

yl:office administration

Factory/works control office - Cont'd

HYACINTH TUGMAN

Contributor

N EVERY business department the duties of the clerk are just as important as his/her superiors'. These duties will involve many activities such as filing and word-processing; the clerk in the factory office, however, will be involved specifically with the following duties:

Preparing documents used in production

Progress chasing

■ Safety procedures

Liaising with other departments

Preparing job cards, progress charts

Maintaining time cards for workers

In addition to these tasks, the clerk may be asked to organise the hours of work for the factory workers. If production takes place on a 24-hour basis, then it is likely that workers will be placed on a shift system. For this, the clerk will need to put workers on a roster, placing each worker on the shift system and allocating adequate time off.

A daily report of how productivity levels and output have gone is very important. This information is used for future planning by management, and assists in ensuring that jobs are proceeding to plan. A progress chaser is what determines each stage of production so that delays do not arise, where one stage of production may be slowing up work elsewhere.

DOCUMENTS USED IN FACTORY OFFICE

■ Job card: Gives the details and description of the job and the necessary requirements for the job to be carried out. It accompanies each job or batch as it progresses through the stages of production.

■ Planning master: This contains every details about the entire production process to enhance the use of equipment and labour, keep the production process running, meet deadlines, and reach for better quality. It will show the rate of production that should be attained daily or weekly, and will give details of the factors to be employed in order to achieve this.

■ Job cost card: This is specific information to the organisation about the cost for producing a particular unit of production. The cost may include utility, labour and materials and salaries.

■ Time card: This shows the time that the worker 'clocks in' and 'clocks out' of work. The time card is usually used with a mechanical clock machine. When the worker arrives at work, it is placed in the machine where the time is printed; this is also done at the end of the workday. This card is now used to calculate the amount of hours worked per week.

■ Quality control card: It is important that organisations maintain their quality standards, hence persons are employed specially to make checks on finished products.

Students, I am giving you a sample of some of these documents. It is important that you learn them and practise filling them out.

Continue to familiarise yourselves with all the documents in the factory office.

Bye for now.

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yl:priniciples of business

Social accounting and global trade – Part 2

YVONNE HARVEY Contributor

ELLO, FRIENDS. As always, I look forward to communicating with you through this medium. I do hope that you also look forward to each week's lesson. This week, we will discuss national income accounting. Please enjoy the lesson and remember to do some additional reading from your textbooks.

NATIONAL INCOME ACCOUNTING

How well is the Jamaican economy performing today? Is it operating at full capacity, or are some of the country's resources idle? Is the country's productive capacity and actual production growing? If so, is production growing at a faster rate than the population? These are the kinds of questions that economic policymakers are constantly asking themselves. In order for policymakers to formulate sound economic policies for maintaining the nation's economic health, it is necessary to have accurate measures of the country's performance.

National income accounting refers to the accounting records that measure the national economy's performance. National Income looks at a country's total income. There are a number of variants or forms of national income. These are:

GROSS DOMESTIC PRODUCT (GDP)

This is the total money value of the final goods and services produced in a country during a one-year period, using the resources of the country. There are THREE methods of measuring GDP. All three methods should result in the same GDP figure.

The first method of measuring GDP is to add up the value of all goods and services produced in the country. This is known as the PRODUCT/OUTPUT method.

The second method of measuring GDP is to add up all the incomes in the form of wages and salaries, profit, rent, and interest and dividends. This is known as the INCOMES method.

The third method focuses on the expenditure necessary to purchase the nation's production. This is called the

EXPENDITURE method. The value of what is sold is equal to the value of what is produced and these must also be equal to the expenditure. Therefore, all three methods must yield the same results.

NATIONAL PRODUCT/OUTPUT=NATIONAL INCOME=NATIONAL EXPENDITURE

GROSS NATIONAL PRODUCT (GNP)

This is the broadest measure of the economy's 'health'. It refers to the total money value of all final goods and services produced by a country during a one-year period. GNP takes into account not only what is produced, locally, but also what is produced by firms abroad that are owned by local individuals and the government.

GNP is GDP plus or minus net property income from abroad. Property income paid is a minus, and property income received is a plus.

NATIONAL INCOME (NI)

This is the measure of the total income earned by everyone in the economy. It includes those who use their own labour to earn an income as well as those who make money through ownership of the other factors of production.

National income/net national product (NNP) is GNP minus depreciation or capital consumption. Depreciation refers to the loss of value because of wear and tear of consumer durables and producer goods. GNP and GDP do not take depreciation into account. Therefore, the difference between GNP and NNP/NI is depreciation.

PER CAPITA INCOME

This refers to the average income or income per head. It is calculated by dividing the total national income by the total population. This gives the income per person.

There are some uses (advantages) and some limitations (disadvantages) of national income statistics.

USES AND LIMITATIONS OF NATIONAL INCOME STATISTICS

Uses include:

1. The statistics allow us to compare output of one country with another.

2. The figures can be used to compare economic growth of countries at a particular time and over a period of time.

The statistics serve as a tool or instrument of economic planning, i.e., the statistics help government to determine how to plan for a country, and these plans are included in their budget.
 One of the most important uses of these statistics is its use in comparing the standard of living of one country with another, i.e., an increase in national income statistics usually means an increase in the standard of living.

Limitations include:

1. Problems in measuring national output because of unrecorded items.

2. Total GDP/GNP figures ignore the distribution of income.
 3. Problems in using national income statistics to measure welfare since:

(a) Production does not equal consumption. (b) There may be high human costs of

production. (c) Externalities are ignored. (d) National income statistics is recorded in money terms, the value of which is constantly

money terms, the value of which is constantly changing and, therefore, inflation can cause it to appear, incorrectly, as if the country's national income is increasing. Deflation would have the opposite effect.

That's it for this week. Work well and rest well. See you next week.

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yl:principles of accounts

Interpretation of final accounts

ROXANNE WRIGHT Contributor

THE QUESTION below is presented with the recommended solution. You are to read it carefully, then match your thoughts with the reasoning given before you attempt to work the question. When you are finished working the question, match your answer with the one given. This should help tremendously in correcting your mistakes as well as enabling the recall of principles applied.

QUESTION

(a) During the year 2016, K. Lewis held an average stock at cost price of \$22,560. His selling prices were obtained by adding 25% to the cost prices. [>1] His turnover for 2016 was \$338,400. His selling and administrative expenses were 12% of turnover.

CALCULATE

- i. Lewis' gross profit for 2016.
- ii. The rate of turnover of stock for 2016.
- iii. The net profit for 2016.

(b) For the year 2016, Lewis has reduced his markup on cost price to 20%. [>2] K. Lewis has also spent \$4,000 on advertising. His average stock remains the same in amount and cost as in 2016, and selling and administrative expenses (excluding the additional advertising) will be \$37,792 for the full year.

Calculate the minimum rate of turnover of stock if he is to earn, at least, a net profit of \$30,400. [>3]

REASONING

[>1] Cost price is 100%. Therefore, selling price is 100% + 25%. That is 125% of cost price.

[>2] Markup on cost price is now 20%. Therefore, selling price is 120% of cost price.

[>3] The formulae used in (a) (i), (ii) and (iii) are:

■ Net profit = Gross profit - expenses.

■ Selling price percentage = Cost price % + gross profit %.

■ Rate of stock turnover = Cost of goods sold average stock

SOLUTION

(a) (i) Turnover of sales (125%) = \$338,400 Gross profit (25%) = \$67,680 25% x \$338,400/125% OR

Turnover or sales (125%) = \$338,400 Cost of goods sold (100%) = 100% x \$338,400 = \$270,720/125%

Therefore, gross profit = Sales - cost of goods sold \$338,400 - \$270,720 = \$67,680

(ii) Rate of turnover of stock = <u>Cost of goods sold</u> average stock

= 100% /125% x \$338,400/\$22,560

= 12

(iii) Net profit = Gross profit - selling and administrative expenses

= \$67,680 - (12% x \$338,400) = \$27,070

(b) Net profit = Gross profit - (selling & administrative expenses + advertising)
\$30,400 = gross profit - (\$37, 792 + \$4,000)
\$30,400 = gross profit - \$41, 792

Gross profit = \$30,400 + \$41,792 = \$72,192

Gross profit (20%) = \$72, 192

Cost of goods sold (100%) = 100%/20%x \$72 192 = \$360,960

Rate of turnover of stock = $\frac{\text{Cost of goods sold}}{\text{average stock}}$

= <u>\$360,960</u> \$22,560

Rate of turnover of stock = 16

EXAMINATION PREPARATION TIPS

As you get closer to your examination, to assist with your preparation, I encourage you to:

- Form a small study group; four is a good number.
 Ensure the other three members have the same goal to
- achieve good results in their external examination as you.

Make a team commitment to stay focused whenever and wherever you meet.

Choose the least distractive place and time to study.

EXAMINATION TIPS

■ Before answering an accounting question, read the data and requirements carefully and then think to recall the information you have learnt.

■ You will not get any marks for an answer that does not answer the question asked.

Separate the stationery and write the appropriate answer on the correct paper.

■ Identify the questions you answer accurately by putting the corresponding number.

This is where we 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.

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yl:chemistry

FRANCINE TAYLOR-CAMPBELL

ALCOHOLS HAVE the general formula Cn H_2n+10H Using n = 1,2,3, etc

When n =1, then C₁H(2*1)+10H gives CH30H - Methanol When n = 2, then C₂H(2*2)+10H gives C2H50H - Ethanol When n = 3, then C₃(2*3)+10H gives C3H70H - Propanol

THE FIRST 3 MEMBERS OF THE ALCOHOLS HOMOLOGOUS SERIES

If you notice the formula of all alcohols, you will see a group of atoms that is present at all times; the OH group. This -OH group is called the functional group for alcohols. A functional group is responsible for the characteristic reactions of that homologous series. In alkenes, the functional group is the C=C double bond.

HOW ARE ALCOHOLS FORMED?

Alcohols can be made from the hydration of alkenes; that is, adding water in the presence of a catalyst (phosphoric acid, silica at 300°C, 60 atm). This is the industrial method of preparing alcohols.

Ethanol can also be prepared by another method. Foods rich in sugars such as sucrose, glucose and fructose can be fermented with yeast to produce ethanol. The yeast produces an enzyme (zymase) which breaks down the sugars, producing energy and alcohol and carbon dioxide as waste products. This process is known as fermentation.

HOW IS PURE ETHANOL OBTAINED AFTER FERMENTATION?

When the ethanol produced during fermentation reaches a concentration of about 14%, the enzyme from the yeast stops working as it becomes denatured. Fractional distillation is then used to increase the ethanol concentration to about 95%.

HOW CAN ALCOHOL/WINE BECOME SOUR?

Fermentation takes place under anaerobic conditions (without oxygen). If air is allowed in the mixture, the ethanol becomes oxidized to ethanoic acid, producing a sour or spoilt taste.

 $C_2H_5OH (aq) + O_2 (g)$ aerobic bacteria $CH_3COOH (aq) + H_2O (I)$ Ethanol + oxygen Ethanoic acid + water

WHAT ARE THE CHARACTERISTIC REACTIONS OF ALCOHOLS?

Alcohols are polar due to the presence of the -OH functional group. This is similar to the -OH group in water (H-OH), hence, alcohols are also soluble in water.

Alcohols burn in air or oxygen to produce carbon dioxide, heat and energy.

 $2C_{2}H_{5}OH(I) + 7O_{2}(g) \longrightarrow 4CO_{2}(g) + 6H_{2}O(g)$

2. Alcohols react with metals such as Na, Li, Mg and Ca to

Alcohols

yield hydrogen gas and to form salts called alkoxides. The reaction is similar to the reaction of metals with water because of the presence of -OH group.

 $2Na(s) + 2C_2H_5OH(I) \longrightarrow 2C_2H_5ONa(aq) + H_2(g)$ sodium ethoxide

3. Oxidation: Alcohols can be oxidized to organic acids using powerful oxidizing agents such as acidified potassium dichromate (VI) or acidified potassium permanganate (VII) solution. C_2H_5OH (I) + 2[O] \longrightarrow CH₃COOH(aq) + H₂O (I)

Ethanoic acid

The oxygen is from the oxidizing agent. If potassium permanganate is used, the reaction mixture changes from purple to colourless; and if potassium dichromate is used, the mixture changes from orange to green as the dichromate VI ion (Cr_2O7^{2-}) is reduced to green chromium III ion (Cr^{3+}). This forms the basis for the BREATHALYZER test for drunken drivers.

DEHYDRATION

Alcohols can undergo dehydration reactions to the corresponding alkene using concentrated sulphuric acid (170°C) or passing the vapour over activated alumina (Al₂O₃). C_2H_5OH (I) $\longrightarrow C_2H_4$ (g) + H₂O. This reaction effectively removes water from the alcohol to form the alkene.

ESTERIFICATION

Alcohols react with carboxylic acids to form esters. $C_2H_5OH + CH_3COOH \longrightarrow CH_3COOC_2H_5$ (ethylethanoate) + H_2O

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yl:social studies

Growth of a region



MAUREEN CAMPBELL Contributor

OBJECTIVES:

- State the functions of:
- a. The OECS secretariat
- b. The CARICOM Secretariat
- c. The Conference of Heads of Government

DEFINITION OF TERMS

Regional integration is a process in which neighboring states enter into an agreement in order to upgrade cooperation through common institutions and rules. They agree to cooperate and work closely together to achieve peace, stability, and wealth.

Regional – a bloc or geographic region/area that has things in common.

Integration – coming together for a common purpose

STAGES IN THE INTEGRATION MOVEMENT

West Indies Federation, Political Integration.

When nations join with others in a trade or political bloc, they

give up some national sovereignty. The first attempt at integration in the region. 1956 - 1962

Caribbean Free Trade Association

(CARIFTA) was formed in 1968.

Free Trade

Its aim was to foster economic and social development by enabling free trade among the member states.

Caribbean Community (CARICOM)

Timeline of Caribbean Integration

economic integration effort

CARICOM was formed on July 4, 1973. It started with the Treaty of Chaguaramas, which was signed by

the prime ministers of Barbados, Guyana, Jamaica, and Trinidad and Tobago.

Organisations of Eastern Caribbean States (OECS)

This was established on June 18, 1981, with the signing of the

Treaty of Basseterre.

Association of Caribbean States (ACS)

The Convention of Cartagena de Las Indias was signed in July

1994 to set up the ACS. The ACS inauguration summit meeting was held in August 1995 when the convention was formally ratified.

CARICOM Single Market and Economy (CSME)

This is an agreement that allows CARICOM goods, services, people, and capital to move through the Caribbean Community without any restrictions or government taxation. It was established with the revision of the Treaty of Chaguaramas in 1989. The purpose of the CSME was to establish a single economy system among the member states of CARICOM.

BENEFITS OF REGIONAL INTEGRATION

1. The ability to be able to better negotiate against rich powerful countries. 'Unity is strength.'

2. Increase cooperation among islands, so we can work together to achieve more .

3. With a reduction of the negative effects associated with globalisation by working together and trading together, we can offset many of the problems faced due to globalisation.

4. Been able to better compete internationally as we are seen as a big body, though with many little countries. As small countries, we may not have the same big voice we have as a group.

5. Each island has more persons to sell its goods to apart from those within its borders. This is so as we buy and sell from each other.

6. Our quality of life will improve as we all have of access to a variety of goods ad services.

7. During times of crises and need, we are well perpared, as we have developed a variety of organisation that respond to the needs of each island.

8. We now, to a large extent, have freedom of travel among islands to find work.

The Functions of OECS and CARICOM secretariats and the Conference of Heads of Government.

OECS

✓ The OECS administrative body, the central secretariat, is located in St. Lucia. It is headed by the director general.

✓ The major division within the OECS oversees the strategic operations of the organisation and the work of a number of specialised institutions, work units, or projects in a number of countries.

✓ The Secretariat consists of four main Divisions responsible for: external relations, functional cooperation, corporate services and economic affairs

✓ These four divisions oversee the work of a number of specialised institutions, work units or projects located various countries.

✓ It assists its members to respond to multifaceted challenges by identifying scope for joint or coordinated action towards the economic and social advancement of their countries in response to the rapidly changing conditions in the international economy.

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yl:history

Popular protests in the 1930s

DEBBION HYMAN Contributor

OBJECTIVES

1. Discuss the economic, political and social factors which created the protests of the 1930s in the Caribbean.

2. Describe the role of outstanding male and female protest leaders.

3. Outline two consequences of the protests.

Hi, guys, this topic is a core one and, as such, multiple-choice items have been included in this lesson for practice.

Instruction: Choose the correct answer for each item.

One of the teachings of Marcus Garvey was that

 (A) Whites should be driven out of the Caribbean.
 (B) Caribbean blacks should strike back by discriminating against the whites.

(C) Blacks should strive for economic independence. (D) Blacks were created to be superior to whites.

2. Which one of the following factors was NOT a reason for the high rate of unemployment among the working class in the British Caribbean in the 1930s?

- (A) The decline of the sugar industry.
- (B) The failure of alternative crops which replaced sugar.
- (C) The termination of migration opportunities.
- (D) The refusal of workers to participate in agriculture.

3. All of the following were reasons why the blacks were NOT receiving an adequate education in the British Caribbean in the 1930s EXCEPT:

(A) Blacks did not have the ability to reach the entry requirements.

(B) Schools generally preferred to give places to whites and coloureds.

(C) The curriculum was irrelevant to the needs of the blacks. (D) There were not enough schools to meet the needs of the population.

4. Identify the reasons why the disturbances occurred in the British Caribbean during the 1930s.

- I. The decline of the sugar industry.
- II. The Great Depression of the 1930s.

III. The repatriation of Caribbean nationals from abroad. IV. The termination of emigration opportunities.

(A) I, II and III only(B) I, III and IV only(C) II, III and IV only

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(D) I, II, III and IV

5. The labour leader who is generally associated with the 1937 disturbances in Trinidad was:

- (A) Uriah Butler
- (B) Arthur Cipriani
- (C) Walter Citrine
- (C) Walter Citrine

(D) Clement Payne

6. The personality who is generally associated with the disturbances in Barbados was: (A) Grantley Adams

- (B) Clement Payne(C) Frank Walcott(D) Uriah Butler
- (D) Ullali Dul

7. Which of the following persons was NOT associated with the riots of the 1930s?(A) Uriah Butler of Trinidad

- (B) Robert Bradshaw of St Kitts
- (C) Alexander Bustamante of Jamaica
- (D) George Price of Belize

8. What was the MAIN purpose of the Moyne Commission of 1938?

938? (A) To bring to an end the disturbances in the islands.

(B) To seek out the troublemakers and recommend punishment.

(C) To investigate the cause of the disturbances and make

recommendations.

(D) To review the conduct of the army and police.

9. Which of the following did NOT occur during the period of social unrest in the British Caribbean in the 1930s?

- (A) Protest demonstrations
- (B) Strikes(C) Constitutional reform
- (D) Riots

10. What contributed to the rapid growth of trade unions in the British Caribbean after 1939?

I. An increase in the labour force. II. The emergence of capable leaders for

- the working class.
- III. An increased willingness of workers to fight for their rights.
- IV. Laws passed in favour of trade unions.

(A) I and II only(B) III and IV only(C) I, III and IV only

(D) I, II, III and IV

11. Which of the following leaders were associated with black consciousness in the Caribbean in the early 1900s?

- I. Arthur Cipriani
- II. Grantley Adams
- III. Clement Payne IV. Marcus Garvev
- (A) I and IV only(B) III and IV only(C) I, III and IV only(D) II, III and IV only

12. The Royal Commission which was established in 1938 to investigate the socio-economic conditions in the British West Indies and to make recommendations for the improvement of these conditions was the

- (A) Deane Commission
- (B) Moyne Commission
- (C) Norman Commission (D) Oliver Commission

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yl:communication studies

The exposition

TRUDI MORRISON REID Contributor

HIS WEEK, we will turn our focus to the Expository Section of the Internal Assessment.

This section of the Internal Assessment will be orally presented and examined. The duration should be no longer than 10 minutes per student. Topics chosen in this section should be current. A student should collect at least two pieces of related information on the selected topic. It is usually best to use at least one primary source and one secondary source of information. This ensures that your research base is fairly wide and balanced. You will also recall that this section is worth 16 marks.

The marks are allotted as follows:

i. Discussion of issues and challenges (5 marks)

ii. Evaluation of the effect of source, context, and medium (or channel) on the reliability and validity of information gathered.(4 marks)

iii. Organisation (3 marks)

iv. Delivery (audibility, fluency, eye contact, body movement, and paralinguistic features such as pauses, throat clearing, pitch, etc)

(4 marks)

In Lesson 3 of this series, we mentioned that the presentation should be well organized and effectively delivered in Standard English. Let us now look more closely at i) and ii) above and what is required of you for each one.

i. Discussion of issues and challenges (5 marks)

This will look at the issues presented in the article or other sources of information used and personal/emotional or practical challenges faced while exploring the theme and processing the information. So your examiner should have a good sense of the critical issues associated with the topic you are exploring (For example: The Prevalence of Human Trafficking in Jamaica). By now, you would have read and researched widely and be in a position to say whether the incidence of human trafficking is on a rise or declining and what measures the Government of Jamaica and other stakeholders have taken to address the issues, etcetera.

You should also be able to comment on whether the information was readily available or what challenges you faced as you conducted your research and processed the information. You can include whether the interview you conducted with the victim of human trafficking was so emotionally moving that you had to reschedule the interview in order to compose yourself. Perhaps all the questionnaires you distributed were not returned and this hindered you in some way. Be prepared to share a fulsome discussion of all these.

ii. Evaluation of the effect of source, context, and medium (or channel) on the reliability and validity of information gathered (4 marks)

This will look at the expertise, authority, perspective, and social and political bias of the author/speaker/source; the social and historical context in which the piece was written or presented; and the factual accuracy, logical structure, and cogency of the piece. If you review the lesson carried in this series for the last couple of weeks, you will see how everything falls nicely into place. So as you review your sources, consider whether they the author or speaker is considered an authority on the matter being discussed. From what perspective are ideas being presented? Is it based on personal experience, professional experience or something else? What impact does this have on the information? Does the potential for bias exist in the way the information was presented by any of the sources? If so, what impact does it have? Could the social, political, or historic context in which the information was presented have an impact on what was presented or how it was presented? Was Jamaica about to sign a new IMF agreement and, therefore, the article presented the country in a very favourable light, economically, in contrast to what your other research indicated was the case? Was the information presented factually, free from fallacies, with the points flowing in a logical order from start to finish? Were the ideas jumbled and confusing, making it difficult to decipher and assess?

For written material, especially, please make note of the publisher's information. Is it a reputable source? Is it politically aligned? Is it well known and highly respected? Please also pay attention to the date of publication. Some things remain factual throughout the passage of time, some secondary sources can be considered primary after some time.But new truths emerge as research widens and deepens, so carefully note the date and how this may affect the information presented, especially when compared to other sources of the same information.

iii. Organisation (3 marks)

Although you have been advised that you may bring into the room ONE cue card 4 x 6 inches with headings/main points related to your presentation, your ideas must be cohesive. Your examiner will be listening for an introduction, a logical sequence of ideas throughout the body, and a conclusion. It is easier to evaluate one source at a time instead of hopping from one source to the other several times throughout the presentation. As with all oral presentations, remember to make it as easy as possible for the listener to follow what is being said.

Next week, we will look at delivering the speech. You may review the previous lesson in the series on non-verbal communication.

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yl:english literature

'The Woman Speaks to the Man who has Employed her Son'

BERYL CLARKE Contributor

PLEASE BEAR in mind that it is easier to keep up than to catch up!

This is a sentiment that I hope you will remember as you prepare for external exams this year. In this week's lesson, we are going to discuss the poem **The Woman Speaks to the Man who has Employed her Son**, which is written by Lorna Goodison. Ms Goodison is Jamaican. She has written several books of poetry and her focus is rooted in her homeland. I would like you to find out all you can about this remarkable writer, especially in light of a recent development.

The subject matter of this poem is very topical, so much so that one who is meeting it for the first time could be forgiven for thinking that it was written only last week. I am confident that your study group will have many fruitful discussions on this one. Please do me the favour of reading it to or with your parents or guardians or older relatives. Why, you may ask? My intention is for you to find out how the writer's words make them feel. Try to focus on their reactions, and then do what you can to find out from them why they have such response. As you read this poem, too, think of how you feel and identify why you do so, for in this way you will be analysing Miss Goodison's craft.

THE WOMAN SPEAKS TO THE MAN WHO HAS EMPLOYED HER SON

Her son was first made known to her as a sense of unease, a need to cry for little reasons and a metallic tide rising in her mouth each morning. Such signs made her know That she was not alone in her body. She carried him full term tight up under her heart.

She carried him like the poor carry hope, hope you get a break or a visa, hope one child go through and remember you. He had no father. The man she made him with had more like him, he was fair-minded he treated all his children with equal and unbiased indifference.

She raise him twice, once as mother

Then as father, set no ceiling On what he could be doctor, earth healer, pilot take wings. But now he tells her he is working for you, that you value him so much you give him one whole submachine gun for him alone.

He says you are like a father to him she is wondering what kind of father would give a son hot and exploding death, when he asks him for bread. She went downtown and bought three and one-third yards of black cloth and a deep crowned and veiled hat for the day he draw his bloody salary.

She has no power over you and this at the level of earth, what she has are prayers and a mother's tears and at knee city she uses them. She says psalms for him she reads psalms for you she weeps for his soul her eyewater covers you.

She is throwing a partner with Judas Iscariot's mother the thief on the left-hand side of the cross, his mother is the banker, her draw though is first and last for she still throwing two hands as mother and father. She is prepared, she is done. Absalom.

The basic story presented here is one that is known to all Jamaicans. A woman gets pregnant for a man who is a womaniser. In the early stages of her pregnancy, she suffers from morning sickness. When her son is born, she has great dreams for him and, as a single parent, tries her best with and for him. Unfortunately, he begins to work for someone who gives him a gun. The mother clearly sees the outcome of her son's 'profession' and accepts his inevitable end.

But is this all? What is it that makes this poem so special? Let's start at the beginning again. We are introduced to the mother, not as a single entity, but as a woman who is with child. We learn that it is the changes in her body that cause her to realise her condition. She starts to feel uncomfortable, having morning sickness and experiencing mood swings. Notice how our speaker

tells us about the conclusion she comes to: *that she was not alone in her body* and of her statement of acceptance in: *"She carried him full term tight up under heart"*

Do you recognise the emotional bond that these words reveal? Up to this point, we do not know whether she has a husband who is overjoyed at this development or not, but we know that she has formed a bond with her unborn child. Are you wondering why the speaker says that 'she carried him full term? Is this because he/she wants us to understand that the idea of an abortion never entered the mother's mind, or to let us know that she had a healthy pregnancy? Contemplation time!

We still have some persons who believe that children are 'old age pension'. Do you know what I mean? If you don't, inquire of an older person, then ask yourself whether this could have been a consideration of the mother. Is there anything in the poem that could possibly lead one to such a conclusion? We are told that much hope rested on the child. It is after this that we are introduced to another feature of Jamaican social life. The man with whom she made him is not seen as a father, but as a promiscuous sperm donor who does not take care of any of his children. There is a literary device used in this verse. I hope that you recognise it and the purpose that it serves. Do make a note of it right there in the text!

The third stanza deals with the fact that she had to be both mother and father to her son, a situation that is all too familiar to us as Jamaicans. What are these words telling us? That she took full responsibility for his upbringing, not shirking anything with the excuse that *'him no have no fada'*. She set his horizons high and wide, thinking that he could achieve any wonderful goal. Consider the professional choices she has in mind for her fatherless boy! In her estimation, he could have been a doctor – thereby caring for others even as he becomes financially independent, or an environmentalist – caring for the earth and being financially well off, or he could have been a pilot. You need to reflect on the significance of this last choice. We will return to it later. Suddenly, there is an unexpected change in the events and the tone of the poem. We will, therefore, take a break and pick up at this point in next week's class.

Make sure to read this poem several times. If there is any word or expression with which you are not familiar, please get clarification. Take care and God bless!

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yl:english language

Writing argumentatively

MELISSA MCKENZIE Contributor

WWELCOME TO another lesson! In last week's lesson, we looked at how the argumentative essay is organised, and special emphasis was given to potential topics. I do hope you have been reading **The Gleaner** and watching TVJ more.

Now, before we focus on the persuasive essay in more detail, let me share with you a few observations CXC has noted in students' performance on Section D over the years.

GENERAL OBSERVATIONS

- 1. Too many responses lacked adequate and well-reasoned points.
- 2. Many essays lacked the appropriate and required argumentative techniques.
- 3. Some essays are too short, which indicate poor management of time.

4. There are some students who confuse an essay with a letter.

5. Many essays are impaired by poor use of grammar, spelling blunders and weak sentence construction.

In this lesson, I will provide you with sample introductions and body paragraphs. This should prove useful to you, as you will gain practical examples of these parts of the argumentative essay.

SAMPLE INTRODUCTION # 1

School uniforms no longer have a place in the school system.

Uniforms have been a regular feature of the school system for a number of years. However, many individuals are of the view that they should be removed. Such a decision should never be taken, for several reasons. One, uniforms function as a means of identifying students; two, it is cheaper for students to wear uniforms; and three, many students would wear inappropriate clothing to school.

In this introduction, it is clear the individual is against the topic.

SAMPLE INTRODUCTION # 2

In many schools nowadays, indiscipline among students is a major concern. This has increased calls for corporal punishment to be reintroduced as a means of curbing indiscipline. The thought of beating students is unacceptable because it is a form of abuse, students/parents may retaliate, and there are other ways to curb indisciplined behaviour.

In this introduction, the individual is against corporal punishment.

MORE ON THE BODY

You are expected to include persuasive techniques in your essays because they contribute to the overall marks you receive. However, they must be used appropriately and effectively.

Below, I have provided three body paragraphs that demonstrate the use of persuasive techniques. The techniques are in bold.

SAMPLE BODY PARAGRAPH # 1

Firstly, many secondary-school students tend to have an improper diet. All teenagers need a lot of nutrients so that they may be able to carry out their daily tasks efficiently. Results from a recent survey done at a secondary school in Jamaica show that seven out of ten students do not eat a proper meal every day. This is very alarming! If free lunch is provided for secondary-school students, they can be given the proper nutrients that they need to be healthy and strong and to do well.

Persuasive Technique: Use of research evidence.

SAMPLE BODY PARAGRAPH # 2

Also, cell phones disrupt classes. Is it fair for a class to be interrupted by a loud and often inappropriate ring tone? If a cell phone rings in class, this can interrupt the learning process because the teacher will have to stop his/her lesson in order to admonish the person who disrupted the class. When this happens, valuable time is lost and a topic that should have been completed is delayed. This can be quite annoying and frustrating.

Persuasive Techniques: Rhetorical question and emotive language.

SAMPLE BODY PARAGRAPH # 3

Additionally, bleaching is extremely damaging to the skin. This practice removes the melanin and exposes the person to the harsh rays of the sun. Prominent dermatologist Dr Neil Persadsingh has asserted that skin bleaching is hazardous to one's health. Apart from exposing us to the damaging effects of the sun, he states that those who use bleaching cream can absorb the steroids in these products, which can lead to diabetes or high blood pressure. It would be foolish to continue bleaching one's skin in light of how destructive it has proven to be.

Persuasive Techniques: Use of expert/authority figure and use of evidence.

I hope these samples prove useful as you practise writing your own essays. Below, I leave you with a sample essay based on the essay topic: 'Music and visual arts should be taken from the school's curriculum in order to solve the island's economic problems.'

SAMPLE ESSAY

More taxes, higher food prices and a lack of jobs are some of the economic woes that the island of Jamaica has been facing for some time now. As a way of solving these problems, a proposal has been made to cut music and visual arts from the school's curriculum. However, such a proposal is not only preposterous, but a retrograde way to go about solving our island's problems. Firstly, these creative subjects are vital to the development of some students. Secondly, the students enrolled in these subjects can contribute to this island economically in the future. Lastly, there are better ways of solving the island's economic issues

To begin with, every child has an area which he/she likes and is really good at. For some, it may be science subjects, and then for others, it might be the more creative subjects. If the government cuts subjects like music and visual arts, they are also cutting some children's artistic and social development and this is not fair. These children should be allowed to study subjects they like without worrying that it might be cut from the curriculum.

Additionally, students enrolled in subjects such as music and visual arts usually become artists or musicians or musical artistes. Is it fair to deprive the next Edna Manley or the next Bob Marley? These careers give back to the island tremendously through foreign exchange. Not only do they provide a source of income for the island, they also make the island a tourist attraction, which further causes the country to earn more revenue.

Furthermore, there are many better ways of solving this economic situation the island is in. For example, the travelling, utility and personal allowances of members of parliament can be decreased. Without these insignificant allowances, these ministers' salaries will still be very high and this will not have any huge economic effect on them. Also, more efficient spending and less instances of waste can positively impact the economy. With the lowering or even cutting of these expenses, the economy of Jamaica will improve by as much as 5%.

In conclusion, people might say that cutting these subjects may be the best economic way of resolving the island's problems, but this is not true. Many people will be unemployed if this happens and the unemployment rate will increase significantly, causing the economy to suffer. The government should find other ways to solve economic problems instead of cutting vital subjects like visual arts and music from the curriculum.

See you next week!

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

yl:information technology

Programming language

NATALEE A. JOHNSON Contributor

GOD DAY, students. This is lesson 26 in our series of lessons. In this week's lesson, we will be looking at programming languages (the beginning of a new unit).

Here is the solution to the practice questions you were provided with in the previous lesson.

QUESTION 1

Course and	Work	Exam	Course V	/ork	
Exam OR	Efforts to	Achieve	Course V	Vork	
Exam					
OR					
Efforts to Achieve					
0	0	0	0	0	
0	1	0	1	1	
1	0	0	0	1	
1	1	1	1	1	

QUESTION 2

(a) 17	DIV 8 = 2
(b) 17	MOD 8 = 1
(C)/	

PROGRAMMING LANGUAGES

- Programming languages fall into the following categories: 1. Machine language – Categorised as a 1st-
- generation language.
- 2. Assembly language Categorised as a 2nd-generation language.
- 3. High-level language Categorised as a 3rd-generation language.
- 4. Fourth-generation language.

These languages can be further categorised as either being low-level or high-level languages.

LOW LEVEL

Machine languageAssembly language

HIGH LEVEL

High-level language
 Fourth-generation language

Let us now examine each of these languages.

MACHINE LANGUAGE

This was the first language available for programming. At the machine level, the instructions are written in ones and zero (binary digits). This is the only language that the computer understands.

ADVANTAGES

- Programs execute fast.
- Efficient use of memory.

DISADVANTAGES

 Programming is slow and tedious.
 Code difficult to learn, read, understand and correct

■ Code is machine-specific – that is, it cannot be used in the same form on other computer models.

ASSEMBLY LANGUAGE

This was developed to replace the zeros and ones of machine language with symbols that are easier to understand and remember. It uses special codes, called mnemonics (words that suggest meaning), to represent machine language instructions.

An assembly language is translated into a machine language by using a translator program called an assembler. However, both the machine language and assembly language programs are machine dependent, i.e., the way the program is written depends on the operation of the computer.

ADVANTAGES

- Programming is faster and less tedious than for machine language.
- Code is easier to learn, read and understand than for machine language.

Execution faster than high-level languages.

DISADVANTAGES

Programming is slower and more tedious than high-level languages. Code is machinespecific.

HIGH-LEVEL LANGUAGE

These differ from low-level languages in that they require less coding details and make programs easier to write. They are closer in appearance to natural language, for example, English and French. Programs written in highlevel language are called source code, while the translated version is called object code. These programs must be translated to a form which can be accepted by the computer. This is achieved by means of a special translator programs called compiler and interpreter.

In contrast to a compiler, an interpreter does not translate the whole program prior to execution. Rather, it translates the code, line by line, during the execution of the program. With the compiler, all the translation is done, and then the object program is executed. They are not machine-dependent. Examples of high-level language are: BASIC (Beginners All Purpose Symbolic Instruction Code), Pascal, COBOL (Common business oriented language), JAVA, C Programming, and so on.

ADVANTAGES

- Programming is faster and less tedious.
 Code is easier to learn, read, understand
- and correct.
- Language is more English and math-like.

DISADVANTAGES

Program executes slowly.

FOURTH GENERATION

They are often described as very high-level language and referred to as 4GLs. They are easy-to-learn, easy-to-use languages that enable users or programmers to code applications quicker than they could with lowerlevel languages. Two examples of 4GLs are DBASE and FOXPRO.

ADVANTAGE

Useful for generating reports.

DISADVANTAGE

Can be very wordy.

KEY PROGRAMMING TERMS

1. **Algorithm** – It's a logical sequence of steps designed to solve a problem. An algorithm can be written in any suitable form, such as pseudo-code, narrative, and represented graphically in a flow chart.

2. **Pseudocode** – This is an imitation of a computer program written using mathematical notations and English-like statements to describe the logic to solve a problem or carry out a procedure.

3. **Test data** – Data which is used to test a program for errors/special data created by a programmer to test the accuracy of the program.

4. **Dry run** – This is the process whereby a program is checked to ensure that it does what it was designed for. Test data would be used to test the program written to find the difference of two numbers.

5. **Bug** – A software bug may be defined as a coding error that causes an unexpected defect, fault, flaw or imperfection in a computer program.

6. **Structured walkthrough** – This is a manual trace of the logics of a program using test data.

7. **Runtime errors** – Run-time errors occur when a syntactically correct program statement cannot execute successfully. A common example is attempting to divide by zero (0). 8. **Loading** – This is the process of

transferring program and data from secondary storage to primary storage.

9. **Syntax errors** –These are errors reported by the compiler/interpreter when the rules of the language are not obeyed. (An example of this

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yl:mathematics

Matrices

CLEMENT RADCLIFFE

Contributor

A S PROMISED last week, we will proceed, in this lesson, to Review matrices.

SPECIFIC OBJECTIVES

- 1. Definition of matrices.
- 2. Order of matrices.
- 3. Application of arithmetic operations to matrices.
- 4. Use of matrices to solve simultaneous equations.
- 5. Matrix transformation.

REMINDERS

A matrix is a rectangle array of numbers, for example,
 3 0 -1 6
 7 2 8 13

The first above is a 2 x 4 matrix, with 2 x 4 representing its order. The others are, respectively, 1 x 3 matrix with order 1 x 3, and 2 x 2 matrix with order 2 x 2.

■ The order identifies the number of rows (horizontal) and columns (vertical), respectively.

Other examples of matrices are as follows: Please determine the respective orders of the following:

(a) $\begin{bmatrix} 3 & 0 \\ 1 & 1 \end{bmatrix}$ (b) $\begin{bmatrix} 4 \\ -1 \end{bmatrix}$ (c) $\begin{bmatrix} 3 & 7 & 4 & 0 \end{bmatrix}$

I do hope that your answers are:- (a) 2 x 2 (b) 2 x 1 (c) 1 x 4

In the specific objectives listed above, the methods involved are relatively straightforward. Students, therefore, need to take time out to understand, study and practise them. Those who do so will experience very little difficulty. The areas providing most difficulties are:

- Multiplication of 2 x 2 matrices
- Determining the inverse of a matrix
- Application of matrix transformation

Please spend adequate time to ensure that you are comfortable with them.

EXAMPLES

Determine the order of the following matrices: 1. (-3) This is a 1x 1 matrix.

2. (- 7 0 5 4 3) This is a 1 x 5 matrix

3. **(**9 2 4) 0 -3

This is NOT a matrix as its elements are not a rectangular array.

We will now review application of arithmetic operations to matrices.

MATRIX ADDITION

Only matrices of the same order may be added or subtracted.

Example: Given
$$A = \begin{bmatrix} 0 & 2 \\ 1 & -3 \end{bmatrix} = \begin{bmatrix} 7 & -1 \\ 2 & 5 \end{bmatrix} = \begin{bmatrix} 4 \\ 3 \end{bmatrix}$$

Find (a) A + B (b) B - A (c) A + C

SOLUTION (a) $A + B = \begin{bmatrix} 0 & 2 \\ 1 & -3 \end{bmatrix} + \begin{bmatrix} 7 & -1 \\ 2 & 5 \end{bmatrix} = \begin{bmatrix} 7 & 1 \\ 3 & 2 \end{bmatrix}$ (b) On your own, prove that B - A is $\begin{bmatrix} 7 & -3 \\ 1 & 8 \end{bmatrix}$

(c) A + C. These cannot be added as the orders are different.

Have you noticed that corresponding elements are added or subtracted.

Please let us attempt the following together.

1) Given the matrices:







Solution Since $\begin{array}{c} 4 & -2 \\ 3 & x \end{array}$ + $\begin{array}{c} y & 6 \\ 2 & -3 \end{array}$ = $\begin{array}{c} 3 & 4 \\ 5 & -1 \end{array}$

By adding the left-hand side, then 4 + y 4 = 345 + x-3 = 5-1

Corresponding elements are identical in equal vectors. Equating corresponding values: 4 + y = 3 y = -1x - 3 = -1 x = 2

Answer: y = -1 and x = 2

Please attempt the following examples.

EXAMPLES

(1) Find the value of: 2 + 3 - 0 7 -2 1



Find (i) A+B (ii) A - C



(ii) A + C cannot be evaluated as C is not a matrix.

Prior to giving this week's homework, please attempt the following:

1. Given the points on the Cartesian diagram, S(- 4, 3) & R(6 , 2), write in the form $\hfill x$

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was shown for the explanation of a bug). 10. **Logical errors** – These errors occur when the expected

results of a program are not met. 11. **Testing** – This is the process of checking a program for

errors. This involves running and compiling the program, where a feedback will be provided by the translator.

12. **Debugging** – This is the process of testing, locating and correcting mistakes by running the program.

13. Linking – This is combining various pieces of code and data

to form a single executable object code that can be loaded in memory. Linking can be done at compile time, at load time, and also at runtime.

14. **Compiling** – This is used for converting a program into a machine code or lower-level form in which the program can be executed.

15. **Executing/run** – This is the process by which a computer performs the instructions of a computer program.

16. **Desk checking** – Tracing involves executing the program manually by using values for variables and recording what takes

place after each instruction is executed.

17. **Program listing** – This is a printout or soft copy of the source program instructions as a reference while working and coding the program.

We have come to the end of this lesson. See you next week when we will look at some key programing terms and the Pascal language. Remember, if you fail to prepare, you prepare to fail.

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CARICOM

✓ The CARICOM secretariat is the headquarters of CARICOM. It is located in Georgetown, Guyana. The Secretary general is the head of this organisation.

✓ It is responsible for the implementation of decisions that are taken by any CARICOM body.

✓ It initiates, organises, and conducts research on issues that are related to economic integration.

✓ It is the organization that prepares estimates of expenditure for any project that relates to CARICOM objectives. It helps in obtaining resources from donor agencies that will assist in the implementation of community programmes.

✓ It makes the arrangements to facilitate meetings of any CARICOM body. It collects, stores, and disseminates relevant information to member states. ✓ It initiates and develops proposals for consideration and decision by the relevant organs.

✓ It provides services to its members on various communityrelated matters.

✓ It provides, on request, technical assistance to the national authorities in member countries to facilitate the implementation of community decisions.

CONFERENCE OF HEADS OF GOVERNMENT

✓ This body consists of heads of government of the member states. It is the supreme organ of the Community and provides policy direction.

✓ It is the final authority for the drawing up of treaties on behalf of the Community.

✓ The conference may consult with entities within the Caribbean region or with other organisations.

✓ It also considers and resolves disputes that may occur between member states. ✓ It can also issue policy directives of a general or special character to other organs and bodies of the Community.

✓ It is responsible for establishing bodies it considers necessary for the achievement of the objectives of the Community.

✓ It is responsible to take the necessary decisions that will establish the financial arrangements that become necessary to defray the expenses of the Community.

ACTIVITIES

1. Suggest two other ways that CARICOM countries should integrate.

Explain why integration is important to Caribbean countries.
 Suggest three reasons why there are problems in the arithmen integration maximum and the problems.

Caribbean Integration movement.

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