

INSIGHT

EXAMINERS GENERAL COMMENTS

BREACH OF EXAMINATION INSTRUCTIONS

IN SPITE OF THE EXAMINERS' GENERAL COMMENT IN PREVIOUS EDITIONS OF THE "INSIGHT", IT WAS OBSERVED THAT A NUMBER OF CANDIDATES HAVE CONTINUED TO BREACH EXAMINATION INSTRUCTIONS AS STATED BELOW:

- A) BY ATTEMPTING MORE QUESTIONS THAN ALLOWED IN EACH PAPER; AND

- B) BY ATTEMPTING MORE QUESTIONS THAN ALLOWED IN EACH SECTION.

INADEQUATE COVERAGE OF THE SYLLABUS

IT HAS BECOME MANIFEST THAT MANY CANDIDATES DO NOT COVER THE SYLLABUS IN DEPTH BEFORE PRESENTING THEMSELVES FOR THE EXAMINATION. CANDIDATES ARE THEREFORE ADVISED TO BE ADEQUATELY CONVERSANT WITH ALL ASPECTS OF THE SYLLABUS.

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FOREWORD

This issue of **INSIGHT** is published principally, in response to a growing demand, as an aid to:

- (i) Candidates preparing to write future examinations of the Institute of Chartered Accountants of Nigeria (ICAN) at an equivalent level;
- (ii) Unsuccessful candidates in the identification of those areas in which they lost marks and need to improve their knowledge and presentation;
- (iii) Lecturers and students interested in acquisition of knowledge in the relevant subject contained therein; and
- (iv) The profession in improving pre-examination and screening processes, and so the professional performance.

The answers provided in this book do not exhaust all possible alternative approaches to solving the questions. Efforts have been made to use methods, which will save much of the scarce examination time.

It is hoped that the suggested answers will prove to be of tremendous assistance to students and those who assist them in their preparations for the Institute's Examinations.

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NOTE

Although these suggested solutions have been published under the Institute's name, they do not represent the views of the Council of the Institute. They are entirely the responsibility of their authors and the Institute will not enter into any correspondence about them.

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AT/122/PII.5

Examination No:.....

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS - SEPTEMBER 2012
PRINCIPLES AND PRACTICE OF FINANCIAL ACCOUNTING**

Time Allowed – 3 hours

Insert your Examination number in the space provided above

SECTION A (ATTEMPT ALL QUESTIONS)

PART I MULTIPLE-CHOICE QUESTIONS (30 Marks)

Write ONLY the alphabet (A, B, C, D or E) that corresponds to the correct option in each of the following questions.

1. Subscription (received in advance) in the accounts of a not-for-profit organisation should be disclosed in the balance sheet as
 - A. Non-Current Assets
 - B. Current Assets
 - C. Current Liabilities
 - D. Accumulated Fund
 - E. Furniture and fittings

2. The following information relates to FlyHigh Limited:
1 January – Electricity Accrued is ₦500,000; cash paid during the year for Electricity is ₦2,000,000; and 31 December, Accrued Electricity balance is ₦600,000. The Income Statement charges for Electricity is
 - A. ₦1,050,000
 - B. ₦1,500,000
 - C. ₦2,000,000
 - D. ₦2,100,000
 - E. ₦2,600,000

3. Kofi's bank account was overdrawn by ₨ 1,275 on 1st March 2010. During the month he made a total bank payment of ₨7,500, and on 31 March, the closing balance was ₨ 2,750 (positive). What was the total lodgment into the bank account during the month?
 - A. ₨ 8,975
 - B. ₨ 11,525
 - C. ₨ 12,525
 - D. ₨ 13,000
 - E. ₨ 13,520

4. The following are Accounts of not-for-profit organisations **EXCEPT**
 - A. Clubs Account
 - B. Associations Account
 - C. Sole Proprietorship Account

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- D. Co-operatives Society Account
 - E. Unions Account
5. The double entry required for accounting for depreciation in the year is
- A. Dr. Income Statement; Cr. Depreciation Account
 - B. Dr. Depreciation Account; Cr. Provision for Depreciation Account
 - C. Dr. Depreciation Account; Cr. Income Statement
 - D. Dr. Provision for Depreciation Account; Cr. Depreciation Account
 - E. Dr. Manufacturing Account; Cr. Income Statement
6. The excess of income over expenditure in an income and expenditure account is
- A. Profit
 - B. Net Income
 - C. Surplus
 - D. Deficit
 - E. Reserve
7. Which of the following would appear in a company's statement of cash flows?
- A. Proposed dividend
 - B. Dividends received
 - C. Bonus issue of shares
 - D. Surplus on revaluation of non-current assets
 - E. Deficit on revaluation of non-current assets
8. Who issues International Financial Reporting Standards?
- A. The Auditing Practices Board
 - B. The Stock Exchange
 - C. The International Accounting Standards Board
 - D. The Government
 - E. International Federation of Accountants
9. When preparing financial statements under historical cost convention in periods of inflation,
- A. Asset values reduce
 - B. Asset value increase
 - C. Dividends reduce
 - D. There is no need to make adjustments
 - E. There is need for adjustments
10. If the Proprietor of a business takes goods from inventory for his own personal use, the accounting concept to be considered is the
- A. Relevance concept
 - B. Capitalisation concept
 - C. Money measurement concept
 - D. Separate entity concept
 - E. Duality concept
11. Which concept is followed when a business records the cost of a non-current asset even though it does not legally own it?

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- A. Substance over form
 - B. Prudence
 - C. Accruals
 - D. Matching
 - E. Going Concern
12. The accounting concept /convention which, in times of rising prices, tends to understate asset values and overstate profits is
- A. Going concern
 - B. Historical cost
 - C. Realisation
 - D. Prudence
 - E. Matching
13. The partners' interests in any partnership include the following **EXCEPT**
- A. Interest on capital not yet agreed
 - B. Capital invested
 - C. Un-withdrawn Commission, in the current account
 - D. Profits, interests and salaries not yet credited
 - E. Future potentials of the Partnership
14. The valuation of Goodwill is **NOT** necessary when
- A. A new partner is admitted
 - B. A partner retires
 - C. There is change in the profit sharing ratio
 - D. There is a change in the name of the partnership
 - E. There is demise of a partner
15. **TWO** different partnerships may come together to form a single partnership for reasons **EXCEPT** to
- A. Eliminate competition
 - B. Dissolve the existing partnership
 - C. Reduce overhead expenses
 - D. Increase financial strength
 - E. Take advantage of economies of scale
16. Partnership absorption may **NOT** occur in which of the following situations?
- A. Relatively bigger partnership takes over the weaker partnership
 - B. Weaker partnership cease to exist
 - C. Relatively bigger partnership takes over the existing assets and liabilities
 - D. All the partnerships in the absorption are terminated
 - E. The assets and liabilities are taken over by the predator
17. The accounting ledger entries necessary to write-off existing Goodwill Account no longer required in the partnership books are
- A. Dr. Goodwill Account; Cr. Realisation Account
 - B. Dr. Goodwill Account; Cr. Partners' Capital Account
 - C. Dr. Partners' Capital Account; Cr. Revaluation Account
 - D. Dr. Partners' Capital Account; Cr. Goodwill Account
 - E. Dr. Partners Current Account; Cr. Goodwill Account

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18. Sanni and Maduekwe share profits and losses equally. Aliyu, was admitted to be entitled to $\frac{1}{5}$ th of the profits or losses but the old partners maintain their former sharing ratio. The partnership's new profit and loss ratio will be

	Sanni	Maduekwe	Aliyu
A	2	1	1
B	1	1	1
C	2	1	2
D	1	1	3
E	2	2	1

Use the following information to answer questions 19 and 20

Opening inventory	₦ 50,000
Costs of Sales	250,000
Closing inventory	70,000
Sales	400,000

19. Taking one year to be 360 days, what is the inventory turnover period
- A. 54 days
 - B. 63 days
 - C. 80 days
 - D. 86 days
 - E. 101 days
20. Calculate the gross profit margin
- A. 32.5%
 - B. 37.5%
 - C. 42.5%
 - D. 56%
 - E. 60%
21. Which of the following ratios would be of interest to debenture holders?
- A. Debt Equity ratio
 - B. Asset turnover period
 - C. Quick ratio
 - D. Profit margin
 - E. Account reconciliation collection period
22. Which of the following is classified as investing activities in a statement of cash flow?
- A. Issue of shares
 - B. Interest payable on loan
 - C. Dividend paid
 - D. Redemption of preference shares
 - E. Purchase of investment
23. What are the effects of overstating closing inventory on cost of sales and gross profit?

	<u>Cost of Sales</u>	<u>Gross Profit</u>
A	Overstated	Overstated
B	Understated	Overstated
C	Overstated	Understated

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D	Understated	Understated
E	No effect	Overstated

24. The current ratio and acid test ratio in year 2010 were 2.7:1 and 1.8:1 respectively. In 2011 the ratios were 2.9:1 and 1.4 to 1. Which of the following factors accounts for the difference?
- A. Increase in bank balance
 - B. Decrease in the bank balance
 - C. Increase in closing inventory
 - D. Decrease in closing inventory
 - E. Increase in Accounts receivable
25. The following are characteristics of Branch Stock Account **EXCEPT**
- A. Shows the movement of goods to and from a branch
 - B. Acts as a Trading account
 - C. Shows the sales made
 - D. Shows how stocks are valued
 - E. Shows the opening and closing stocks
26. In the books of the buyer in a Hire Purchase contract, the hire purchase price is segregated into
- A. Selling price and interest element
 - B. Contract price and interest element
 - C. Cash price and interest element
 - D. Finance charge and interest element
 - E. Credit price and interest element
27. In consignment outward account, which of the following is **NOT** a debit entry?
- A. Value of goods consigned
 - B. All expenses incurred on the consignment by the consignor
 - C. Commission due to consignee
 - D. Goods returned by consignee
 - E. Bad debt where no del credere commission is paid to consignee
28. Which of the following is **NOT** a common term in royalty account?
- A. Sub-lessee
 - B. Short workings
 - C. Guaranteed minimum Rent
 - D. Landlord account
 - E. Development right
29. Container Suspense Account is used to record

- A. Purchases from customers
 - B. Sales to customers
 - C. Packages to and from customers
 - D. Profit or loss on sale of goods
 - E. Non-returnable containers only
30. Accounting entry for commission due to a venture is
- A. Dr. Joint Venture Account; Cr. Ventures Account
 - B. Dr. Ventures Account; Cr. Joint Ventures Account
 - C. Dr. Joint Venture Account; Cr. Profit and Loss Account
 - D. Dr. Profit and Loss Account; Cr. Joint Venture Account
 - E. Dr. Joint Venture Account; Cr. Cash Book

PART II: SHORT-ANSWER QUESTIONS
Marks)

(20

Write the answer that best completes each of the following questions/statements

1. Straight line method of depreciation is also known as.....
2. In accordance with IAS 1, another name for Balance sheet is.....
3. Capital is related to Limited liability company asis related to not-for-profit organisation
4. List **TWO** items in Income and Expenditure Account which cannot appear in Receipts and payments Account
5. List **TWO** recognised methods of preparing and presenting statement of cash flows
6. A body of rules, regulations and procedures which govern the way financial statements are prepared is called.....
7. What is a pre-paid expense?
8. List **TWO** items to be disclosed on each class of depreciable assets
9. Net profit is to profit oriented organisation, as.....is to Not-for-profit organisation
10. The accounting basis that supports the policy of ignoring subscriptions due but not yet received when preparing the Income and Expenditure of Not-for-profit organisation is.....

Use the following information to answer questions 11 and 12

Annual subscription per member is ₦1,200 for the year 2011. On 1 January 2011, subscriptions for 36 members were in arrears for 2010.

In December 2010, 8 members paid their subscriptions in advance

Subscriptions received in 2011 are:

₦

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2010	43,200
2011	830,400
2012	16,800

At 31 December 2011, 22 members had their subscriptions in arrears.

11. What is the total subscription for the year 2011?
12. What is the Subscriptions in arrears as at 31 December, 2011?
13. State one non-cash transaction relating to financing activities.
14. The technical term for sales revenue plus other income less bought in goods and services is called.....
15. State the formula for calculating the assets turnover ratio.
16. An increase in current liabilities has.....effect on cash
17. State the accounting entries in the books of the Head office when goods are sent to the branch
18. What are the accounting entries for the deposit paid to the vendor when a hire purchase contract is entered into?
19. In the books of a consignee in a consignment account commission due is credited to.....
20. Which type of “right” is granted by a government or an owner of a land allowing the extraction of material of economic importance?

SECTION B - Attempt Any FOUR Questions

(50 Marks)

QUESTION 1

The following is the Receipts and Payments Account of NKRUMA GHANA CLUB for the year ended 31 December 2011

<u>RECEIPTS AND PAYMENTS ACCOUNT</u>			
<u>RECEIPTS</u>	¢	<u>PAYMENTS</u>	¢
Balance brought forward	18,000	Electricity	75,000
Registration fee	9,000	Furniture and Fittings	225,000
Membership Subscription	720,000	Interest on Loan	30,000
Rent of club premises	<u>90,000</u>	Stationery	15,000
		General Expenses	36,000
		Wages	72,000
		Balance 31 December	<u>384,000</u>
	<u>837,000</u>		<u>837,000</u>

The following additional information is relevant.

- i. The membership subscription include ¢6,000 which relates to the previous year and ¢24,000 is paid in advance. Subscriptions for the current year which have not been paid amounted to ¢3,000

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- ii. The club's freehold property was acquired many years ago at a cost ₦1,545,000. There was also an outstanding loan of ₦600,000 on the same date at an interest rate of 5% per annum
- iii. Depreciation is to be provided on furniture and fittings at 10% per annum
- iv. General expenses of ₦6,000 was due and not yet paid in the year. ₦9,000 was outstanding at the end of the previous year
- v. With respect to Club premises, ₦22,500 was due and not yet received at the end of the previous year and ₦21,000 for the current year is still due from the tenants

You are required to:

- a. Prepare an Income and Expenditure account for the year ended 31 December 2011
- b. Balance sheet as at that date.

(Total 12½ Marks)

QUESTION 2

Explain clearly the following terms as stated in IAS 8

- a. Prospective Application (3½ Marks)
 - b. Retrospective Application (3 Marks)
 - c. Prior Period Errors (2 Marks)
 - d. Material Omission/Misapplication (4 Marks)
- (Total 12½ Marks)**

QUESTION 3

Presented below is the Balance Sheet of Akoko and Okiki who shared profits and losses three-fifth and two-fifth respectively.

AKOKO, OKIKI & ASSOCIATES					
BALANCE SHEET AS AT 31 DECEMBER 2011					
	₦	₦		₦	₦
Capital: Akoko	400,000		Premises		300,000
Okiki	<u>200,000</u>		Motor vehicle	200,000	
		600,000	Less: depreciation	<u>60,000</u>	
Current Liabilities					<u>140,000</u>
Payables		<u>140,000</u>	Current assets:		440,000
		/	Inventories	160,000	
		/	Receivables	100,000	
		/	Bank	<u>40,000</u>	<u>300,000</u>
		<u>740,000</u>			<u>740,000</u>

On 31 December 2011, the partners decided to convert the partnership to a Limited Company and Omona Limited was formed for this purpose. For the purpose of the conversion all assets (except bank) were taken over at book values but premises were revalued by the Company at ₦600,000. Creditors were taken over by the Company and the agreed consideration was ₦960,000 to be discharged by the issue of 800,000 ordinary shares of ₦1.10 per share and ₦80,000 in cash. Akoko and Okiki each received 400,000 shares. Conversion cost of ₦10,000 to be borne by the partners.

You are required to:

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Prepare the realisation cash book, Omona Limited, shares in Omona Limited and capital accounts in the ledger of Akoko, Okiki & Associates

(Total 12½ Marks)

QUESTION 4

Joju Plc offered for subscription 2,000,000 shares of ₦1.50 each payable as follows:

March 1, 2011 – Application ₦0.80 (with ₦0.30 premium)

April 1, 2011 – Allotment ₦0.40

May 1, 2011 – 1st and final call ₦0.30

Applications were received for 2,400,000 shares. The 2,000,000 shares were allocated pro-rata to all applicants and the balance of the application money was credited towards the amount payable on allotment.

All payments were received when due. This is the first offer to the public.

You are required to prepare the following ledger accounts to record the above transactions and balance the accounts as at 31 May 2011

- Application and Allotment Account
- Bank Account
- Share Capital Account
- Share Premium Account
- First and Final Call Account

(Total 12½ Marks)

QUESTION 5

Freday Limited whose accounting year ends on 31 December acquired a car as official vehicle for its Managing Director on Hire Purchase on 29 February, 2010 from ABC Motors Ltd, details of the agreement were as follows:

	₦'000
Cash Price	5,300
Hire Purchase Price	6,200
Deposit	800

Interest was to be apportioned equally over the period of the agreement. Payments are to be made in 36 equal monthly instalments effective from the last day of the month following purchase.

On 30 November 2011, the car was involved in a major road accident which rendered the vehicle irreparable. The driver of the vehicle was found guilty and thus forfeited his 2011 non-accident bonus of ₦360,000. On 15 December 2011, the insurance company paid Freday Ltd ₦3,280,000 for the loss suffered on the insured car.

ABC Motors Ltd accepted ₦1,850,000 for the full settlement of the hire Purchase agreement on 31 December 2011. The last instalmental payment on the car was made on 31 December 2011. Other instalments were paid on the due dates.

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Motor vehicles were depreciated at 20% per annum on cost with a full year depreciation taken on vehicles in existence on the last day of accounting year.

You are required to prepare the:

- a. Motor vehicle Account (1 Mark)
 - b. ABC Motors Ltd Account (5 Marks)
 - c. Hire Purchase interest Account (2 Marks)
 - d. Motor Vehicle Disposal Account (4¹/₂ Marks)
- (Total 12¹/₂ Marks)**

QUESTION 6

- a. Explain the following methods of Inventory valuation:
 - i. First In First Out (FIFO)
 - ii. Last In First Out (LIFO) (4 Marks)

- b. The Financial Year of Kalakuta Trading Company ended 31 March 2011. Owing to a nationwide strike, the company could not conduct stock taking exercise on that date. The stock taking was therefore shifted to 4 April 2011 at which date the value of inventory was ascertained at ₦1,068,750.
During the period from 1 April to 3 April 2011 the following movements of inventory took place
 - i. Goods costing ₦125,000 was purchased from suppliers and delivered to store on 1 April
 - ii. Goods costing ₦25,000 were found unsuitable and returned to supplier on 2 April
 - iii. On 3 April, goods of a total sales value of ₦375,000 were sold to consumers. The gross margin on the sales was 25%

You are required to ascertain the value of Inventory as at 31 March 2011.

(8¹/₂ Marks)
(Total 12¹/₂ Marks)

SUGGESTED SOLUTIONS

SECTION A

PART I- MULTIPLE-CHOICE QUESTIONS

1. C

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2. D
3. B
4. C
5. B
6. C
7. B
8. C
9. D
10. D
11. A
12. B
13. A
14. D
15. B
16. D
17. D
18. E
19. A
20. B
21. A
22. E
23. B
24. C
25. D

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- 26. C
- 27. D
- 28. E
- 29. C
- 30. A

TUTORIAL

19. Opening Stock + closing stock: $- 2 = 60,000$

Turnover = $\frac{60,000}{400,000} \times 360 \text{ days} = 54 \text{ days}$

400,000

EXAMINER'S COMMENT

The questions cover all areas of the syllabus, all candidates attempted them. 50% of the candidates scored above half of the marks allocated to the questions.

PART II SHORT- ANSWER SOLUTION

- 1. Fixed installment or equal installment method
- 2. Statement of Financial Position
- 3. Accumulated fund
- 4. Depreciation or bad debts, or surplus or deficit, etc
- 5. Direct and Indirect method
- 6. Accounting standard
- 7. Prepaid expenses are expenses paid, and the benefits are yet to be enjoyed
- 8.
 - (i) The depreciation method
 - (ii) Useful lives or depreciation rates
 - (iii) Depreciation expense for the period
 - (iv) Gross depreciable assets and accumulated depreciation
- 9. Surplus of income over expenditure

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10. Cash basis
11. ₦890,400
12. ₦26,400
13. (i) Conversion of debentures to equity
(ii) Issue of share capital to acquire property, plant and equipment
14. Value added statement
15. Sales turnover divided by capital employed
16. Positive
17. Dr. Branch Stock Account; Cr. Goods to Branch Account
18. Dr. Hire Purchase Vendor Account; Cr. Bank Account
19. Commission Received Account
20. Mineral rights

TUTORIAL:

Note to solution 11 and 12

Subscription Account

	₦		₦
Balance b/d	43,200	Balance b/d	9,600
Income & Expenditure	866,400	Receipts & Payments	890,400
Balance c/d	<u>16,800</u>	Balance c/d	<u>26,400</u>
	<u>926,400</u>		<u>926,400</u>
Balance b/d	26,400	Balance b/d	16,800

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EXAMINER'S COMMENT

The questions cover all areas of the syllabus, and was attempted by all candidates. 40% of the candidates scored above 40% of marks allocated to the questions

SUGGESTED SOLUTIONS

SOLUTION 1

(a) NKRUMAH GHANA CLUB

INCOME AND EXPENDITURE ACCOUNT

For the year ended 31 December 2011

<u>Income:</u>	Notes		₵
Membership Subscription (w1)		693,000	
Rent of club premises (w2)			88,500
Registration fee		<u>9,000</u>	
			790,500
<u>Expenditure:</u>			
Electricity	75,000		

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Interest on loan	30,000	
Stationery	15,000	
Wages	72,000	
General Expenses (w3)	33,000	
Depreciation of F& fixings	<u>22,500</u>	<u>247,500</u>
Surplus of income over expenditure		<u>543,000</u>

NKRUMAH GHANA CLUB BALANCE SHEET AS AT 31 DECEMBER 2011

Fixed Assets:	Note(s)	₵	₵
Free hold property.....			1,545,000
Furniture & fittings		225,000	
Less depreciation		<u>22,500</u>	<u>202,500</u>
			1,747,500

CURRENTS ASSETS:

Sundry debtors – member sub.	3,000		
Rent of club premises (due)		21,000	
Cash		<u>384,000</u>	
			408,000

CURRENT LIABILITIES

Sub. Paid in advance		(24,000)	
General Expenses accrued		<u>(6,000)</u>	

Net current asset			378,000
			<u>2,125,500</u>

₵

Accumulated fund (w4)		982,500	
Surplus of Income over Expenditure		<u>543,000</u>	1,525,500
Loan		<u>600,00</u>	<u>2,125,500</u>

WORKINGS

(W1) Membership Subscription		₵	
Bank/cash		720,000	
Unpaid subscription for the year		<u>3,000</u>	
			723,000
Less: previous year subscription		(6,000)	
Subscription paid in advance		<u>(24,000)</u>	<u>693,000</u>

(W2) Rent of club premises		₵	
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Bank A/c		90,000
Current year rent not yet paid	<u>21,000</u>	111,000
Less: Previous year rent not yet received		<u>(22,500)</u>
		<u>88,500</u>
(W3) GENERAL EXPENSES:		₪
Per Bank Account		36,000
General exp due for the year not yet paid		<u>6,000</u>
		42,000
Less:		
Due in respect of previous month		<u>(9,000)</u>
		<u>33,000</u>
(W4) STATEMENT OF ACCUMULATED FUND:		
<u>Assets</u>	₪	₪
Free hold property		1,545,000
Debtors: membership sub.		6,000
Rent of club premises		22,500
Cash		<u>18,000</u>
		1,591,500
Less: <u>Liabilities</u>		
Loan	600,000	
General Expenses	<u>9,000</u>	<u>(609,000)</u>
		<u>982,500</u>

EXAMINERS' COMMENT

The question tests preparation of Income and Expenditure Account and Balance Sheet and was attempted by 90% of the Candidates. 75% of candidates performed above average, while 5% percent of the candidates could not differentiate between Receipts and Payment Account, and Income and Expenditure Account, and they also computed the Accumulated fund wrongly. Candidates are advised to master the preparation of Receipts and Payment and Income and Expenditure for the future examinations.

SOLUTION 2

- a. **Prospective application** of a change in accounting policy and of recognising the effect of a change in an accounting estimate, respectively, are:
- applying a new accounting policy to transactions occurring after the date at which the policy changed.

- (ii) Recognising a change in an accounting estimate in the current and future periods affected by the change.

- b. **Retrospective application** is applying a new accounting policy to transactions, other events and conditions as if that policy had always been applied.

Retrospective application is where the financial statements of the current period and each prior period presented are adjusted so that it appears as if the new policy had always been followed. This is achieved by restating the profits in each period presented and adjusting the opening position by restating retained earnings (i.e. cumulative profits held in the statement of financial position as part of equity).

Where it is not practicable to determine either the specific effect in a particular period or the cumulative effect of applying a new policy to past periods, the new policy should be applied from the earliest date that it is practicable to do so.

The reasons for and effects of a change in accounting policy should be disclosed.

Where a new standard had been issued but an entity is not yet required to implement it and the entity has not implemented it early, it should disclose this fact. The information provided should quantify the effect on future periods if this can be reasonably estimated. This provides useful information to users of the financial statements about an entity's future reported performance.

- c. **Prior period errors:** are omissions from, and misstatements in, the entity's financial statements for one or more prior periods arising from a failure to use, or misuse of, reliable information that:

- (a) was available when financial statements for those periods were authorized for issue; and
- (b) Could reasonably be expected to have been obtained and taken into account in the preparation and presentation of those financial statements.

Such errors result from mathematical mistakes, mistakes in applying accounting policies, oversights or misinterpretations of facts, and fraud.

Errors discovered in the period they are made are corrected before the financial statements are authorized for issue. However, material errors are sometimes not discovered until a subsequent period, and these prior period errors are corrected in the comparative information presented in the financial statements for that subsequent period.

Prior period error shall be corrected by retrospective restatement expected to the extent that it is impracticable to determine either the period-specific effects or the cumulative effect of the error.

- c. **Material** omissions/misapplication of items are material if they could, by their size or nature, individually or collectively, influence the economic decisions of users taken on the basis of the financial statements

INSIGHT

EXAMINER'S COMMENT

The question tests candidates' knowledge of IAS 8 and was attempted by 15% of the candidates. 95% of those who attempted displayed poor/no idea of the standard, while 5% performed well and scored above average. Candidates are advised to study every relevant standard IAS, IFRS, IPSAS in preparing for future examinations.

SOLUTION 3

Subscription Account

	N		N
Premises	300,000	Payables	140,000
Tor vehicle	140,000	Purchase consideration	960,000
Inventories	160,000		
Receivables	100,000		
Bank (conversion exp)	10,000		
Capital a/c:			
- Akoko	195,000		
- Okiki	<u>195,000</u>		
	<u>1,100,00</u>		<u>1,100,00</u>

Cash Account

	N		N
Balance b/d	40,000	Realisation a/c – (conversion exp.)	10,000
Omona Ltd.	80,000	Capital a/c – Akoko	<u>155,000</u>
Capital a/c - Okiki	<u>45,000</u>		
	<u>165,000</u>		<u>165,000</u>

Omona Limited

INSIGHT

	N			
Payables		140,000		
Realisation a/c: Consideration		960,000	Shares in Omona Ltd.	880,000
Payables		<u>140,000</u>	Cash	<u>80,000</u>
		<u>1,100,000</u>		<u>1,100,000</u>

Shares in Omona Limited

	N			N
Omona Ltd.		880,000	Capital a/c - Akoko	440,000
		<u>880,000</u>	- Okiki	<u>440,000</u>
				<u>880,000</u>

Partners Capital Account

		Akoko	Okiki		Akoko	Okiki
		N	N		N	N
Shares in Omona Ltd.	440,000	440,000	Balance c/d	400,000	200,000	
Cash a/c	155,000	-	Realisation a/c	195,000	195,000	
			Cash a/c		<u>45,000</u>	
	<u>595,000</u>	<u>440,000</u>		<u>595,000</u>	<u>440,000</u>	

EXAMINERS' COMMENT

The question tests Candidates' knowledge of conversion of partnership to a Limited Company and was attempted by 60% of the candidates. 40% of those who attempted it scored above average, while 25% displayed poor understanding of partnership account. All Candidates are advised to study the principles in converting Partnership Accounts to Limited Liability accounts in future examinations.

SOLUTION 4

Appl. & Allot A/c

Share capital $2,000,00 \times .5 + .4$	1,800,000	Bank a/c	$2,400,00 \times .80$	1,920,000	
Share premium $2,000,000 \times .3 =$	<u>600,000</u>	Bank Account		<u>480,000</u>	
	<u>2,400,000</u>			<u>2,400,000</u>	

Bank A/c

App x allot. $2,400,000 \times 0.80$	1,920,000	Bal c/d		3,000,000	
App x allot	480,000				
1 st and final call $2,000,000 \times .3$	<u>600,000</u>				

INSIGHT

	<u>3,000,000</u>	<u>3,000,000</u>
Bal b/d	3,000,000	

Share Capital A/c

Bal b/d	2,400,000	App & allot 2,000,000 x (50 + 40k)
	<u>2,400,000</u>	1 st & final call 2,000,000 x .3
		1,800,000
		<u>600,000</u>
		<u>2,400,000</u>
		Bal b/d
		2,400,000

Share Premium A/c

Bal b/d	<u>600,000</u>	App & allot 2,000,000 x 30k
		<u>600,000</u>
		Bal b/d
		<u>600,000</u>

1st & final call A/c

Share capital a/c 2,000,000	<u>600,000</u>	Bank a/c 2,000,000 x .30k	<u>600,000</u>
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EXAMINER'S COMMENT

The question tests accounting entries on issue of shares and attempted by 95% of the candidates. 45% of the candidates performed well and scored above average, while the remainder displayed poor understanding of double entry principles by posting to wrong sides of the ledger and in effect lost good marks. Candidates are advised to study and understand the posting of accounting entries for future examinations.

SOLUTION 5

Freday Limited			
Motor Vehicle Account			
	N'000		N'000
29/2/10 ABC Motors Ltd.	<u>5,300</u>	31/12/11 Bal c/d	<u>5,300</u>
1/3/11 Bal. b/d	<u>5,300</u>	31/12/11 Bal c/d	<u>5,300</u>

INSIGHT

ABC Motor Ltd.

		N'000			N'000
29/2/10	Bank- Deposit	800	29/2/10	Motor Vehicle	5,300
31/12/10	Bank – Installments	1,500	31/12/10	HP Interest	250
	Bal c/d	<u>3,250</u>			
		<u>5,550</u>			<u>5,550</u>
31/12/11	Bank-Installments	1,650	1/1/11	Bal b/d	3,250
	Bank-final settlements	1,850	31/12/11	HP Interest	300
	Disposal	<u>50</u>			
		<u>3,550</u>			<u>3,550</u>

Hire Purchase Interest Account

		N'000			N'000
31/12/10	ABC Motors Ltd.	<u>250</u>	31/12/10	Income Statement	<u>250</u>
31/12/11	ABC Motors Ltd.	<u>300</u>	31/12/11	Income Statement	<u>300</u>

Disposal of Motor Vehicle

		N'000			N'000
29/02/11	Motor Vehicle	5,300		ABC Motors	50
				Depreciation	1,060
				Bank-Insurance claim	3,280
				Salaries A/c-Non-accident	
				Bonus forfeited	360
				Income statement	<u>550</u>
		<u>5,300</u>			<u>5,300</u>

Workings Notes

1. Interest paid on 31st December 2010 (i.e. for 10 months)

$$\begin{aligned} \text{Total interest for 36 months } & \text{N}6,200,000 - \text{N}5,300,000 = \text{N}900,000 \\ & = \text{N}900,000 \end{aligned}$$

$$\text{Interest for 10 months} = \frac{10}{36} \times \text{N}900,000 = \text{N}250,000$$

2.	Monthly installments	<u>N'000</u>	
	HP Sales Value	6,200	
	Less: Deposit	<u>800</u>	
	Total Payable installmentally	<u>5,400</u>	
	Monthly installment		150

3.	Accumulated depreciation	<u>N'000</u>	
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INSIGHT

Year of purchase: 20% x ₦5,300,000

1,060

EXAMINER'S COMMENT

The question tests knowledge of Hire Purchase Account and was attempted by 20% of the candidates. They put up poor performance and actually displayed lack of understanding of the accounting treatment of hire purchase transactions and in effect scored below average. Candidates are advised to have a good understanding of Hire Purchase accounting transactions and principles for the future.

SOLUTION 6

(a) **First In First Out method of Valuation**

This is a method of valuation of stock on the assumption that stock received first are issued first. This implies that issues are priced at the price of the oldest batch in stock until all units of the batch have been issued when the price of the next oldest bath is used and so on.

The value of closing stock reflect the current price levels. The fee in a period of rising prices, closing stock and by implication profits are overstated and vice versa.

(b) **Last in first out method of valuation**

Under this method, stocks are valued on the assumption that stocks received last are issued first. This implies that issues are priced at the price of the most recent batch and continue to be so priced until a new batch is received.

The value of closing stock reflects the price levels ruling in the early part of the period.

In the period of rising prices, closing stock and by implication profit are under stated and vice versa.

STOCK VALUE AS AT 31 MARCH 2011

	₦	₦
Value of stock ascertained 4 April 2011		1,068,750
Add: /(Deduct)		
Goods purchased 1 April 2011	(125,000)	
Goods returned to supplier 2 April 2011	<u>25,000</u>	(100,000)
Goods sold:	375,000	
Less: Profit margin 25% 375,000	<u>93,750</u>	281,250
Value of stock as at 31 March 2011.		<u>1,250,000</u>

EXAMINER'S COMMENT

The question which tests candidates' knowledge on the methods of inventory valuation was attempted by 85% of the candidates. 75% of them failed to highlight the inventory price which distinguishes

INSIGHT

between earlier and latter inventory, and also could not accurately compute the value of stock as it becomes difficult for them to work back. About 50% scored below average marks.

Candidates are advised to study inventory principles and understand the various method of inventory valuation for future examinations.

ATS/122/PII.6

Examination No:.....

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS - SEPTEMBER 2012
PUBLIC SECTOR ACCOUNTING**

Time Allowed – 3 hours

Insert your Examination number in the space provided above

SECTION A (ATTEMPT ALL QUESTIONS)

PART I MULTIPLE-CHOICE QUESTIONS Marks)

(30

Write only the alphabet (A, B, C, D or E) that corresponds to the correct option in each of the following questions.

1. Government expenditure on projects like the construction and maintenance of roads, schools and hospitals are classified as.....expenditure.
 - A. Capital
 - B. Private
 - C. Recurrent
 - D. Revenue
 - E. Debt

2. The accounting concept which states that financial statements should reflect the economic substance of the activities rather than the legal form is known as
 - A. Materiality concept
 - B. The cost concept
 - C. The money measurement concept
 - D. Substance under Form
 - E. Substance over Form

3. The following are the advantages of using the 'Cash basis of Accounting' in Public Sector Accounting, **EXCEPT**
 - A. It is simple to understand, install, operate and maintain
 - B. Compliance can be demonstrated e.g. by keeping within a cash limit, thus fiscal stewardship can be fulfilled
 - C. It does not provide for depreciation since assets are written off in the year of purchase
 - D. It makes delegation of authority readily possible in government
 - E. It is time and cost saving basis in terms of preparation of Government Accounts

4. Which of the following is **NOT** a characteristic of Public Sector Accounting?
 - A. Cash Basis of Accounting
 - B. Fund Accounting
 - C. Accrual Basis of Accounting
 - D. Writing off Assets in the year of purchase
 - E. Keeping Departmental Vote Expenditure Allocation Book

5. Which of the following organisations has **NOT** issued any pronouncements and recommendations on government accounting?
 - A. International Federation of Accountants (IFAC)
 - B. Federation of International Accountants (FOIA)
 - C. International Public Sector Accounting Standard Board (IPSASB)
 - D. United Nation Organization (UNO)

- E. Chartered Institute of Public Finance and Accounting (CIPFA)
6. According to the Financial Regulations of Nigeria Section 106 (1), the head of a Ministry/Extra Ministerial Department or whosoever is empowered to manage the fund allocated to the Ministry or Department is called.....officer
- A. Debt Management
B. Treasury
C. Audit
D. Revenue
E. Accounting
7. A typical Appropriation Act contains some standard provisions as follows, **EXCEPT**
- A. The number of sittings by the Parliament before the Bill is passed
B. The introduction: comparing the present budget with that of previous year
C. A brief description of the services expected to be rendered
D. A detailed analysis of the amount provided
E. A detailed analysis of expected receipts during the year
8. The document containing instructions which shall be observed and complied with by all Local Governments for better control and management is known as
- A. Fiscal Responsibility Act 2007
B. Public Procurement Act 2007
C. The Financial Memoranda for Local Government
D. The Local Government Staff Regulations
E. The Local Government Estimates
9. The duties of the Local Government Council **EXCLUDES**
- A. Making Laws, debating and passing Local Government Legislation
B. Debating, approving and possibly amending Local Government annual budgets
C. Monitoring the implementation of projects and programmes in the Local Government annual Budgets
D. That there is compliance with the provisions of the Financial Memoranda
E. Taking care and custody of the Local Government Finance whether in cash or held in the Local Government Bank Account
10. On the receipt of a Loss Report, the Local Government Chairman shall inform the following
- i) The Executive Committee
ii) The Treasurer if he has not himself made the report to the Chairman
iii) The Council
iv) The Internal Auditor
v) The Auditor General
- A. I and III
B. I, III and III

- C. I, IV and V
 - D. V, I and II
 - E. I, II, III, IV, V
11. The following steps must be followed in the preparation of Transcripts, **EXCEPT**
- A. Collection of receipts and payment Vouchers along with the main cash book
 - B. Pre-Listing of Vouchers
 - C. Analysis of outstanding Liabilities
 - D. Posting into Analysis Book
 - E. Sorting of vouchers into their respective heads and subheads
12. The following documents must be prepared and taken along with the Transcript **EXCEPT** the
- A. Breakdown of expenditure
 - B. Bank Reconciliation Statement
 - C. Certificate of Cash and Bank balances
 - D. Breakdown of Consolidated Revenue Funds Accounts
 - E. List of outstanding vouchers
13. Which of the following is **NOT** classified under “Below-the-Line” payments?
- A. Salary Advance
 - B. Correspondence Advance
 - C. Motor Vehicle Advance
 - D. Miscellaneous Deposit Paid
 - E. Printing and Stationery
14. The major source of revenue to your country is
- A. Income from fixed interest securities
 - B. Petroleum
 - C. Cocoa
 - D. Mineral deposits
 - E. Rubber
15. Under IAS No.7 (Cash flow Statement) repayment of loan is classified as
- A. Operating Activities
 - B. Investment Activities
 - C. Net increase/(decrease) in cash and its equivalent.
 - D. Financing Activities
 - E. Fixed Asset
16. The Auditor General applies the following techniques in carrying out Value for Money Auditing **EXCEPT**
- A. Conduct Compliance Test
 - B. Initial analysis of Financial Statement
 - C. Planning Coordinating and Controlling the Test
 - D. Management and System review
 - E. Writing of Management Letter

17. Which of the following is **NOT** the cause of the Domestic Debt?
- A. Financing Religious Activities
 - B. Increasing Socio-Economic Responsibilities
 - C. Financing Government's Budget Deficit
 - D. Financing ever rising government expenditure
 - E. Sharp decline in government revenue, following the collapse of the International market.
18. Which of the following is **NOT** among the conditions for granting immediate Retirement Benefits?
- A. On compulsory retirement on attaining the retirement age of 60 years
 - B. On voluntary withdrawal of service having served for 3 years and 9 months
 - C. Retirement on Public interest
 - D. On Health ground
 - E. On voluntary retirement after serving for qualifying period of 35 years
19. Which of the following terms is **NOT** relevant with reference to Pension Reform Act 2004?
- A. Retirement Benefit Plans
 - B. Defined Contribution Plans
 - C. Defined Benefit Plans
 - D. Funding
 - E. Actuarial Plans and Certificate
20. With reference to statement No, 4 (Capital Development Fund). Education is classified under
- A. Economic Sector
 - B. Regional Development Sector
 - C. Social Service Sector
 - D. Administration Sector
 - E. Capital Receipt
21. The Stores, the cost of which are chargeable direct to, and remain a charge to, the Subhead of expenditure in which Fund for their purchase are provided in the Estimate is
- A. Expendable Stores
 - B. Non-Expendable Stores
 - C. Allocated Stores
 - D. Unallocated Stores
 - E. Consumable Stores
22. Unserviceable and obsolete stores shall be posted in a ledger supported by a
- A. Receipt Book Issue Note
 - B. Store Requisition Note
 - C. Store Receipt Voucher
 - D. Store Issue Voucher

- E. Consignment Note
23. The redline drawn immediately below the last entry on each page of the Stores Ledger is for
- A. Closing the transaction for the year
 - B. Opening the transaction for the year
 - C. Indicating the Bench Mark Prize in the year
 - D. Indicating the Average Price for the year
 - E. Disclosing the Unit Price for the year
24. Entries on Tally Cards written in indelible ink is initialled by
- A. Accounting Officer
 - B. Head of Internal Audit
 - C. Head of Accounts
 - D. Head of Store
 - E. Store Keeper
25. The General Supervision of Store is the responsibility of
- A. Head of Accounts
 - B. Head of Internal Audit
 - C. The External Auditors
 - D. The Accounting Officer
 - E. Head of Board of Survey
26. The responsibility of Store Keeper includes the following **EXCEPT**
- A. Safe keeping of store
 - B. Checking and handling of store issued
 - C. Checking the utility of store issued
 - D. Progression of issued stores to forestall store becoming obsolete
 - E. Maintenance of stores within the prescribed maximum and minimum level for avoiding wastage of Public Fund
27. Stores may be obtained by from overseas suppliers
- A. Local Purchase Order
 - B. Overseas Purchase Order
 - C. Indents
 - D. Store Transfer Order
 - E. Store Import Order.
28. In place of Local Purchase Order or Job Order, it is forbidden to use
- A. Indent
 - B. Import Order
 - C. Cash Advance
 - D. Tender process
 - E. Across the Counter Purchase
29. In all payment vouchers for the execution of Job Order, Certificate of _____ must be attached.

- A. Job Completion
 - B. Audit
 - C. Honour
 - D. Accountant General
 - E. Auditor General
30. The purchase of Stores for general use rather than for a particular works or service for which the vote of charge **CANNOT** be stated at the time of purchase is called.....stores
- A. Expendable
 - B. Non Expendable
 - C. Allocated
 - D. Unallocated
 - E. Consumable

SECTION A

PART II: SHORT ANSWER QUESTIONS (20 Marks)

Write the answer that best completes each of the following questions/statements

1. According to the financial regulations, the General Imprest Warrant is issued by the.....
2. What Committee of the National Assembly exposes waste, corruption, etc in the spending of public funds?
3. What instrument empowers the Accountant-General to make funds available for spending on Capital projects?
4. What is the account which the Federal Government constitutionally created for Capital receipts?
5. The constitutionally created account into which all funds which belong to the Federal Government are credited and all expenditure debited is known as.....
6. A document used in Government to effect transfer from one account to another without the movement of cash is.....
7. An expenditure whose benefits accrue for more than one year is.....
8. A financial statement prepared by the government to meet extra expenditure not originally proposed is known as.....
9. The excess of expenditure over income is referred to as

INSIGHT

10. A fund operated by the government to take care of all forms of national disaster is called.....
11. An independent appraisal activity within an organisation for the review of operation as a service to management, and a managerial control which function by measuring and evaluating the effectiveness of other controls is known as
12. With reference to FR 1904, the contribution from both the employers and employees shall be accounted for, and paid into.....account opened by National Pension Commission
13. Financial Regulation 101 defines.....as the Chief Accounting Officer of the receipt and payment of Government funds
14. The examination involving consideration of every entries in the books in conjunction with supporting documents is known as.....
15. The audit technique adopted to ensure the existence of asset and liabilities and their valuation at a date is known as.....
16. What governs the operation of Parastatals that is set up as a Company?
17. A Transcript has.....columns on each side
18. A control which measures, evaluates and reports upon the effectiveness of internal controls set up in an organisation is known as.....
19. Salary Advance is repayable within..... months instalmentally
20. Subvention is one of the internally generated Revenue of a corporation. True or False?

INSIGHT

SECTION B: ATTEMPT ANY FOUR QUESTIONS MARKS)

(50

QUESTION 1

Mallam Litafi, a revenue collector in Manafiki Local Government Area, submits the following information, for the month ended 30 September 2011.

DATE	PAYER	REASON FOR PAYMENT	AMOUNT ₦
02/09/2011	Mr. & Mrs. Uche	Court Wedding	6,000
03/09/2011	Mr. Ayangba	Court Fine	20,000
04/09/2011	Mallam Sofidiya	Court Fine	80,000
05/09/2011	Mrs. Patience	Court proceeding document	8,000
07/09/2011	Mr. Shoprite	Court proceeding document	12,000
09/09/2011	Mr. & Mrs. Ethiope	Court Wedding	5,000
13/09/2011	Mr. Buko	Court Fine	15,000
30/09/2011	Chief Madu	Court proceeding document	5,000

The money collected is shown under Head 200 with the following Sub-Heads;

- a. Court Wedding 001
- b. Court Fine 003
- c. Court proceeding document 005

Mallam Litafi deposited the takings to the Sub-Accounting Officer on 29 September 2011 and was issued with Treasury Receipt number Y300201. The receipt issued to Mr. & Mrs. Uche was Z700607. Receipt No. Z700613 dated 13/09/2011 was cancelled.

You are required to:

Write up the Revenue Collector's Cash Book.

(Total 12¹/₂ Marks)

QUESTION 2

The Pension Reform Act 2004 has empowered the Pension Fund Administrator and the National Pension Commission (PenCom) to perform certain functions.

You are required to:

List FIVE functions for each of:

- a. National Pension Commission (PenCom) (6¹/₄ Marks)
 - b. Pension Fund Administrator (PFA) (6¹/₄ Marks)
- (Total 12¹/₂ Marks)

QUESTION 3

INSIGHT

The Development Fund is used to finance general Capital Expenditure of the Government. The account relating thereto should be kept by the Accountant General. The inflow to the account is usually sourced from

- (i) Product of loans raised by the government
- (ii) Development Grant made to the government
- (iii) Sum of time authorized by law

Otigba, a satellite State from Beribe Government, has the following information derived from its Development Fund Ledgers Head balances in 2011

		Head/Actual 2010 ₦	Estimate 2011 ₦	Actual ₦
Grant	212	150,000,000	200,000,000	210,000,000
Internal loan	213	101,000,000	109,500,000	149,462,607
External loan	214	140,000,000	152,000,000	282,069,665
Total Expenditure	220	1,300,000,000	2,420,000,000	2,479,000,000
External financial obligation	247	200,000,000	260,500,000	250,000,000
Loan lent to state	-	400,000,000	440,000,000	441,000,000
Petroleum Company	251	800,000,000	900,00,000	996,173,000
Steel Development Company		400,000,000	567,000,000	612,150,000

The legislature approved the sum of ₦5.38 billion for Development fund Annual General Warrant which is transferred from the Consolidated Revenue Fund. Last year approval was ₦4.807 billion and the proposed estimate was ₦2 billion for the year.

You are required to prepare Capital Development Fund Statement No4 as at 31 December 2011. (Total 12½ Marks)

QUESTION 4

INSIGHT

There was a complaint from the Head of Accounts, Mr. Obayomi of the Ministry of Environment, in respect of Affair Bank reconciliation exercise. It was observed that there was loss of ₦12 billion which he suspected the Cashier had embezzled. He then constituted a three-man Investigative Team being chaired by the Chief Internal Auditor.

The following findings were reported:

- i. ₦150,000 was a shortage incurred by the Cashier while paying the March Salary due to shortage from money collected from the Bank. Bank has been notified.
- ii. There was overpayment of ₦200,000 to Mr. Adedeji through e-payment. He admitted the overpayment and promised to refund.
- iii. There was overpayment of ₦10 million to the Ministry by cash supply division of the Treasury. It was initially charged to Consolidated Revenue Fund and now discovered it was deducted from the May cash backing.
- iv. The Company Constructing Ayewa road was over-paid by ₦1 million being part of advance payment but was not recovered. It has been charged to Development Fund. The Company has agreed to refund the sum.
- v. Mr. Phillips took an advance in the year 2006 for a sum of ₦700,000 but unfortunately he could not retire it before he was summarily dismissed. He later sued the Government to Court and he won the case, but he was due to retire and the outstanding sum was recovered.

- Notes:
- i. Personal Advance: 1218
 - ii. Allocation from Consolidated Revenue Fund: 1220
 - iii. Advance: Accountant-General
 - iv. Excess Cash 1100

You are required to use Adjustment Voucher (Journal Voucher) to rectify the above stated Accounting Entries. (Total 12½ Marks)

QUESTION 5

- a. “Board of Survey to be held after the close of business on the last business day of each financial year or before the commencement of business on the first working day of new financial year shall be appointed to examine the Cash, Bank balances and stamp by the office of Accountant General at the Sub-Treasury and Federal Pay Office and Cash Office in Ministries”.

You are required to name the THREE classes of Board of Survey. (3 Marks)

INSIGHT

- b. Enumerate the Composition of the Board of Survey. (3 Marks)
- c. List **FOUR** circumstances for setting up the Board of Enquiry. (3¹/₂ Marks)
- d. In accordance with the Financial Regulations 1505(1d) of 2006 (as amended) state when a Board of Enquiry may not be necessary. (3 Marks)

(TOTAL 12¹/₂

Marks)

QUESTION 6

- a. Who is a Treasurer? (2 Marks)
- b. List **SEVEN** functions of a Treasurer. (10¹/₂ Marks)
- (Total 12¹/₂ Marks)**

SUGGESTED SOLUTIONS

SECTION A

PART I MULTIPLE-CHOICE QUESTIONS

1. A
2. E
3. C
4. C
5. B
6. E

INSIGHT

- 7. A
- 8. C
- 9. E
- 10. E
- 11. C
- 12. D
- 13. E
- 14. B
- 15. D
- 16. E
- 17. A
- 18. B
- 19. E
- 20. C
- 21. C
- 22. E
- 23. A
- 24. E
- 25. D
- 26. C
- 27. C
- 28. C
- 29. A
- 30. D

EXAMINER'S COMMENT

The Multiple Choice Questions were well understood by many of the Candidates whereby over 65% of them scoring between 80 – 90% of the obtainable marks.

PART II SHORT-ANSWER SOLUTIONS

INSIGHT

1. Minister of Finance
2. Public Accounts Committee
3. Development Fund General Warrant
4. Development Fund Account
5. Consolidated Revenue Fund
6. Adjustment Voucher
7. Capital Expenditure
8. Supplementary Warrant/Estimate/Budget
9. Deficit
10. Ecological Fund
11. Internal Control
12. Retirement Savings Account
13. Accountant General of the Federation
14. Vouching
15. Verification
16. Enabling Act
17. Six (6)
18. Internal Audit
19. Three (3)
20. False

EXAMINER'S COMMENT

Majority of the Candidates did not quite understand the Short Answer Questions. The performance was poor as less than 50% of the candidates scored above 40% of total marks obtainable.

SOLUTION 1

SYLLABUS AREA: 1B CONSTITUTIONAL, LEGAL AND ADMINISTRATIVE FRAMEWORK

INTERNALLY GENERATED REVENUE (IGP)

SUGGESTED SOLUTION:- MANAFIKI LOCAL GOVERNMENT AREA

INSIGHT

REVENUE COLLECTOR'S CASH BOOK FOR THE MONTH ENDED 30TH SEPT. 2011

DATE	REVENUE RECEIPT NO	CLASSIFICATION HEAD	FROM WHOM RECEIVABLE	AMOUNT	DATE	TREASURY RECEIPT NO.	AMOUNT
02/09/2011	2700607	200--001	MR & MRS UCHE	6,000	29/09/2011	Y300201	131,000
03/09/2011	2700608	200--003	MR. AYANGBA	20,000			
04/09/2011	2700609	200--003	MAL.SOFIDIYA	80,000			
05/09/2011	2700610	200--005	MRS. PATIENCE	8,000			
07/09/2011	2700611	200--005	MR. SHOPRITE	12,000			
09/09/2011	2700612	200--001	MR. & MRS ETHIOPE	5,000			
13/09/2011	2700613	CANCELLED	MR. BUKO				
30/09/2011	2700614	200--005	CHIEF MADU	<u>5,000</u>	30/09/2011	Bal. c/d	<u>5,000</u>
				<u>136,000</u>			<u>136,000</u>
		Bal b/d		5,000			

EXAMINER'S COMMENT

The question tests the candidates' knowledge of Revenue Collector's Cash Book. 99.5% of the students attempted it with over 98% of them scoring above average. Candidates are advised to maintain them scoring above average. Candidates are advised to maintain this performance in future examinations and continue to do well in revenue collector's cash book.

SOLUTION 2

- a. The Functions of National Pension Commission (PENCOM) are to:
- i. Regulate and supervise the scheme established under this Act
 - ii. Issue guidelines for the investment of pension funds
 - iii. Approve, license, regulate and supervise Pension Funds Administrators (PFA), Pension Funds Custodians (PFC) and other institutions relating to pension matters as the commission may from time to time determine
 - iv. Establish standards, rules and guidelines for the management of the pension funds under this Act
 - v. Ensure the maintenance of a National Data Bank on all pension matters
 - vi. Carry out public awareness and education on the establishment and management of the scheme
 - vii. Promote capacity building and institutional strengthening of pension fund administrators and custodians
 - viii. Receive and investigate complaints of impropriety leveled against any pension fund administrator, custodian or employer or any of their staff or agent

INSIGHT

- ix. Perform such other duties which, in the opinion of the commission, are necessary or expedient for the discharge of its functions under this Act.
- (b) The Functions of Pension Fund Administrators (PFA) are to
- i. Invest and manage Pension Funds and Assets
 - ii. Open retirement savings accounts for all employees with Personal Identity Numbers (PIN) attached
 - iii. Provide regular information on investment strategy, market returns and other performance indicators to the commission and employees or beneficiaries of the retirement savings accounts.
 - iv. Maintain books of accounts on all transactions
 - v. Carry out other functions as National Pension Commission may assign from time to time
 - vi. Provide customer services support to employees including access to employees account balances and statements on demand
 - vii. Process the calculations and payments of retirement benefit

EXAMINER'S COMMENT

This question tests the candidates' knowledge of the functions of PENCOM and PFAs and more than 50% attempted this question. The performance was poor. Only about 20% of those who attempted scored above 50% of marks obtainable. Lack of adequate preparation in this area in the syllabus was the major pitfall. Candidates are advised to cover all the areas of the syllabus indepth, especially as it affects PENCOM and PFAs.

SOLUTION 3

OTIGBA STATE OF BEREBE GOVERNMENT CAPITAL DEVELOPMENT FUND STATEMENT NO. 4 AS AT 31 DECEMBER 2011

2010	2011					
	HEAD	DESCRIPTON	ESTIMATE	ACTUAL	VARIANCE	REMARKS
N			N	N	N	
	CAPITAL REVENUE					
150,000,000	212	Grant	200,000,000	210,000,000	10,000,000	Favourable
101,000,000	213	Internal Loans	109,500,000	149,462,607	39,962,607	Favourable
140,000,000	214	External Loans	152,000,000	282,069,665	130,069,665	Favourable
<u>4,807,000,000</u>		Transfer from CRF	<u>2,000,000,000</u>	<u>5,380,000,000</u>	<u>3,380,000,000</u>	Favourable
<u>5,198,000,000</u>		A	<u>2,461,500,000</u>	<u>6,021,532,272</u>	<u>3,560,032,272</u>	Favourable

INSIGHT

		<u>CAPITAL EXPENDITURE</u>				
1,300,000,000	220	Total Expenditure	2,420,000,000	2,479,000,000	(59,000,000)	Adverse
200,000,000	247	Ext. Fin. Obligations	260,500,000	250,000,000	10,500,000	Favourable
400,000,000		Loan lent to state	440,000,000	441,000,000	(1,000,000)	Adverse
800,000,000	251	Petroleum company	900,000,000	996,173,000	(96,173,000)	Adverse
<u>400,000,000</u>		Steel Dev. Company	567,000,000	612,150,000	(45,150,000)	Adverse
<u>3,100,000,000</u>		B	4,587,500,000	4,778,323,000	(190,823,000)	Adverse
		Excess (Deficit) of Rev. over Expenditure				
2,098,000,000		(A – B)	2,126,000,000	1,243,209,272	3,369,209,272	Favourable

EXAMINER'S COMMENT

The question tests candidates' knowledge of the preparation of Capital Development Fund Statement. 70% of the Candidates attempted this question and 60% scored above 50% of total marks obtainable. Candidates are advised work harder in this area.

SOLUTION 4

MINISTRY OF ENVIRONMENT OFFICE OF THE ACCOUNTANT-GENERAL LOSS OF FUND ACCOUNTS

S/NO	DESCRIPTION	CODE	DEBIT ₦	CREDIT ₦
1.	Non-Personal Advance		150,000	
	Cash Book			150,000
	Being cash shortage receivable from bank to pay outstanding salaries			
2.	Non-Personal Advance		200,000	
	Bank			200,000
	Being overpayment to Mr. Adedeji through e-payment			
3.	Advance Account	1,100	10,000,000	
	Consolidated Rev. Fund			10,000,000
	Being over payment to the Ministry by the cash supply Dept. from May cash banking			
4.	Non-Personal Advance		1,000,000	
	Development Fund			1,000,000
	Being overpayment to a contribution company yet to be recovered			
5.	Loss of fund A/c	1,218	700,000	
	Abandoned Adv. A/c			700,000
	Being advance granted to Mr.			

INSIGHT

	Phillips in the year 2006 later recovered			
--	---	--	--	--

EXAMINER'S COMMENT

The question tests the candidates' knowledge of the use of Adjustment Voucher (Journal Voucher). Less than 50% attempted this question. Performance was very poor. Only 10% of those who attempted the question scored above average. Candidates are advised to cover all the areas of the syllabus in-depth especially adjustment voucher preparation.

SOLUTION 5

A. THREE CLASSES OF BOARD OF SURVEY

- i. Survey of Cash
- ii. Survey of Stamp
- iii. Survey of stores, plant, building and equipment

B. COMPOSITION OF BOARD OF SURVEY

- i. The President who must be a Senior Officer of Grade level 08 and above
- ii. Two other officers not below grade level 06

C. CIRCUMSTANCES FOR SETTING UP BOARD OF ENQUIRY

- i. If fraud is probable
- ii. If several officers are involved
- iii. If collusion is suspected
- iv. If the loss is substantial

D. WHEN BOARD OF ENQUIRY IS NOT NECESSARY

The Board of Enquiry may not be necessary in the following circumstances

- i. if the loss is a small one
- ii. if it is an isolated case
- iii. if the identity of the officer responsible is indisputable

EXAMINER'S COMMENT

INSIGHT

This question tests the candidates' knowledge of Board of Survey. The question was attempted by about 65% - 70% of the Candidates. They showed some understanding of this question with 70% of them scoring above 50% of total marks obtainable. Candidates are advised to study every aspect of the syllabus especially as it affects Board of survey.

SOLUTION 6

- (a) A treasurer is the chief accounts officer and chief financial adviser to the Local Government.
- (b) His functions/duties include to:
- i. Advise the Council and its committees at all times as to the true state of its finances
 - ii. See that the accounting procedures prescribed in Financial Memoranda are fully observed.
 - iii. See that the safeguards laid down for protection against fraud and irregularities are effectively maintained.
 - iv. Make adequate provision for the safe custody of the Council's cash balances and other assets in accordance with provisions of Financial Memoranda.
 - v. Check accounts of revenue collectors regularly
 - vi. Ensure that no payment is made unless duly authorized and relevant vouchers signed by designated official
 - vii. Ensure that all advances are retired in accordance with the conditions under which they were authorized.
 - viii. Prepare and submit financial returns and reports
 - ix. Prepare bank reconciliation statements on continuous basis and balancing of subsidiary accounts.
 - x. Prepare and publish monthly, quarterly and annually the financial statements of the Council
 - xi. Be a signatory to the Local Government cheques
 - xii. Prepare budget, introduce monitoring procedures and supervise the accounts of all departments of the Council.

- xiii. Control administratively the Finance Department of the Council
- xiv. He is always a facilitator to the Local Government Audit Alarm Committee

EXAMINER'S COMMENT

The question tests the candidates' knowledge of the Treasurer and its Functions. All candidates attempted this question, and there was good understanding as shown by their performance. 60% of the candidates scored above average. Candidates are advised to keep up the understanding of the functions of the treasurer.

AT/122/PII.7

Examination No:.....

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS – SEPTEMBER 2012
QUANTITATIVE ANALYSIS**

Time allowed: 3 hours

Insert your Examination Number in the space provided above

SECTION A (Attempt All Questions)

PART 1 MULTIPLE-CHOICE QUESTIONS (30 Marks)

Write ONLY the alphabet (A, B, C, D, or E) that corresponds to the correct option in each of the following questions

1. Which of the following is/are qualities of a good questionnaire?
 - I. Each question in the questionnaire must be precise and unambiguous.
 - II. Avoidance of leading questions in the questionnaire
 - III. A questionnaire must be lengthy in order to accommodate many questions.
 - A. I only
 - B. I and II
 - C. I and III
 - D. II and III
 - E. I, II and III

2. Which of the following is **NOT** an advantage of primary data?
 - A. It produces the desired information in detail
 - B. The degree of bias can be reduced with quality control procedures
 - C. The magnitude of sampling error and the nature of the non-sampling error are known and can be described
 - D. Primary data are more correct and reliable than secondary data
 - E. The use of primary data will reduce cost (in terms of money and resources)

3. Which of the following statements is **NOT** correct?
 - I. For a normal distribution, the coefficient of skewness is zero
 - II. For a normal distribution, the measures of central tendency must be equal.
 - III. The variance is the square root of the standard deviation
 - IV. The standard deviation has the same unit of measurement as the original data set.

- A. III only
B. I only
C. IV only
D. II only
E. I, II and IV
4. Which of the following is/are true?
I. Correlation measures pattern of relationships
II. When the rank correlation is +1, it means perfect agreement
III. Coefficient of determination can only take possible integer values.
A. I only
B. II only
C. III only
D. I and II
E. II and III
5. Which of the following is/are true of moving average method?
I. Extreme values are always lost
II. The method is suitable for forecasting
III. It is not good for non-linear trend
A. I only
B. I and II
C. I, II and III
D. II only
E. III only
6. Which of the following is **NOT** a problem in the construction of index number?
A. Selection of sources of data
B. Definition of the purpose for which index is needed
C. Method of collecting data for index
D. Method of combining the data
E. Unweighted average price index
7. What do Binomial Distribution and Normal Distribution have in common?
A. They are both continuous distributions
B. The random variable for both takes infinite number of values.
C. They both have two parameters
D. They both deal with occurrences in an interval
E. They are both discontinuous analysis tools.
8. Which of the following is an estimator?
A. \bar{x}
B. S
C. P
D. $\bar{x} = 10$

E. $\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$

9. Data can be classified into any of the following **EXCEPT**
- I. Qualitative and Quantitative
 - II. Primary and Secondary
 - III. Continuous and Discrete
 - IV. Ordinal and Non-numeric
- A. I and II
 - B. IV only
 - C. I and III
 - D. II and III
 - E. I, II and III
10. Which of the following is a measure of partition?
- A. Mode
 - B. Mean
 - C. Median
 - D. Standard deviation
 - E. Z – value
11. The semi-interquartile range is also known as
- A. Quartile range
 - B. Interquartile deviation
 - C. Standard deviation
 - D. Standard range
 - E. Variance
12. Which of the following is **NOT** true about coefficient of variation (CV)?
- A. The CV is a useful statistical tool
 - B. The CV is dimensionless
 - C. The CV is a measure of dispersion
 - D. The CV for standard deviation is the mean expressed as a percentage of the standard deviation
 - E. The CV is used not only for comparison purposes but also as a measure of homogeneity
13. The graph of a quadratic function $y = ax^2 + bx + c$ is cap-shaped when
- A. a is positive
 - B. b is positive
 - C. a is negative
 - D. b is negative
 - E. a and b are both positive
14. A necessary condition for a turning point of a function is that the

- A. First derivative is zero
 - B. Second derivative is zero
 - C. First derivative is non-zero
 - D. Second derivative is non-zero
 - E. First derivative is positive
15. What was the original price (in Gh¢) of a gallon of petrol if the price was marked up by 6% and marked down by 3%, resulting in a price of Gh¢ 4.43?

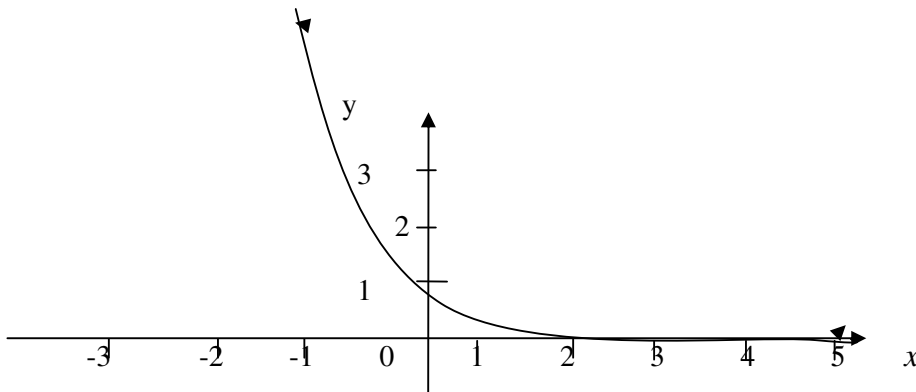
- A. 1.34
- B. 4.13
- C. 4.31
- D. 3.41
- E. 1.43

16. In the following equation $\frac{x}{2} + \frac{2x}{3} + \frac{3x}{4} = 2 - \frac{x}{12}$

The value x is

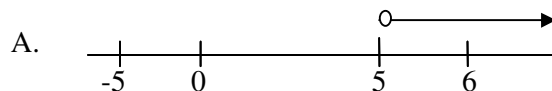
- A. 5
- B. 4
- C. 3
- D. 2
- E. 1

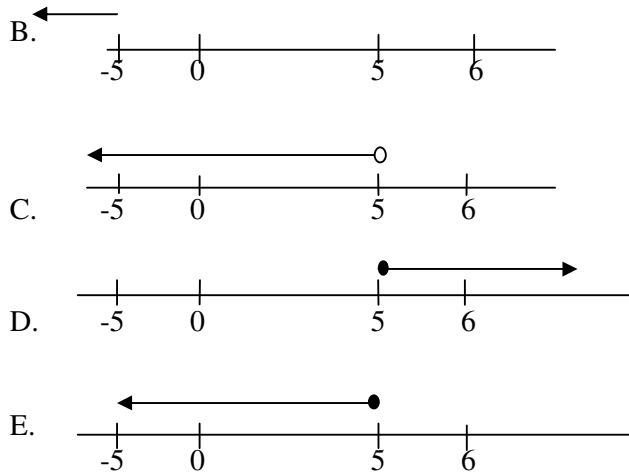
17. The type of function that describes accurately the following graph is



- A. Logarithmic
- B. Exponential
- C. Surdic
- D. Cubic
- E. Quadratic

18. Represent the solution set of the inequality: $3x + 12 \geq 5x + 2$



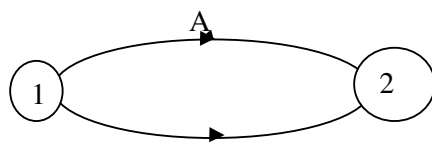


19. At break-even point
- A. Total cost equals total revenue.
 - B. Total cost is greater than total revenue
 - C. Total cost is less than total revenue
 - D. Marginal cost equals marginal revenue
 - E. Product of marginal cost and marginal revenue is 1

20. The sum of the series $243 + 81 + 27 + 9 + \dots$ is
- A. 465.3
 - B. 536.4
 - C. 364.5
 - D. 435.6
 - E. 356.4

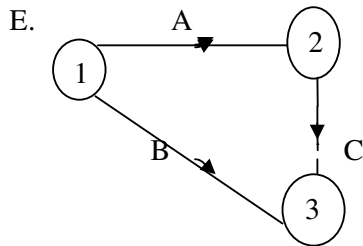
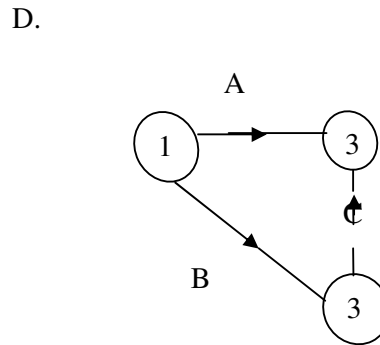
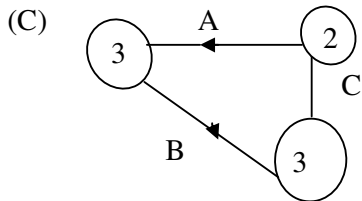
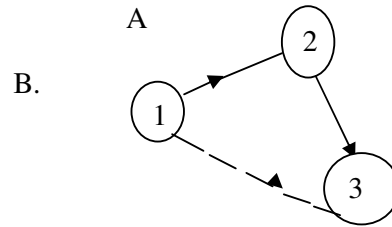
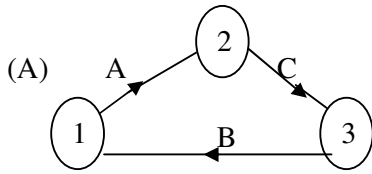
21. Decision-making is important in order to
- A. Make profit for a business
 - B. Solve an identified problem
 - C. Please the customer
 - D. Perform a task
 - E. Please the management

22. When the abnormality in the network diagram below is corrected,



We shall obtain

B



23. Operations Research is a method which assists in making decisions that are
- Subjective and scientific
 - Subjective and objective
 - Objective and scientific
 - Technical and subjective
 - Objective and technical
24. The amount by which the objective function changes as a result of an extra unit of the scarce resource is
- Market price
 - Shadow price
 - Dummy price
 - Slack price
 - Surplus price
25. In a typical transportation problem, the major operation normally carried out on the total cost of shipping products from sources to destinations is
- Optimisation
 - Minimisation
 - Maximisation
 - Reduction
 - Quartisation

INSIGHT

26. If the primal problem of a linear programming problem is a maximising one, the dual problem will be a.....one.
- A. Quadratic
 - B. Minimising
 - C. Maximising
 - D. Exponential
 - E. Logarithmic
27. For an economic order quantity (EOQ), the relationship between the total holding cost and the total ordering cost is
- A. Total holding cost is less than total ordering cost
 - B. Total holding cost is greater than total ordering cost
 - C. Total stock out cost is equal to total ordering cost
 - D. Total holding cost is greater than cost of stock
 - E. Total holding cost is equal to total ordering cost
28. The three motives for holding stock are transactions motives, precautionary motives and..... motives
- A. Conditional
 - B. Official
 - C. Profit
 - D. Speculative
 - E. Integrity
29. If the earliest start time and latest start time of an activity are respectively 6 and 15, then the total float of the activity is
- A. 7
 - B. 8
 - C. 9
 - D. 10
 - E. 11
30. What does it mean to say that a dummy activity is an activity of 'Circumstance'? It means that
- A. The activity is delayed
 - B. The activity consumes a lot of time
 - C. The activity can never finish
 - D. The activity does not consume any time
 - E. The dummy activity is critical.

PART II: SHORT-ANSWER QUESTIONS

(20 Marks)

Write the answer that best completes each of the following questions/statements

INSIGHT

1. The coefficient of determination takes on real values between..... and.....
2. What is the relationship between a time series Y and the four components of T, S, C and R, in a multiplicative model?
3. State the multiplicative law of probability concerning two independent events A and B.
4. One characteristic of the normal distribution is.....
5. A test in which the alternative hypothesis is one directional is called.....
6. The test-statistic for a small sample in hypothesis testing of the mean is.....
7. A population consists of four observations: $\{1, 3, 5, 7\}$ What is the variance?
8. What is the expected value of points in tossing a fair die once?
9. The following are the interest rates offered by a certain bank for the last six months: 13%, 16%, 21%, 15%, 14%, and 17%,

Calculate the appropriate measure of central tendency for the bank interest rates in the last 6 months.
10. When constant cash flows are received regularly forever, the series generated is termed.....
11. The gradient of the straight line given by $7x - 2y + 8 = 0$ is
12. At maximum profit.....is equal to.....
13. If the 3rd term and the 8th term of an Arithmetic Progression are 30 and 55 respectively, then the common difference is.....
14. The variables involved in any Operations Research Technique can be grouped into.....and.....variables.
15. Another name for shadow price in linear programming is.....
16. The two major assumptions in linear programming are.....and.....
17. The time which elapses between ordering and eventual delivery is called.....time
18. Given that the annual demand is 50,000, ordering cost is Gh¢20 per order and holding cost per item is Gh¢ 2 per annum, then the basic economic order quantity is.....

INSIGHT

19. A critical path of a network is the path with.....duration.
20. If an activity duration is 5 days with LFT = 20 and EST = 7, then the total float is.....

SECTION B - Attempt Any Four Questions out of which at Least ONE Must Come from Each SUB-SECTION (50 Marks)

STATISTICS

QUESTION 1

The average annual bonuses paid to a sample of 50 staff of Teleh International Limited last year was ₦500 with standard deviation of ₦65.

You are required to:

- a. Compute a point estimate of the average annual bonus paid to all staff of Teleh International Limited last year. (1 Mark)
- b. Calculate the standard error of annual bonuses. (2 Marks)
- c. Construct a 99% confidence interval for the average annual bonus paid to all staff last year. (4 Marks)
- d. Determine the sample size that will guarantee a margin of error of not more than ₦15 at 95% confidence. (5¹/₂ Marks)
- (Total 12¹/₂ Marks)**

QUESTION 2

A supplier claims that on the average his product has a content of a main ingredient of 45%. A sample of 10 bags of the product were selected at random and the following were the contents of the main ingredient in each bag:

40%, 38%, 48%, 50%, 30%, 43%, 52%, 35%, 32% and 48%.

You are required to test the claim of the supplier at 5% significance level.

(Total 12¹/₂ Marks)

BUSINESS MATHEMATICS

QUESTION 3

- a. Mr. Dozie, a bio-statistician, wanted to know which of the five communities (A, B, C, D and E) the patient came from on one particular day to his hospital.

The information below was obtained:

A	A	C	C	C	B	E	D	E	A
B	D	E	D	A	E	D	C	B	C
C	E	C	C	D	D	C	B	C	A
A	D	D	E	E	A	A	A	C	A
A	C	C	C	C	D	E	B	D	E
B	D	E	B	E	D	E	A	C	B

You are required to:

- Construct a frequency distribution for this data (2¹/₂ Marks)
 - State the community that had the highest number of patients visiting the hospital on that particular day. (1¹/₂ Marks)
 - Draw an ordinary bar chart to summarise the data above (2 Marks)
 - Work out the probability that if a patient was selected at random from Mr. Dozie's hospital, the patient would be from community B. (1 Mark)
- b. An amount of Gh¢10,000 was invested in a business. The business generated net cash flows of Gh¢2000, Gh¢3000, Gh¢7000, Gh¢1000, and Gh¢500 at the end of year 1, 2, 3, 4 and 5 respectively. The cost of capital is assumed to be 12% per annum.

You are required to:

INSIGHT

- i. Calculate the Net Present Value (NPV) for this business (5 Marks)
- ii. Justify the desirability of the business for the five years of operation? (1½ Marks)
- (Total 12½ Marks)

QUESTION 4

For one type of product, it has been established that:

$$\text{Total Cost (in L\$'000): } TC = Q^3 - 6Q^2 + 140Q + 750$$

$$\text{Total revenue (in L\$'000): } TR = -7.5Q^2 + 1400Q$$

where Q is the quantity produced and sold.

You are required to calculate:

- a. The marginal cost and marginal revenue functions in terms of Q and hence the quantity that will maximize profit. (7 Marks)
- b. The point elastic of demand at the point where profits are maximized. (5½ Marks)
- (Total 12½ Marks)

OPERATIONS RESEARCH

QUESTION 5

The Royal Saakry Company has orders to be completed next month for three of its products – Jumping Horse, Flying Horse, and Racing Horse – as given in the table below.

Product	Order (units)
Jumping Horse	4000
Flying Horse	2400
Racing Horse	1000

There are three machines available for the manufacturing operations, and all three can produce each of the products at the same production rate. However, the unit costs of these products vary depending upon the machine used. The unit costs (in Le) of each machine are given in the following table:

Machine	Product		
	Jumping Horse	Flying Horse	Racing Horse
A	12	13	11
B	14	13	15
C	11	10	13

INSIGHT

Furthermore, it is known that capacity for next month for machines B and C is 3000 unit each and for machine A is 1400 units.

You are required to:

- a. Use the Least Cost Method to determine the minimum cost production schedule for the products and machines. (11 Marks)
- b. Determine the minimum cost (1½ Marks)
(Total 12½ Marks)

QUESTION 6

Pharmco Limited produces three drugs: A, B and C, and can sell these drugs at unit prices of Gh¢80, Gh¢70, and Gh¢90 respectively. Producing a unit of drug A requires 1 hour of labour and 2mg of a special chemical. Producing a unit of drug B requires 2 hours of labour and 1mg of the special chemical producing a unit of drug C requires 1 hour of labour and 3 mg of the special chemical.

A total of 4000 hours of labour and 4500mg of the special chemical are available.

You are required to:

- a. Formulate the primal LP for Pharmco Limited. (2½ Marks)
- b. Formulate the dual LP for Pharmco Limited and hence use graphical method to determine the maximum sales revenue for Pharmco Limited. (10 Marks)
(Total 12½ Marks)

SUGGESTED SOLUTION

SECTION A

INSIGHT

PART I MULTIPLE-CHOICE QUESTIONS

1. B
2. E
3. A
4. D
5. B
6. E
7. C
8. E
9. B
10. C
11. B
12. D
13. C
14. A
15. C
16. E
17. B
18. E
19. A
20. C
21. B
22. E
23. C
24. B

25. B
26. B
27. E
28. D
29. C
30. D

MCQ Tutorials

15. $4.43 = 1.06x(0.97)$

$$\therefore x = \frac{4.43}{(1.06)(0.97)} = 4.31 \quad (\text{C})$$

16. $\frac{x}{2} + \frac{2x}{3} + \frac{3x}{4} = 2 - \frac{x}{12}$

$$6x + 8x + 9x = 24 - x \quad (\text{E})$$

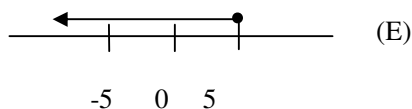
$$24x = 24$$

$$x = 1$$

18. $3x + 12 \geq 5x + 2$

$$10 \geq 2x$$

$$2x \leq 10 \Rightarrow x \leq 5$$



20. This is sum to infinity of a G.P

$$S_{\infty} = \frac{a}{1-r}, a = 243, r = \frac{81}{243} = \frac{1}{3}$$

$$\therefore S_{\infty} = \frac{243}{1 - \frac{1}{3}} = \frac{243}{\frac{2}{3}} = 364.5 \quad (\text{C})$$

29. Total Float = $LST - EST$
 $= 15 - 6$
 $= 9$

EXAMINER'S COMMENT

The Multiple Choice Questions were well spread taking the weights of each section into consideration. The performances were good here.

SHORT-ANSWER QUESTIONS - SOLUTIONS

- 0 and 1 (in that order)
- $Y = T \times S \times C \times R$ (TSCR, T. S. C. R)
- $P(A \cap B) = P(A) \cdot P(B)$
- any from : bell shaped, symmetrical, total area under the curve is one, deals with continuous random variable, coefficient of skewness is zero.
- one-tailed test or one – sided test
- $t_{cal} = \frac{\bar{x} - \mu}{\frac{S}{\sqrt{n}}}$
- 5
- $7/2$ or $3\frac{1}{2}$ or 3.5
- 16%
- Perpetuity or perpetual annuity
- $7/2$ or $3\frac{1}{2}$ or 3.5
- Marginal cost, marginal revenue (or Vice Versa)
- 5
- controllable, uncontrollable (or Vice Versa)

15. Dual price
16. Linearity, Non negativity (or Vice Versa)
17. Lead
18. 1000
19. Longest
20. 8 days

Short Answer Questions Tutorials

$$\begin{aligned} 7. \quad \text{Var}(x) &= \frac{\sum x^2 - N\mu^2}{N} \\ &= \frac{84 - 4(4)^2}{4} \\ &= 5 \end{aligned}$$

or
$$\frac{\sum x^2}{N} - \left(\frac{\sum x}{N} \right)^2$$

$$\begin{aligned} &\frac{84}{4} - \left(\frac{16}{4} \right)^2 \\ &= 21 - 16 \\ &= 5 \end{aligned}$$

$$\begin{aligned} 8. \quad E(X) &= 1\left(\frac{1}{6}\right) + 2\left(\frac{1}{6}\right) + 3\left(\frac{1}{6}\right) + 4\left(\frac{1}{6}\right) + 5\left(\frac{1}{6}\right) + 6\left(\frac{1}{6}\right) \\ &= \frac{21}{6} = \frac{7}{2} \text{ or } 3\frac{1}{2} \text{ or } 3.5 \end{aligned}$$

$$9. \quad \frac{13\% + 16\% + 21\% + 15\% + 14\% + 17\%}{6} = 16\%$$

$$11. \quad 7x - 2y + 8$$

$$\Rightarrow 2y = 7x + 8$$

$$y = \frac{7}{2}x + 4 \therefore \text{gradient} = \frac{7}{2} \text{ or } 3\frac{1}{2} \text{ or } 3.5$$

13. Let a be the 1st term & d the common difference

$$a + 2d = 30 \dots (i)$$

$$a + 7d = 55 \dots (ii)$$

$$(ii) - (i) \text{ gives } 5d = 25, 5$$

18. $EOQ = \sqrt{\frac{2cd}{h}}$

$$= \sqrt{\frac{2 \times 20 \times 50000}{2}}$$

$$= 1000$$

20. $Total\ float = LFT - EST - D$

$$= 20 - 7 - 5$$

$$= 8 \text{ days}$$

EXAMINER'S COMMENT

This is an area which tests knowledge of the topics. The questions are very good and well spread over the syllabus. Candidates' performances here were not very good.

SOLUTION 1

- (a) Point estimate is $\mu = Gh \neq 500$

- (b) Standard error is $\sigma_{\bar{x}} = \frac{s}{\sqrt{n}}$

$$= \frac{65}{\sqrt{50}}$$

$$= 9.1924$$

- (c) for 99% Confidence Interval, $Z = 2.58$

$$\text{C.I} \quad : \quad \mu = \bar{x} \pm z \frac{s}{\sqrt{n}}$$

$$99\% \text{C.I} \quad : \quad 500 \pm 2.58(9.1924)$$

$$\text{i.e} \quad 500 \pm 23.72$$

$$\text{i.e} \quad 476.28 \leq \mu \leq 523.72$$

(d) Maximum error : $e = 15$

For 95% C. I, $z = 1.96$

Now

$$e = z \frac{s}{\sqrt{n}}$$

$$\text{or} \quad n = \left(\frac{zs}{e} \right)^2$$

$$= \left(\frac{1.96 \times 65}{15} \right)^2$$

$$= 72.14 \quad (1)$$

i.e the required sample size is 73

EXAMINERS' COMMENT

The question tests candidates' knowledge of computation of point and interval estimates including the calculation of confidence interval. Less than 20% of the candidates attempted this question and none of them scored a pass mark. Candidates seem not to understand the knowledge of the calculation of point and interval estimates. Candidates are advised to take every aspect of the syllabus and study well the content.

SOLUTION 2

Let X be the content of the main ingredient in % age.

Hytheses:

$$H_o : \mu = 45\%$$

$$H_1 : \mu \neq 45\%$$

Since the sample size is small and population standard deviation is unknown, student's t distribution is used

$$\text{i.e } t_{cal} = \frac{\bar{x} - \mu}{s/\sqrt{n}}$$

X	X^2
40	1600
38	1444
48	2304
50	2500
30	900
43	1849
52	2704
43	1849
52	2704
35	1225
32	1024
48	2304
416 (½)	17854

$$\bar{x} = \frac{416}{10} = 41.6$$

$$s = \sqrt{\frac{\sum X^2 - n\bar{x}^2}{n-1}}$$

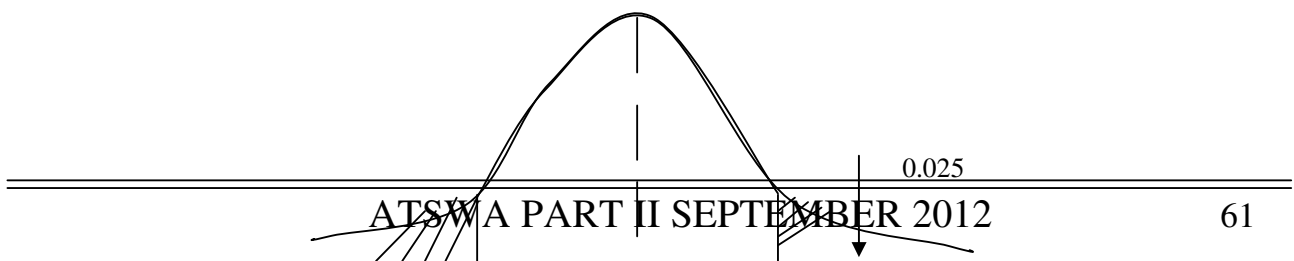
$$= \sqrt{\frac{17854 - 10(41.6^2)}{10-1}}$$

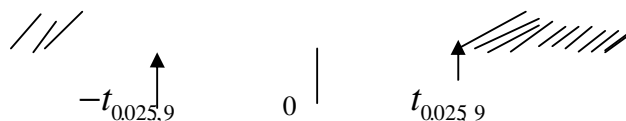
$$= 7.8$$

$$\therefore t_{cal} = \frac{41.6 - 4.5}{7.8/\sqrt{10}}$$

$$-1.3784$$

Critical region





From table, $t_{0.025,9} = 2.262$

Since $|t_{Cal}| < |t_{0.025,9}|$, we cannot reject H_0 .

Hence there is no evidence at 5% significance level to contradict the claim of the supplier.

ALITER FOR s

X	$X - \bar{X}$	$(X - \bar{X})^2$
40	-1.6	2.56
38	-3.6	12.96
48	6.4	40.96
50	8.4	70.56
30	-11.6	134.56
52	10.4	108.16
35	-6.6	43.56
32	-9.6	43.56
48	6.4	40.96
416(1/2)		548.4

$$\bar{x} = \frac{416}{10} = 41.6$$

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

$$= \frac{548.4}{9}$$

$$= 7.8$$

EXAMINER'S COMMENT

The question tests the Candidates knowledge on simple hypothesis testing using the student's t distribution. About 30% of the candidates attempted the question while about 8% scored above average. The question is not ambiguous and simple hence the performance of the candidates is disappointing. Candidates are advised to take the content of Quantitative Analysis in the Syllabus very serious and prepare well for future examinations.

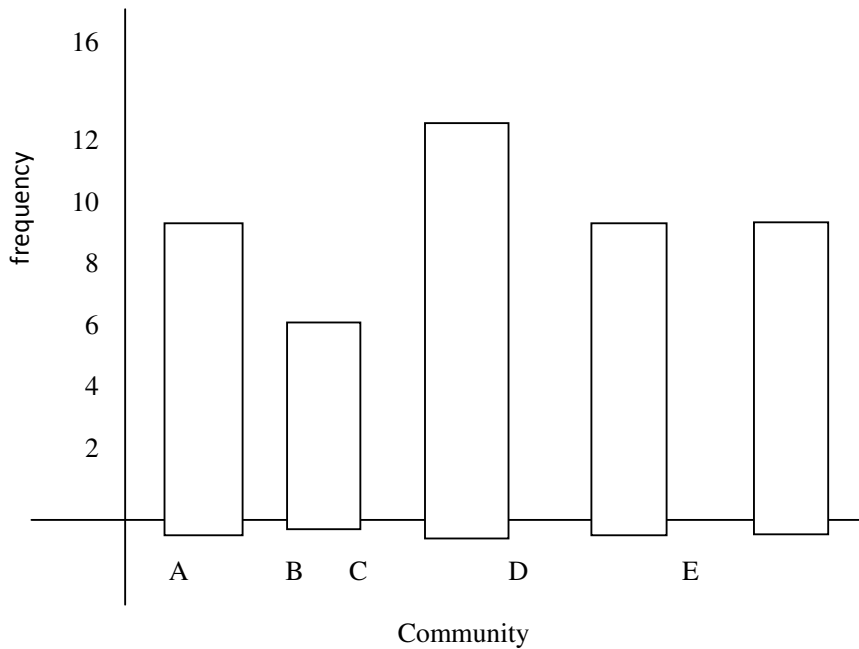
SOLUTION 3

(a)(i)

Community	Tally	Frequency
A		12 (½)
B		8 (½)
C		16 (½)
D		12 (½)
E		12 (½)

(i) Community C

(iii)



(iv) Prob (patient comes from community B) = $\frac{8}{60} = \frac{2}{15}$ or 0.133

3b

INSIGHT

Time	Net Cash Flow	Discount factor	Present Value
0	-10000	1	-10000
1	2000	0.89286	1785.72
2	3000	0.7919	2391.57
3	7000	0.71178	4982.46
4	1000	0.63552	635.52
5	500	0.56743	283.72
			78.99

- (i) Net Present Value (NPV) = Gh ₵ 78.99
- (ii) The business is desirable since the NPV is positive

ALITER

$$\begin{aligned} NPV &= \sum \frac{A_i}{(1+r)^n} - 10000, \text{ where } r = 12\% = 0.12 \\ &= \frac{2000}{1.12} + \frac{3000}{(1.12)^2} + \frac{7000}{(1.12)^3} + \frac{1000}{(1.12)^4} + \frac{500}{(1.12)^5} - 10000 \\ &= 1785.72 + 2391.57 + 4982.46 + 46 + 635.52 + 283.72 - 10000 \\ &= \text{Gh } \text{₵} 78.99 \end{aligned}$$

EXAMINER'S COMMENT

The question tests the candidates' knowledge and understanding of the presentation of data using bar charts obtained from frequency table. Most of the candidates did well in this question. Also direct calculation and interpretation of the Net Present Value (NPV) are tested. Candidates were unable to obtain the discounting factors correctly. 99.5% of the candidates attempted this question with 70% scoring a pass mark in Part A, while majority of the Candidates performed poorly in Part B. Candidates are advised to study and understand the determination of the discounting factor in preparing for future examinations.

SOLUTION 4

Total cost $TC = Q^3 - 6Q^2 + 140Q + 750$

$$\text{Total Revenue } TR = -7.5Q^2 + 1400Q$$

$$\begin{aligned} \text{(a) Marginal cost : } MC &= \frac{dTC}{dQ} \\ &= 3Q^2 - 12Q + 140 \end{aligned}$$

For maximum profit, $MC = MR$

$$\text{i.e. } 3Q^2 - 12Q + 140 = -15Q + 1400$$

$$3Q^2 + 3Q - 1260 = 0$$

$$Q = \frac{-3 \pm \sqrt{3^2 - 4(3)(-1260)}}{2(3)}$$

$$= 20 \text{ or } -21$$

Since Q cannot be negative, $Q = 20$

$$\text{(b) Price } P = \frac{TR}{Q} = -7.5Q + 1400$$

$$\frac{dp}{dQ} = -7.5$$

$$\text{at } Q=20, \quad p = -7.5(20) + 1400 = 1250$$

$$\begin{aligned} \therefore PED &= \frac{p}{Q} \left/ \frac{dp}{dQ} \right. = \frac{1250}{20} \left/ (-7.5) \right. \quad (1) \\ &= -8.33 \end{aligned}$$

EXAMINER'S COMMENT

The question tests candidates' knowledge of marginal cost and marginal revenue to obtain the maximum profit. 80% of the Candidates attempted the question but the performance was poor with only 20% doing well. The pitfall is candidates' inability to differentiate between Marginal cost and Total costs. Candidates are advised to understand the concept of Total Cost and Marginal Cost in preparing for future examinations.

SOLUTION 5

(a)

INSIGHT

Destination Source	J	F	R	Total
A	400 13	13	1000 11	1400 1000
B	3000 14	13	15	3000
C	600 11	2400 10	13	3000 600
Total	4000	2400	1000	7400

~~3400~~

~~3000~~

b. Minimum total cost = $400 \times 12 + 1000 \times 11 + 3000 \times 14 + 600 \times 11 + 2400 \times 10$
 = Gh ₵ 88400

EXAMINER'S COMMENT

The question tests the candidates' knowledge of the calculation of the least cost method in determinant of transportation cost. 91% of the candidates attempted the question with 73% pass. Candidates are advised to study and understand the concept of transportation model in Quantitative Analysis in preparing for future examination.

SOLUTION 6

(a) Let x_1 represent the no of units of drug A

Let x_2 represent the no of units of drug B

Let x_3 represent the no of units of drug C

and Z represent the total revenue.

Then, the primal LP is :

(1) Maximise : $Z = 80x_1 + 70x_2 + 90x_3$

Subject to:

$$x_1 + 2x_2 + x_3 \leq 4000(\text{labour})$$

INSIGHT

$$2x_1 + x_2 + 3x_3 \leq 4500(\text{Chemical})$$

$$x_1, x_2, x_3 \geq 0(\text{Non - negatives})$$

(b) Let x and y be the new variables in the dual problem. Then the dual problem is :

(1) Minimise : $Z = 4000x + 4500y$

Subject to:

$$x + 2y \geq 80$$

$$2x + y \geq 70$$

$$x + 3y \geq 90$$

$$x, y \geq 0$$

Points on graph

$$L_1 : x + 2y = 80 \Rightarrow x = 0, y = 40 (0,40)$$

$$y = 0, x = 80 (80,0)$$

$$L_2 : 2x + y = 70 \Rightarrow x = 0, y = 70 (0,70)$$

$$y = 0, x = 35 (35,0)$$

$$L_3 : x + 3y = 90 \Rightarrow x = 0, y = 90 (0,90)$$

EXAMINERS' COMMENT

The question tests the Candidates' knowledge of forming dual problem from the primal in a Linear Programming problem. 90% of candidates attempted but 10% passed it.

Most of the Candidates failed to even obtain the primal correctly. The commonest pitfall is the Candidates' inability to formulate Linear Programming problem correctly especially as it relates to the dual of primal. Candidates are advised to study and understand any aspect of Linear programming problem in preparation for future examinations.

AT/122/PII.8

Examination No:.....

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS – SEPTEMBER 2012
INFORMATION TECHNOLOGY**

Time Allowed: 3 Hours

Insert your Examination Number in the space provided above

SECTION A (ATTEMPT ALL QUESTIONS)

PART 1 MULTIPLE CHOICE QUESTIONS (30 Marks)

Write ONLY the alphabet (A, B, C, D or E) that corresponds to the correct option in each of the following questions.

1. Advantages of prototyping include:
 - I – The user is able to judge the proposed system before things get too far to be changed
 - II – Making it more economical for users to get custom-built Application Software
 - III – A prototype does not necessarily have to be written in the language of the system it is developing
 - A. I only
 - B. II only
 - C. III only
 - D. I, II and III
 - E. II and III
2. The full meaning of the acronym SSADM is
 - A. Structured System Analysis and Design Methodology
 - B. Structured Software Analysis and Design Methodology
 - C. Structured System Analysis and Design Methods
 - D. Sufficient System Analysis and Design Methods
 - E. Sufficient Software Analysis and Design Manual
3. Responsibilities of a System Analyst are the following **EXCEPT**
 - A. System Analysis

- B. System Design
 - C. System Specifications
 - D. System Testing
 - E. Gives approval for project costing and evaluation
4. Personnel cost of a proposed system include the following **EXCEPT**
- A. Staff training
 - B. Computer and its peripherals
 - C. Staff recruitment/relocation
 - D. Staff salaries and pensions
 - E. Staff welfare
5. The methods of evaluating a capital project in cost-benefit analysis are:
- I - Payback period
 - II - Accounting Rate of Return
 - III - Discounted Cash Flow (DCF)
- A. I only
 - B. II only
 - C. III only
 - D. II and III
 - E. I, II, and III
6. An interface between application program and the hardware system is known as
- A. Operating system
 - B. System software
 - C. Application software
 - D. Computer system
 - E. Application system
7. Which of the following is **NOT** a type of systems software?
- A. Language processor
 - B. Operating system
 - C. Hardware resources
 - D. Utility routines
 - E. Editors
8. Which of the following is **NOT** a function of an operating system?
- A. Resources sharing
 - B. Memory management
 - C. Typing of text
 - D. Input and output handling
 - E. Error handling

9. A program that converts a user's code into the machine code is known as a/an
- A. Language processor
 - B. Utility routines
 - C. Loaders
 - D. Editor
 - E. Operating system
10. Multi-user Application requires the following **EXCEPT**
- A. Terminals Controller
 - B. Private leased communication lines
 - C. Powerful processor
 - D. Large memory capacity
 - E. Minimum of fifty users
11. Devices such as MODEM switches and routers that perform a variety of control and support functions in a telecommunication network are called
- A. Terminals
 - B. Telecommunication channels
 - C. Transmission servers
 - D. Telecommunication processors
 - E. Servers
12. The central computer in a star configuration that handles the data communications between autonomous local computers may act as a
- A. Router
 - B. Switch
 - C. Multiplexor
 - D. Token
 - E. Gateway
13. With broadband channels, many messages are sent simultaneously at different frequencies. The role of the multiplexor is to assemble and decompose these. This is known as..... multiplexing
- A. Frequency division
 - B. Time division
 - C. Statistical time division
 - D. Statistical
 - E. Statistical time
14. Internet messaging between two friends is an example of.....transmission mode.
- A. Full duplex
 - B. Half duplex
 - C. Simplex
 - D. Serial
 - E. Asynchronous

15. Which of the following is **TRUE** of a file server?
- A. It is a high capacity disk storage device that is attached to the network
 - B. It is one of the clients in a client-server arrangement
 - C. It accesses its data from the client
 - D. It cannot be accessed by all computers in the network
 - E. Can only serve few terminals within the network
16. The computer system consists of hardware, software, data and
- A. User
 - B. System software
 - C. Application programme
 - D. Information
 - E. Operating system
17. Which of these is **NOT** a characteristic of RAM?
- A. Cannot be erased
 - B. Loses contents when the power is switched off
 - C. Stores data downloaded from internet
 - D. Holds system commands
 - E. Hold on the file
18. Which of the following is **NOT** an output devices?
- A. Keyboard
 - B. Monitor
 - C. Printer
 - D. Speaker
 - E. Diskette
19. Which of these is **NOT** an auxillary storage device?
- A. RAM
 - B. DVD drive
 - C. CD-ROM
 - D. Diskette
 - E. Flash
20. The first Generation Computer manufactured from the middle of 1940 to middle 1950 used the technology to the construction of central processing unit (CPU).
- A. Vacuum tubes
 - B. Hard tubes
 - C. Micro chips
 - D. Very large integrated circuit
 - E. Integrated circuit
21. The following are various versions of Windows **EXCEPT**
- A. Windows 1.0
 - B. Windows 98

- C. Windows Vista
 - D. Windows ED
 - E. Window XP
22. Which of the following is an application software?
- A. Norton utilities
 - B. Ms-DOS
 - C. Device driver
 - D. Microsoft office
 - E. Windows vista
23. The following are input devices **EXCEPT**
- A. Keyboard
 - B. Mouse
 - C. Scanner
 - D. Printer
 - E. Light pen
24. MODEMS convert digital signals to
- A. Partial Analog frequencies
 - B. Data encryption
 - C. Analog frequencies
 - D. Data frequencies
 - E. Analog encryption
25. When interacting with Ms-DOS windows, you discover the following **EXCEPT**
- A. My documents
 - B. My load
 - C. Desktop
 - D. Control panel
 - E. Menu bar
26. A multifunction integrated computer based system that allows many office activities to be performed in an electronic mode describes
- A. A multimedia office
 - B. An electro-mechanical office
 - C. An automated office
 - D. A facsimile office
 - E. An e-mail office
27. A technology which allows office employees to do office work from their homes is known as
- A. Voice mail
 - B. Facsimile equipment
 - C. Teleconferencing
 - D. Telecommuting
 - E. Micrographics

28. A technology that moves computing and data away from desktop and portable PCs into large data centres describes
- A. Cloud computing
 - B. Forensic computing
 - C. Software as a service
 - D. Google applications
 - E. Microsoft online services
29. Analysis of information contained within and created with computer systems and computing devices in the interest of figuring out what happened, how it happened and who was involved is known as
- A. Cloud computing
 - B. Computer forensic
 - C. Documentation of evidence
 - D. Proof of evidence
 - E. Computer analysis
30. A deposit and withdrawal device used in Banking is known as
- A. Electronic Fund Transfer
 - B. Automated Teller Machine
 - C. Bankers Automated Clearing Service
 - D. Electronic Document Transfer
 - E. Electronic Billing System

SECTION A

PART II- SHORT-ANSWER QUESTIONS

(20 Marks)

Write the answers that best complete the following questions/statements

1. A hand held pointing device used in clicking options or making selections on the computer describes a
2. Random Access Memory and Read Only Memory make up the.....storage of the computer.
3. The physical part of a Computer System and its associated devices is known as
4. Conversion of the old data file into the form required by the new system is
5. The process used in ensuring that the system works accurately and efficiently before live operations commence is known as

INSIGHT

6. A fourth generation language (4GL) development tool that is used to allow users to quickly produce a simulation of the output required for a completed system is known as
7. Power Point is apackage
8. Outlook is used forand.....in Microsoft office package.
9. Scanner converts photos into.....files.
10. Any method of interaction between a user and a computer system based on graphical displaying is known as graphical.....
11. In a telecommunication network,.....is a port switching communications processor.
12. A process that allows jobs to be entered remotely from a computer or terminal and transmitted to the computer is called.....
13. In data transmission, the process of transmitting characters singly, at will and at irregular intervals is known as.....
14. The complete set of instructions along with manual which enables computer system users to use the computer system to perform some task is known as
15. Application packages can be acquired by asking software developing house to develop one for your organization, develop in-house or through
16. Programs that facilitate the optimal use of the hardware system and provides suitable environment for the writing, editing, debugging, testing and running of user's programs is known as
17. The process of starting the computer system is known as
18. A security measure built into the program with the powers of judgement so that incorrect items of data are detected and reported is known as
19. A sequence of characters which must be presented to a computer system before it will allow access to the system or parts of that system is known as
20. A health problem among Information Technology workers which affects muscles, tendons and ligaments especially in the upper limbs is known as

SECTION B - Attempt Any FOUR Questions

(50 Marks)

QUESTION 1

- a. State **TWO** types of Computer Service Bureau (2 Marks)

- b. Identify **SIX** different services available from Computer Service Bureau (6 Marks)
- c. Give **THREE** reasons for using Computer Service Bureau. (4½ Marks)
(Total 12½ Marks)

QUESTION 2

- a. Define Electronic business (E-Business). (2½ Marks)
- b. Identify and describe **FIVE** benefits of E-business. (10 Marks)
(Total 12½ Marks)

QUESTION 3

- a. Differentiate between Data and Information giving **TWO** examples of each. (4 Marks)
- b. Identify **SEVEN** processing activities performed by a computer system. (7 Marks)
- c. What is a Bit? (1½ Marks)
(Total 12½ Marks)

QUESTION 4

- a. Define an Operating System. (1½ Marks)
- b. Itemise **SIX** functions of Operating System. (6 Marks)
- c. Give **TWO** main components of an Operating System? (2 Marks)
- d. List any **THREE** examples of Operating Systems. (3 Marks)
(Total 12½ Marks)

QUESTION 5

- a. Explain “Application Package”. (3½ Marks)
- b. List **SIX** advantages and **THREE** disadvantages of Integrated Software Packages. (9 Marks)
(Total 12½ Marks)

QUESTION 6

- a. What is a computer network? (2½ Marks)
- b. i. What are the **TWO** basic types of network?
ii. Briefly describe the structure of each of (bi) above

INSIGHT

- iii. What do the **TWO** types of network have in common?
iv. What makes them different? (7 Marks)
- c. Enumerate **THREE** benefits that can be derived from a computer network. (3 Marks)
- (Total 12½ Marks)

SUGGESTED SOLUTION

SECTION A

PART I MULTIPLE-CHOICE QUESTIONS

(30 Marks)

1. D
2. A
3. E
4. B
5. E
6. A
7. C
8. C
9. A
10. E
11. D
12. B
13. A
14. B
15. A
16. A
17. A
18. A
19. A

- 20. A
- 21. D
- 22. D
- 23. D
- 24. C
- 25. B
- 26. C
- 27. D
- 28. A
- 29. B
- 30. B

EXAMINER'S COMMENT

This section of the question paper consists of thirty questions which cover many parts of the syllabus, and the selection was balanced.

About 60% of the candidates scored above 50% of the allocated marks. The performance of the students is highly encouraging.

SHORT-ANSWER SOLUTIONS

- 1. Mouse
- 2. Primary/Main storage/Internal storage
- 3. Hardware
- 4. File Conversion
- 5. System Testing
- 6. Rapid Applications Development (RAD)
- 7. Presentation
- 8. E-mail and Scheduling
- 9. Digital

10. User Interface
11. Hub
12. Remote Job Entry (RJE)
13. Asynchronous Transmission
14. Documentation
15. Off-the-shelf
16. System Software
17. Booting
18. Validation
19. Password
20. Repetitive Stress Injuries.

EXAMINER'S COMMENT

This section of the question paper consists of twenty questions which cover substantial part of the syllabus. About 40% of the candidates scored over 50% of the allocated marks. The performance is poor. The major pitfall is that many candidates could not give exact short answers as requested. Candidates are advised to read widely in order to master the technical Information Technology terms and concepts.

SUGGESTED SOLUTIONS

SECTION B

- (a) Types of Computer Services Bureau include:
- i. Companies that use their systems to give computer services to clients.
 - ii. Companies that provide services to client by using the clients systems.
- (b) Services offered by computer service bureau include:
- i. Data preparation or conversion:- This may be required when changing from one system of operation to another.
 - ii. Systems Development:- This entails a thorough study of an existing system to ascertain how it works, the reasons why it works the way it does, and preparing a document that details the specifications of a proposed new system.
 - iii. Programming:- Coding a program to answer user needs and testing it to ensure it works as desired.
 - iv. Hiring out Computer time:- Entails the running of jobs for clients using clients' own data and programs.
 - v. Do-It-Yourself services:- Where clients staff use the bureau's facilities themselves, usually during peak periods.
 - vi. Training of client's staff
 - vii. Providing space for clients who have challenges with their computer systems.
 - viii. Provision of Computer networking services to clients.
 - ix. Maintenance of client's system
 - x. Backup of client's software/Data
- (c) Reasons for using Computer Service Bureaux
- i. To obtain valuable initial experience of computer processing prior to acquiring own computer
 - ii. To use as a Stand-by arrangement in case of break-down of in-house computer.
 - iii. For use during peak processing periods.
 - iv. To avoid the financial and administrative implications of ownership and operating an in-house computer.

- v. Insufficient workload to justify the installation of in-house computer.
- vi. To obtain the benefit of computer power at reasonable cost.

EXAMINER'S COMMENT

This question tests candidates understanding on the concept of Computer Services Bureaux. The question demands for the types of Computer Bureaux and the different services rendered by them.

80% of the candidates attempted this question. The performance was encouraging as indicated by the marks scored by the candidates. Over 70% of the candidates that attempted the question scored over 50% of the allocated marks.

Many candidates demonstrated good mastery in the solution presented. Candidates are advised to keep up the understanding of the syllabus in future examinations.

SOLUTION 2

- (a) E-business is the transformation of key business processes through the use of internet technologies.
- (b) Benefits of e-business:
 - i. Cost reduction in procurement and reduced headcount needed to handle Consumer and business enquiries. Cost of Sales and Promotion may be reduced and lower prices passed on to customers.
 - ii. Capability:- May be able to increase penetration in new countries and may help reduce the amount of goods stored.
 - iii. Communication to customers can be improved with updates of product or services information.
 - iv. Control:- The Website can be used to monitor interest in products or services from customers.
 - v. Customer Service:- Many basic enquiries about products can be dealt with on the website. Opening times (For stores or offices) and special offers can be promoted. This may reduce the number of phone enquiries. They can use the system to track delivery and manage inventory better through reducing time for ordering.
 - vi. Competitive Advantage:- Will be dependent on the use of e-commerce by competitors.

EXAMINER'S COMMENT

This question tests candidates' knowledge on e-business which is a recent development in Information Technology. The question demands for the definition and benefits of e-business.

Over 98% of the candidates' attempted the question and the performance was good. Candidates are advised to note the activities involved in both the manual and electronic data processing.

SOLUTION 3

- (a) Data are raw facts and figures which require processing. It can be described as Unprocessed Information.

Examples include:

- Names of Students in a class
- List of employees in an organisation

While information can be described as processed data which is meaningful. Examples include:

- Audited account of a Company for a particular period.
- Number of employees in an Organisation.

- (b) Seven processing activities in a computer include the following:

- i. Calculating/Performing Arithmetic Operations
- ii. Editing
- iii. Storing
- iv. Retrieving
- v. Transcribing/Recording
- vi. Sorting
- vii. Summarising
- viii. Comparison

- (c) A bit is a single binary digit 0 or 1 i.e. the smallest unit of data representation on the computer.

EXAMINER'S COMMENT

This question tests candidates' knowledge on the fundamentals of data processing. It demands for the difference between data and information and the activities involved in data processing.

Over 90% of the candidates attempted the question and the performance was good. Candidates are advised to note the activities involved in both the manual and electronic data processing.

SOLUTION 4

- (a) An Operating System is the collection of programs that manage the computer-based Management Information System resources in the best manner possible.

Functions of Operating Systems include:

(b)

- i. Resources Sharing
- ii. Provision of a Virtual machine
- iii. Input and Output (I/O) handling
- iv. Memory Management
- v. Filing System
- vi. Protection and Error handling
- vii. Program Control
- viii. Initial Set-up of the Computer System
- ix. Process Management

(c) Main Components of Operating Systems are:

- i. A supervisor
- ii. A command language translator
- iii. An Input/Output Control System
- iv. A Librarian
- v. Kernel or Neucleus

(d) Examples of Operating Systems are

- i. DOS
- ii. WINDOWS
- iii. OS/2

- iv. UNIX
- v. MVS
- vi. Novell's Netware

EXAMINER'S COMMENT

The question tests the candidates' knowledge on the concept of computer Operating System. It demands for the definition, types, functions and components of an Operating System.

Over 80% of the candidates attempted this question and the performance was good. The major pitfall was that many candidates did not know the main components of the Operating System and different examples of Operating Systems.

These are vital issues in Operating System which students are advice to note.

SOLUTION 5

- (a) Application Software are also called application packages. These are Pre-written Computer Programs which are widely used for specific applications in order to avoid unnecessary duplication of similar programs by many users.
- (b) Advantages of Integrated Software Package include:
 - i. It saves cost as several software packages are bundled into one.
 - ii. It allows the user to make use of any package without leaving the software.
 - iii. it is well documented with easy to follow user manual.
 - iv. All the packages within the software are being developed by the same experts hence, it has a very high quality.
 - v. Update on the integrated software package is done once on all the software constituting the integrated software package.
 - vi. It is well tested so that end-user can start to use it immediately after purchase.
 - vii. Since they are off-the-shelf packages they can be easily purchased.

DISADVANTAGES

- i. The end-user will dependant on the manufacturer or Vendor in case of any serious trouble-shooting or maintenance.
- ii. It produces standardized solution which may not be well suited to individual user.
- iii. It may not have some special features required by the end-user.

- iv. Developer may be out of business; as a result it can affect the maintenance of the package.

EXAMINER'S COMMENT

The question tests candidates' knowledge on Application packages and Integrated packages. It demands for the definition of Application Packages and the advantages and disadvantages of Integrated packages.

40% of the candidates attempted this question and the performance was poor. The major pitfalls were that many candidates read integrated packages as Ordinary Application packages. The advantages and disadvantages given are for application packages.

Students are advised to note the differences between application packages and Integrated Software.

SOLUTION 6

- (a) Computer Network is a combination of devices or nodes (computers and communication devices on network), connected to each other through one of the communications channels.

(b)

- i. The two basic types of Computer networks are

- Local Area Network (LAN)
- Wide Area Network (WAN)

- ii. Local Area Network (LAN):- This is a network that connects computers and other information processing devices within a limited physical area such as an office, classroom, a building etc.

Wide Area Network (WAN):- This is a network that crosses organisational boundaries, or in case of a multisite organisation, it reaches outside the immediate environment of local offices. The area of coverage is not limited.

- iii. Facilities common to LAN and WAN include:

- often both types of network use the same layout or topology;
- the same types of protocols for signal transmission and reception;
- computer telecommunication channels

- and telecommunication software.
- Sharing of Computer Resources e.g. Data

- iv. The difference between the two is the distance covered by each.

- (c) The benefits of a network include:
- The provision of local facilities without loss of central control.
 - Sharing of resources such as file servers, printers, staff etc.
 - Even distribution of work, processing loads etc.
 - Sharing of risks and initial support
 - Improved and more economic communication facilities.

EXAMINER'S COMMENT

The question tests candidates' knowledge on the concept of computer network. It demands for the types, structures, similarity and differences among networks.

Over 80% of the candidates attempted this question and the performance was fair. Over 40% of the candidates scored over 50% of the allocated mark.

The major pitfalls are the inabilities of the students to give the similarities and differences between LAN and WAN. Also many students could not give valid benefits of a network.

Computer network is a major concept in Information Technology and Students are advised to read it widely.