land which could have been utilised for peasant production by the freed people.

From the outset, one notes that the growth of the peasantry was not in keeping with the aim of the plantation. This was because both activities competed for the labour of the freed people. In this context, therefore, one can understand that although the peasants did in fact often work on the plantations as part-time wage earners, in general, however, their orientation was in opposition to the plantation. This occurred because they were always looking for more land to expand the peasantry and, by so doing, making their labour less available to the estates. Thus, the two main inputs of the plantation, land and labour, were the two main inputs also required by the peasantry.

With no surprise, therefore, we learn that the plantocracy often pursued policies to hamper the growth of the peasantry and keep its labour tied to the estates. These policies included strategies like raising the price of landholdings to make it too expensive for the peasants (peasants often paid £20 per acre of land, which could be raised to as much as £200 per acre), as well as to pursue strategies that would lead the peasants into a form of debt peonage. The effectiveness to these policies were, however, limited by the planter's own indebtness and their own need to secure labour through the offering of incentives to the peasant labour force.

The peasantry was a mixed one and the peasants pursued a number of economic activities which were not all tied to their own plots of cultivated land. To this end, they fished and carried on shopkeeping and huckstering, in addition to part-time jobs on the estates. Their land use differed from that of the plantation and resulted in the setting up of smallholdings and villages away from the plantation. Indeed, in British Guiana, for example, by 1852, peasant smallholdings were valued at over £1 million and numbered about 11,000, while in Jamaica, the smallholdings, under 50 acres, had grown to 50,000.

Historians studying the development of the Caribbean peasantry have identified three stages in its growth. First, a period of establishment which lasted from 1838 up until 1850-60, second, a period of consolidation which followed on and lasted until 1900 and, third, a period of saturation which lasted from 1900 to the present. During these phases, the peasantry established itself as a force for change in the Caribbean and also demonstrated that it too was a changing force. As such, the size of the smallholding increased over time (especially in order to remain as viable units), as the focus changed to cash crops and to the export market. One realises, therefore, that the peasantry was always a dynamic force that experienced different phases in its development.

An important developmental aspect of the peasantry was its move from an activity providing initial subsistence for the freed people to one geared towards the production and export of cash crops and products. To this end, we note that the peasants produced export crops and products such as arrowroot, cotton, sugar, bananas, citrus, logwood, rum, spices, coffee, cocoa, ginger and pimento. The peasantry also introduced new crops and diversified the monoculture of the sugar economies. By their activities, they, ultimately, led to a level of self-sufficiency for the colonies that was never attained in the previous years under enslavement. Indeed, by removing the focus from the plantation, the peasantry directly stimulated the growth of an independent village life for the freed people with the associated services and amenities such as churches, schools and markets. Indeed, the development of the cooperatives in the Caribbean has been traced to this peasant development.

Ultimately, the growth of the peasantry in the British Caribbean was one that succeeded not because of, but largely in spite of the colonial authorities. Since the peasants consisted largely of the freed people and they were competing with the estates, no real encouragement was given to them by the local governments. Agricultural innovation and assistance that could easily have been provided by the state were denied these peasants. Indeed, it was not until the later part of the 19th century, with the agitation of the period and reports like those of the Royal West India Commission of 1897 (which pointed out that the peasantry was "a source of both economic and political strength"), were the peasants taken seriously. In spite of these realizations, however, little had actually been done in terms of official support, and the Caribbean peasantry has still continued to exist largely because of the resilience of its participants.

ACTIVITY

Extended Writing

Imagine that you are a journalist in Trinidad in the 1890s and assigned to the newspaper the **Trinidad Times**. Write an article for the newspaper in which you examine the factors that led to the development of the peasantry in the island.

SOURCES

1. A Post Emancipation History of the West Indies – Isaac Dookhan

2. Freedoms Won: Caribbean Emancipations, Ethnicities and Nationhood – Hilary Beckles & Verene Shepherd

3. Notes on Peasant Development in the West Indies since 1838 – Woodville Marshall

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yl:social studies

Population distribution

MAUREEN CAMPBELL CONTRIBUTOR

OBJECTIVES

Explain the factors influencing population distribution.

Outline the factors influencing population growth.

Outline the sources and uses of population statistics.

If you had a choice, where in Jamaica would you live? Give TWO reasons for your answer.

In any study of the population, it is essential to be aware of its distribution; it is also necessary to identify factors which determine the way in which the population is distributed within an area or in a country.

The three factors that most explain the patterns of population distribution are generally grouped into three categories: (1) geographical factors (2) economic and social factors and (3) demographic factors.

The main factors that affect distribution of population are, therefore, natural resources, fertile areas, the relief of the land, climatic conditions, types of vegetation, cultural factors, industrial development/location of mineral resources, and means of transport and communication.

(I) NATURAL RESOURCES/LOCATION OF MINERAL RESOURCES

The regions having a wealth of natural resources, like coal, water, minerals and forests, favour the growth of population. These resources help in the development of trade, commerce and industry. Readily available resources encourage exploitation and will ultimately result in industrial development.

(II) CLIMATIC CONDITIONS

Climate also influences growth of population. Moderate climate leads to the growth of population because it is pleasant and refreshing. In these regions, density of population is high. On the other hand, people do not like to live in toohot and too-cold climates.

(III) FERTILE AREAS

Rich and fertile soil always helps in the growth and development of agricultural activities with substantially high revenue. This is so because fertile lands produce a variety of crops to support dense population.

(IV) TRANSPORT AND COMMUNICATION

Highly developed means of air, road and water transportation add to the density of population in a particular region because if people are able to move about as quickly and often as they desire, they will be willing to live in certain areas.

(V) CULTURAL FACTORS

Cultural factors like the modes of life of the people also affect the density of population. Culture will dictate whether one uses family planning measures or not.

(VI) RELIEF OF THE LAND

Adverse physical conditions and lack of sufficient opportunities for means of livelihood have been mainly responsible for discouraging inhabitation in certain areas. Most persons are prone to living in low, flat areas that are not treacherous and the vegetation is acceptable. Steep gradients and rugged terrain are difficult to cultivate and restrict movements.

(VII) NATURAL VEGETATION

Areas such as forests are sparsely populated, as not many persons want to live there. Some areas are hard to clear for the building of houses or to find fertile soil for farming purposes.

FACTORS INFLUENCING POPULATION CHANGE/TREND

The main factors that affect population change

are birth rate, death rate and migration patterns.

BIRTH RATES

This is the number of people born into a society. It has a very profound impact on any population. Developed countries tend to have a lower birth rate due to the availability of birth control, education and with more women working outside the home. Women in underdeveloped countries are often producing many children. Many do not work and may not use or want to use, or may not have, contraceptives.

DEATH RATES

This is the number of people dying in comparison to those being born; it is a factor in determining population growth rates. This factor is affected by other factors such as disease epidemics in a particular regions, wars that take a toll on populations, healthcare availability, food resources and sanitation. Developed countries have better healthcare as opposed to underdeveloped areas, which have few healthcare resources.

EMIGRATION

The number of people who leave a country has an impact on the population. Factors that influence emigration include wars, famine, lack of resources, and natural disasters like a hurricane or earthquake. The number of individuals who migrate to a particular area will increase the population. This migration is facilitated by the appeal of a region or by emigration factors that drive people from one area and into another.

For your information:

When there is poverty: more children mean more chances that one of them will survive. It is said in some areas that children are seen as an insurance for old people. They can take care of their parents in the future.

With the great increase in technology and research, one of the results is improved healthcare: With this improving healthcare availability, human beings tend to live longer. **Education:** People who are educated tend to have kids later in life, which somewhat is a brake on population growth. If people have children at an early age, and their children also, and so on, then this means a rise in population growth.

SOURCES OF OFFICIAL STATISTICS

Official statistics may be gathered from a national census which is carried out every 10 years in most countries. The Registrar's Office can supply information on births and deaths, also marriages and divorce. The Office of Naturalization, as well as records of religious and educational institutions also provide muchneeded population statistics.

USES OF POPULATION STATISTICS

Population statistics is essential in all countries to plan for healthcare, housing, education, employment, social welfare and infrastructural development. With this in mind, every country needs basic information on its residents in order for the following to happen:

■ Planning – Good planning is based on reliable, up-to-date, accurate and detailed information on the state of the society in the country, and the population becomes the most important element when planning for a country now and for the future.

■ For a country to move forward with a satisfied population, the development and improvement of the residents' quality of life is of paramount interest.

■ A country must plan better services as the age of a population dictates this and the vast improvement in technology worldwide demands it

The improvement of citizens' quality of life will help to solve existing problems and provide for sustainable development.

■ Statistical information, which serves as the basis for constructing planning forecasts, is essential for the democratic process since it enables the citizens to examine the decisions made by the government and local authorities, and decide whether they serve the public they

CONTINUED ON PAGE 22

Multiple choice practice – Argumentative essay

MELISSA MCKENZIE CONTRIBUTOR

W ELCOME TO another lesson! This week you will be getting further multiple choice practice. The extracts that will be used are argumentative in nature and will help in preparing you for the upcoming lessons that will focus on argumentative essay writing.

Read the extracts carefully and select the most logical responses.

Read the following extract carefully and then answer the questions on the basis of what is stated or implied.

The main argument in favour of keeping the death penalty for murder is that it will frighten men out of the desire to commit the crime. In other words, it will act as a preventative. It is curious that the more ineffective it is in this way. that is, the more murders actually take place, the more defenders of capital punishment cry for it to be kept. Two reasons at least account for its ineffectiveness as a preventative. The first is that few men, when they commit murder, either know clearly what they are doing or are in sufficient control of themselves to mind what will follow. The second is that figures show that for every eleven murders committed, only one man is executed. So that a murderer who calculates the chances may well decide to take the risk. Society can best show its horror at murder by refusing to imitate it in the name of justice.

1. To 'frighten men out of the desire' presents the view that:

A. Desire can be counteracted by fear.B. Fear is the strongest emotion that men

possess.

C. Fear causes great desire in men.

D. Desire is man's weakest emotion.

2. 'Preventive' as used in line 2 of the extract means:

- A. law
- B. precaution

C. deterrent

D. terror

3. The writer mentions statistics in the extract in order to:

A. Convince the reader that the death penalty encourages murder.

B. Inform us that the number of murderers receiving the death penalty has increased.

C. Impress the reader with his knowledge of the law regarding the death penalty.

D. Show that most murderers are not given the death penalty.

4. The term 'calculate the chances' as used in the passage means:

- A. Computes the score.
- B. Works out the odds.
- C. Thinks about the opportunities.
- D. Predicts the future.

5. In the last sentence of the extract, the writer is expressing the view that:

A. Murders are increasing because society is influenced by the courts.

B. Society should not regard the death penalty as justice but as murder.

C. People have a desire to imitate what they see and therefore commit murder.

D. Courts of justice should prevent people from committing the horrible crime of murder.

6. According to the extract, which of the following is NOT given as a reason for the death penalty being ineffective as a deterrent?

A. Only eleven murderers are caught and executed.

- B. Murderers feel that they are unlikely to be executed.
- C. Only one out of every eleven murderers is executed.
- D. Most murderers lack the control during the act about the consequences.
- 7. The style of writing in the extract can BEST be described as

Α.	Descriptive
В.	Factual
C.	Argumentative

D. Narrative

8. The writer uses the sentence: 'The first is that decide to take a risk.' in order to:A. Convince the reader that the death penalty

- is ineffective. B. Persuade the reader that only one out of
- every eleven murderers is executed. C. Show the reader the adverse effects of

me.

D. Inform the reader how a would-be killer might think.

Read the following extract carefully and then answer the questions on the basis of what is stated or implied.

The Press must be, in any democratic society, a dedicated Opposition.

Any Government – to a good Press – is a suspect instrument. Any Opposition, to a good Press, is opposing ineptly.

The good Press represents nobody but itself. It is the last stronghold of totally aristocratic privilege. It speaks for the people because it depends on the people who buy it because they like it; and because it has an unwritten contract between it and the people who would otherwise know about the Government of the day only what the Government wanted the people to know. But this allegiance to, and contract with, the people do not bind the Press to any commitment except telling the truth. The Press elects itself and can be removed from office only by a legitimate revolution of the people when they stop buying it, or by an illegitimate coup mounted by the elected estates of the Government.

Every Government is, potentially, a ravager, every people, potentially, a victim. Every good Press is an individualistic, opinionated knight who simply declares that between ravager and victim there is a force which will not be frightened by the ravager and which will not be influenced by those to whom it sells its opinions.

A good Press speaks for the people who vote a Government out of power. But the day after such a Government takes power, the Press must be ready to rebuke the people for shouting "Hurrah!" for a patently incompetent Government.

A good Press, in short, is the product of 500 years of technological development between Caxton and Baird and we make history as well as record it. The politician never knows when one editorial, one story, one commentary, one pictorial feature might not destroy him or create him. There is nothing that the politician can do about us in the free Press. We do not seek office, influence or advantage from the Party in power. We simply reserve the right to be a part of the governing process, with or without the approval of the elected Government or its elected Opposition. Our constituency does not depend on those who say "I agree or I disagree" with what you had to say, but on those who say "I read you! I listened to you! I saw you last night on TV!"

9. The function of the second and third sentences in the extract is to:

- A. Give specific examples of a dedicated Opposition.
- B. Explain the statement made in the first sentence.
- C. Show that the Press is only good when it acts as an Opposition.
- D. Arouse the reader's concern about the role of the Press.

10. Why does the writer repeat the phrase 'good Press' at the beginning of paragraphs three, five and six?

- A. To emphasise the ideal characteristics of the 'good Press'.
- B. To indicate contempt for the Press which is not an Opposition.
- C. To stimulate greater identification of a 'good Press'.
- D. To emphasise that he is a member of a 'good Press'.
- 11. According to the writer, the MOST important function of the good Press is to:
- A. Oppose the Government.
- B. Present the truth.
- C. Increase the number of its subscribers.
- D. Represent the views of the people.

12. By describing the good PRESS as 'an individualistic, opinionated knight', the writer is emphasising:

- A. Strength
- B. Wisdom
- C. Honesty
- D. Independence

yl:english literature

BERYL CLARKE

'M HAPPY to be here again this week. You do know that you should find and remember the similarities between the poems and those among the short stories so that when a question demands answers that have to be taken from two sources, whether poems or short stories, you are ready. In other words, pair up the poems by their themes and do the same with the short stories! Please do not wait until you are in the examination room and you see the question to try to do so.

Did you get a chance to read or reread **Berry**? If you did not, please stop reading this lesson and take a few minutes to go through it now. As in **Raymond's Run**, you will recognise prejudice. Prejudice in **Berry**, though, is of a different nature from that in **The Two Grandmothers**, where it is based on class differences. **Berry**, on the other hand, faces racial prejudice.

Berry is a young black man who, in his desire for improvement/survival in life, moves from his home state of Georgia to New Jersey. He gets a job at Dr Renfield's Summer Home for Crippled Children, where he is immediately discriminated against both by Mrs Osborn, who is the housekeeper of the establishment, and by Dr Renfield. Mrs Osborn does not wait to see if her employer will hire Berry, but puts him to work while thinking that there could be a problem finding a place for him to sleep. One

'Berry'

wonders whether she would have done the same had he been white. Dr Renfield reveals his dishonesty and prejudice when he decides to reduce the young man's wage and refers to him as a 'darkie'. There are no other obvious reasons for his actions. Milberry Jones is a person with a name by which he could have been addressed, and his colour did not need to be mentioned. But this is only the beginning and, as we read, we find out about just how awful Dr Renfield is, the humourous link between himself and the housekeeper, and the character of Berry – after whom the story is named.

Briefly, what happens is that the doctor agrees to employ Berry. He is apparently to be a member of the kitchen staff, but as time goes on he becomes overworked, being called on at first, and then later as a matter of course, to do every and anything. The children love him because he treats them well; in fact, better than those who are supposed to take care of them.

Later, there is an incident which happens because of the loving relationship he has with them, and he is harshly and unjustifiably

dismissed. His dismissal and punishment underscores the racism with which he was treated during his employment and shows up not only the cruelty of his employer, but also the weakness of Mrs Osborn and the selfishness and unfairness of the nurses.

Now, let us look at Dr Renfield. He has opened a business for crippled children. What does it do for the children whose parents pay as much as they could for this 'service'? He takes the children off their parents' hands during the summer, but they do not get any special care. The food they are being fed is inferior to that which is on show when parents come to visit. There is mention of the doctor making his rounds. However, where we learn that the children become attached to Berry, we do not get any suggestion that he has a close relationship with any of them. The little boy who falls out of his wheelchair clings to Berry, refuses to go to the doctor, and even kicks at him.

As for the nurses, they seem to be more concerned with their pay than about the 'little brats' that cause them to be employed. I doubt that 'brat' is used by them in a humourous way but, instead, tells us that they are critical and disrespectful of the children. You know what I mean, don't you? Yes, they look down on the children. If the owner of the business had been conscientious, he would have been aware of this and taken steps to change their attitude, or he could have dismissed them. However, judging by the way he treats Berry, it is likely that he, too, does not think much of his charges. Berry is not happy at what he observes and

> concludes that Dr Renfield is running what we call, today, a scam on the parents. Do you agree with him? It could be that he was not in the habit of treating his employees well, for the nurses complain about their wages and the Scandinavian boy left without even telling Mrs Osborn that he was going.

> The first person we meet in this story is the 'boy' and then Mrs Osborn, and soon after we find out that she is particuliarly attached to her employer. She worships him, according to the workplace gossip. She takes every opportunity to be with him and is critical of his wife, who is seemingly aware of Mrs Osborn's fondness for her husband, and treats her coldly on the one occasion we see them together. In next week's lesson, we will continue our exploration of this text.

Walk tall, young ladies and young men, and God bless!

LIONEL ROOKWOOD/PHOTOGRAPHER

Beryl Clarke is an independent contributor. Send questions and comments to kerry-ann.hepburn@gleanerjm.com

Sixth-form girls from Titchfield High School, Port Antonio.

yl:information technology

Control structures

NATALEE A. JOHNSON CONTRIBUTOR

OOD DAY, students. This is lesson 24 in our series of lessons. In this week's lesson, we will conclude looking at control structures and will also look at trace tables.

THE 'REPEAT-UNTIL LOOP'

The repeat-until loop is similar to the while loop, except the condition is tested at the end of the loop (post-test). Thus, the block of statement(s) will continue to execute as long as the specified condition in the UNTIL statement is true. Using the same example of having a bowl of ice cream and jello, you would continue to have your ice cream and jello as long as you have ice cream in your bowl.

The repeat-until loop structure is shown below: REPEAT Block Statement(s) UNTIL <condition is true> Example 1 Repeat fill spoon with ice-cream and jello Block statements lift spoon to mouth swallow ice-cream with jello Until bowl is empty Pseudocode version Flow chart version These statements will Start be repeated until name Start is "END". Repea Print "Enter your nam Print "Enter your name followed by your age followed by your age" Read name, age Until name = "END' Read name, age Print "Age is just a number." Stop Na Is Name = "END"? Yes Print "Age is just a number " Stop

TRACE TABLE

A trace table is an important tool for testing the logics of a pseudocode for accuracy. A trace table is a rectangle array of rows and columns. The column headings are the variables in the pseudocode. As instructions in the pseudocode are carried out and the variables are modified, the changes are recorded in the appropriate column in the table. When the pseudocode terminates, the final values in the trace tables should reflect the correct result.

Let us look at an example of how a trace table is executed using Example 1 shown below.

EXAMPLE 1

Write a pseudocode algorithm to read the ages of 10 persons and print the average age of the persons as well as the age of the oldest person.

Start count $\leftarrow 0$ Sum $\leftarrow 0$ Oldest $\leftarrow 0$

For count $\leftarrow 1$ to 10 do Read age Sum \leftarrow Sum + age

If age > Oldest

Oldest ← age Endif

 $count \leftarrow count + 1$

Endfor

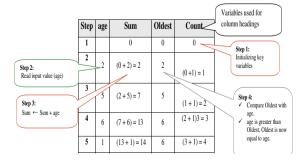
Average ← Sum/count Print Average, Oldest

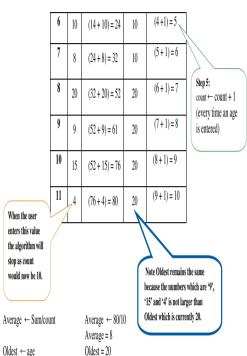
Stop

THE TRACE TABLE FOR EXAMPLE 1

EXAMPLE 1

We will use the following numbers as input for the trace table: 2, 5, 6, 1, 10, 8, 20, 9, 15, and 4.





1. For the example above, you will first initialize your variables as shown in the algorithm.

2. Then you would repeat step 2 to step 5 until the user enters the 10th value. The program will then stop.

3. The average will be calculated (80/10); average is 8.

4. Both the average and the oldest value will be printed, which is 8 and 20, respectively.

We have come to the end of lesson 24 in our series of lessons. See you next week, when we will look at relational operators and begin a new unit. Remember, if you fail to prepare, you prepare to fail.

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CLEMENT RADCLIFFE

CONTRIBUTOR

s we continue the review of vectors, we will begin with the solution to last week's homework.

By reviewing the graph, you should have determined the following:

h = 42 C = 3 6

CONTINUING VECTORS

The arithmetic operations may be applied to vectors as follows:

If AB = x1, then k AB = k x1y1 k y1 where k is a constant.

EXAMPLE

If AB = 3, then $2 \times AB = 6$ -1 -2

-1 x AB = BA I do hope that you realise that the negative sign reverses the direction of the vector.

Example: If AB = 5, then $-1 \times AB = -5$ - 3 3

NB: $-1 \times AB = BA$. That is, the direction is reversed.

If PQ = x1 and RS = x2, then PQ + RS = x1 + x2y2 y1 + y2 y1

 \blacksquare PQ - RS may be evaluated as PQ + (-1) x RS. I hope the implication is clear to you. From the above, therefore, PQ - RS = x1 - x2y1 - y2

Let us attempt the following examples which will clearly illustrate the above. It is advisable that you evaluate the answers and check them against mine.

EXAMPLE

Illustrate the following on the graph; a = 3 m = - 3 & n = - 2 4 4 - 5

Vectors

NB : Note the negative direction on the graph.

EXAMPLE

Given the vectors b = 2 and c = -4-2 6

Determine the following vectors: - b, -c, 2b, -3c. 2b - 3c

ANSWERS

1b = -2	2c = 4	3. 2b = 4
-6	2	12
43c = 12		
6		

5. 2b - 3c = 4 + 12 = 4 + 12 = 16 12 6 12 + 6 18

In number (3 above, could you use the Cartesian diagram to investigate the relationship between the vectors b and 2b?

NB: Did you notice that 2b is twice the length of b and in the same direction? I am sure that you will find it interesting to attempt all the questions in the Cartesian diagram and endeavour to determine the various relationships.

If you have mastered the above, we will go on to a special vector – the vector position.

POINTS TO NOTE

- The position vector always begins at the oriain.
- It is denoted by p or alternatively OP, where 0 is the origin.
- Given the point P (5, 3), then the position vector OP = 5. 3

Let us do the following together. The points A(3, -2), B(5, 2), C(6, 4) and D(2, 4) are the vertices of a quadrilateral ABCD. (a) Express in the form = x. y

(i) The position vectors OA, OB, OC and OD when 0 is the origin (0, 0).

Solution (a) (i) Given A(3, -2), then the position vector OA = 3-2

Similarly, OB = 5, OC = 6, OD = 2. 2 4 4

HOMEWORK

1. Express in the form

(i) b (ii) c (iii) c + b (iv) 2 b - c

2. Given the points A(-5, 2) and B(4, 3),

Plot both points on a Cartesian diagram using a suitable scale.

Write OA and OB as a column vectors in the form:

Find the x and y components of the vector AB:

Write A B as a column vector in the form :

3. Given the points M(0, 4) and N(2, -5), Write NM as a column vector in the form :

4. Given the points R(2, -4) and S(-3, 7), determine the following:

■ The vector RS may be represented as, a. y

Find the value of a.

SR may be represented as, x find the value of b. b

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NORMAN GRINDLEY/CHIEF PHOTO EDITOR

Students of Excelsior High School posed for a picture at the school as some teachers stayed away from the classroom.

yl:mathematics

yl:communication studies

Sample essay question

TRUDI MORRISON REID CONTRIBUTOR

A S PROMISED, we will look today at a sample Module 1 essay question which is the first of the three essay questions you will find on your examination paper.

1. Read the extract below and then answer the questions that follow.

Look at them behind their counters – young, neatly outfitted in their starched fast-food uniforms or their linen and polyester clerk suits. They quickly and effortlessly tap the keys on their cash registers and computers, answer phones, and look quite efficient, don't they? They seem as if they can think, don't they? Don't let the pressed clothes and technology fool you; many of them can't. Let there be a glitch or a breakdown and then you'll see what lies beneath the suits and uniforms and beyond the counters – operators of broken-down cash registers and computers who will fumble to spell and calculate. And you, older than they, will wonder what they spent their primary- and secondary-school years learning.

You can spot them every day, everywhere. Last week, for example, I saw the brain of a young attendant at a fast-food outlet shut down the instant his computer crashed. Before the crash, he had appeared capable as he punched the appropriate keys for the orders. But when he was faced with having to write down what his customers wanted, he could only operate in slow motion. I know because, to my misfortune, I was about to order a tuna sandwich and a large orange juice when the system failed. After a minute or two of trying to spell the two items, he scrunched up the piece of paper and started writing afresh on a second sheet. I was not sure I'd get the correct meal.

Two days after this calamity, I encountered

one of Mr. Illiteracy's pals. a Miss Innumeracy. in a store downtown when I was trying to pay a bill of \$26.05 with two twenty-dollar bills. Because of a mix-up, the cash register was closed, and so the young girl had to calculate on paper how much change to give me. After an eternity of scratching her head and calculating on a sheet of paper, she handed me \$14.05, but, thanks to my Standard Five teacher. I had already calculated in my head that I should have received \$13.95. When I told her so, she seemed mentally paralyzed. Luckily, another suited girl, who looked senior in age and rank, came to her rescue. She whipped out a calculator. pressed a few kevs. and. presto. gave me the right change, scolding Miss Innumeracy for her had math!

I left, thinking sadly that there was nothing I could do to help them make up for the years they had spent in their classrooms not bothering to learn how to read, write, count, or think. Adapted from Suzanne Mills' **Between the** Lines. Trinidad and Tobago Newsday, June 2, 2004, p.11.

(a) State the writer's MAIN point in no more than 30 words. (2 marks)

- (b) Write an ESSAY in no more than 500 words in which you include reference
- to the following:
- (i) The writer's purpose
- (ii) Organizational strategies (iii) Language techniques
- (iii) Language techniques
- (iv) An evaluation of the appropriateness of the tone.

(23 marks) [Total: 25 marks]

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yl:social studies

CONTINUED FROM PAGE 17

are meant to help.

ACTIVITY

1. State TWO reasons each why a country would consider the following to be important:

- Death rate
- Birth rate

Migration

2. Explain why you would or would not leave where you are living now for somewhere else.

3. Discuss the following: "Jamaica's population is ageing".

4. State five reasons, with explanation, where and why a country and its people need to be able to access population statistics.

- 5. Outline THREE ways each, how the following factors affect the population:
- Fertility rate
- Infant mortality rate
- Life expectancy

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yl:english language

CONTINUED FROM PAGE 18

13. The writer states that the good Press depends on the people who buy it because they like it and that it will not be influenced by those to whom it sells its opinions. These two statements taken together:

A. Show that the power of the Press depends upon the number of its subscribers.

B. Argue that the Press creates popular opinions.

C. Repeat that the good Press owes its allegiance only to its subscribers.

D. Appear contradictory but support the argument that a good Press should be independent.

14. According to the writer, the good Press should regard Government with:

A. Disrespect

. .

B. Mistrust C. Resentment

D Fear

In next week's lesson, I will provide the answers. Until then, take care!

Melissa McKenzie is an independent contributor. Send questions and comments to kerry-ann.hepburn@gleanerjm.com