

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 OBVIOUS 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.

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/151/PII.5

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME
PART II EXAMINATION - SEPTEMBER 2015
PRINCIPLES & PRACTICE OF FINANCIAL ACCOUNTING
Time Allowed: 3 Hours**

Section A: PART I MULTIPLE-CHOICE QUESTIONS (30 MARKS)

ATTEMPT ALL QUESTIONS

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

1. VAT liability arises in the books of an enterprise when
 - A. Recoverable input VAT exceeds recoverable output VAT
 - B. Recoverable output VAT exceeds recoverable input VAT
 - C. Recoverable output VAT is nil
 - D. Recoverable input VAT and Recoverable output VAT are equal
 - E. Recoverable input VAT is nil

2. The process of allocating the cost of an intangible asset over its beneficial period is
 - A. Depletion
 - B. Depreciation
 - C. Wear and tear
 - D. Amortisation
 - E. Diminution

Use the following information to answer questions 3 and 4

The following information was extracted from the books of Wamag Enterprises:

	₦
Purchases	270,000

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Sales	360,000
Closing inventory	45,000

Gross profit is 25% on cost of goods sold.

3. Calculate the opening inventory
- A. ~~₦~~45,000
 - B. ~~₦~~ 48,000
 - C. ~~₦~~ 63,000
 - D. ~~₦~~ 65,000
 - E. ~~₦~~ 72,000
4. Calculate the gross profit
- A. ~~₦~~65,000
 - B. ~~₦~~68,000
 - C. ~~₦~~69,500
 - D. ~~₦~~70,000
 - E. ~~₦~~72,000
5. The journal entries required to correct subscriptions received but wrongly recorded as donation is
- A. Dr. Donation Account, Cr. Subscriptions Account
 - B. Dr. Receipts and Payments Accounts, Cr. Donation Account
 - C. Dr. Subscriptions Account, Cr. Donation Account
 - D. Dr. Donation Account, Cr. Receipts and Payments Account
 - E. Dr. Receipts and Payments Accounts, Cr. Subscriptions Account
6. When the Statement of profit or loss and other Comprehensive Income is prepared using nature of expenses method, the following information are disclosed **EXCEPT**
- A. Distribution cost
 - B. Changes in inventories of finished goods
 - C. Employee benefit expenses
 - D. Depreciation and amortization expenses
 - E. Raw materials consumables used
7. The following information should be disclosed in the Statement of Changes in Equity **EXCEPT**
- A. Dividend paid
 - B. Increase in share capital
 - C. Transfer to retained earnings

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- D. Finance cost
 - E. Revaluation surplus
8. Other non-cash items adjusted for in the Statement of Cashflow, in order to arrive at cash flows before adjustment for working capital is
- A. Proceed from bank borrowing
 - B. Proceed from disposal of non-current assets
 - C. Profit on disposal of non-current assets
 - D. Payment of dividend to shareholders
 - E. Cash payment or refunds of Income taxes
9. The following are examples of accounting errors **EXCEPT**
- A. Mathematical mistakes
 - B. Oversight
 - C. Undercasting
 - D. Fraud
 - E. Overcasting
10. The double entry required for the transfer of excess depreciation from the revaluation surplus to retained earnings is:
- A. Dr. Depreciation Account
Cr. Retained earnings
 - B. Dr. Revaluation surplus
Cr. Retained earnings
 - C. Dr. Retained earnings
Cr. Revaluation surplus
 - D. Dr. Revaluation surplus
Cr. Depreciation Account
 - E. Dr. Non-current Asset Account
Cr. Depreciation Account
11. Which of the following are the differences between partnerships and companies?
- i. Partners are liable for all losses of the business
 - ii. Only companies have share capital
 - iii. Both partnership and companies pay tax on their profits
 - iv. Company's affairs are managed by members
- A. i & ii
 - B. ii & iii

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- C. i & iii
D. i, ii & iii
E. iii & iv
12. Seidu and Yakubu are partners sharing profits or losses equally. They admitted Sauza and the profit sharing ratio became 2: 2: 1. Goodwill was valued at Le 10 million and it is not to be retained in the books .
- The capital account of Seidu before adjusting for goodwill was Le 8million. The capital account balance of Seidu after adjusting for goodwill is
- A. Le 13 million
B. Le 9 million
C. Le 8 million
D. Le 7 million
E. Le 6 million
13. Which of the following is **NOT** a Not-For-Profit organisation?
- A. Religious organisation
B. Public educational institutions
C. Community development associations
D. Human rights organisation
E. Insurance organisation
14. In a Not-For-Profit organisation, which of the following incomes has the greatest risk of becoming bad debt?
- A. Prepaid expenses
B. Accrued subscriptions from members
C. Bar sales
D. Income from lectures and symposia
E. Government subvention
15. A social club received life membership fund of ~~N~~50 million. It is the club's policy to credit the fund to income over a period of five years in equal instalments.

For the second year, state the amount credited to the income and expenditure account and the balance in accumulated fund at the end of that year.

	Income and Expenditure	Accumulated Fund
	N'm	N'm
A.	20	30
B.	30	20
C.	10	30
D.	30	10
E.	20	20

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16. The excess of total assets over current liabilities is called:
- A. Net assets
 - B. Shareholders fund
 - C. Shareholders fund plus long term liabilities
 - D. Fixed assets plus liabilities
 - E. Shareholders fund minus long term liabilities
17. Which of the following is **NOT** included in Cashflows from financing activities?
- A. Cash proceeds from issuing shares
 - B. Changes during the period in inventories
 - C. Proceeds from issuing debentures
 - D. Cash payments of amount borrowed
 - E. Cash payments to owners to acquire or redeem the entity's shares
18. Which of the following does **NOT** qualify as an intangible asset?
- A. Computer software
 - B. Registered patent
 - C. Copyrights that are protected
 - D. Goodwill
 - E. Notebook computer
19. The following ratios are profitability ratios **EXCEPT**
- A. Price earnings ratio
 - B. Gross profit margin
 - C. Return on equity
 - D. Return on capital employed
 - E. Net profit margin
20. In preparing the manufacturing account of an economic entity, understating value of closing work-in-progress will have the following effects **EXCEPT**
- A. The cost of goods manufactured is increased
 - B. Overstate the cost of goods manufactured
 - C. Overstate cost of goods sold
 - D. Understate prime cost
 - E. Understate the profit of manufacturing
21. State the accounting entry for returns outward in the ledger for goods supplied on credit by a creditor:
- A. Debit purchases account

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- Credit accounts receivables
 - B. Debit accounts payable
Credit returns outward account
 - C. Debit returns outward account
Credit account payable
 - D. Debit accounts receivable
Credit purchase account
 - E. Debit account payable
Credit returns inward account
22. Which of the following is **NOT** used in containers accounting?
- A. Containers suspense account
 - B. Containers profit and loss account
 - C. Containers sent to customers account
 - D. Containers trading account
 - E. Containers realizable inventory account

Use the following information to answer questions 23 and 24

Salah and Johnson entered into a joint venture to buy up and sell the inventory of a bankrupt manufacturer. Saleh paid L\$20,000 for the inventory and L\$5,000 for expenses. He sold the inventory for L\$40,000 and Johnson paid cash expenses of L\$2,000. They share profit or loss in the ratio 5:3 respectively.

23. Calculate the profit due to Saleh from the joint venture.
- A. L\$8,125
 - B. L\$8,725
 - C. L\$9,375
 - D. L\$9,525
 - E. L\$11,250
24. Calculate the profit due to Johnson from the Joint Venture.
- A. L\$2,250
 - B. L\$3,975
 - C. L\$4,875
 - D. L\$5,625
 - E. L\$6,750
25. Which of the following is **NOT** a type of inventory?
- A. Finished goods
 - B. Raw materials
 - C. Work-in-progress
 - D. Periodic stock
 - E. Livestock and agricultural produce awaiting sale

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26. Generally speaking, biological assets relating to agricultural activity should be measured at
- A. Net realizable value
 - B. Historical cost less accumulated depreciation
 - C. A fair value
 - D. Cost or net realizable value
 - E. Historical cost
27. The consideration paid to a lessor for allowing another party to utilize a legal right owned by him is called
- A. Royalty
 - B. Premium
 - C. Short working receivable
 - D. Short working payable
 - E. Commission
28. Under a general liabilities insurance policy, an insurance company undertakes to indemnify a business organization in respect of inventory lost by fire or other causes. The consideration for this is
- A. Bond
 - B. Commission
 - C. Sum insured
 - D. Premium
 - E. Simple interest
29. When a head office sends goods to a branch at cost plus mark-up, unrealized profit will arise on
- A. Cash in transit
 - B. Cost of goods sold
 - C. Branch expenses
 - D. Closing inventory
 - E. Branch Debtors
30. Which of the following branches does **NOT** keep its own accounts?
- A. Local branches
 - B. Foreign branches
 - C. Non-autonomous branches
 - D. Autonomous branches
 - E. Divisional branches

SECTION A: PART II SHORT-ANSWER QUESTIONS (20 Marks)

ATTEMPT ALL QUESTIONS

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

1. AKSON Enterprises bought pharmaceutical and medical products worth ₦250,000 and sold vatable goods worth ₦350,000. What is the AKSON Enterprises VAT liability? if VAT rate is 5%?
2. What is the gross profit on sales worth ₦1,500,000, if the gross profit is 20% on cost of goods sold?
3. State two methods of depreciation which is based on decreasing charge to the final accounts?
4. State the necessary journal entries to record subscriptions received but omitted from the books of accounts.
5. The accounting concept followed when a business records the cost of a non-current asset in its books even though it does not legally own the asset, is called
6. A non-current asset was purchased at the beginning of year 2011 for ₦4,800,000 and depreciated by 20% p.a. using reducing balance method . If the asset was sold for ₦2,400,000 at beginning of year 2014. What is the profit or loss on disposal?
7. An item of inventory which had cost ₦500 was sold for ₦700. It cost the company ₦600 to replace the item. At the time of sale, the ₦600 was the inventory's.....
8. The application of the principal qualitative characteristic and the appropriate accounting standard normally results in financial statements that provide presentation
9. Which of the items recorded in the partners current accounts is not transferred from the statement of distribution of income but is debited directly?
10. When a partnership maintains fixed capital accounting system, the balance may change only in a few instances. State **ONE** of the instances.
11. Which change in partnership structure would **NOT** require the statement of financial position?
12. When a new member of a not-for-profit organizations pays registration fees, what effect will it have on the income and expenditure account?
13. A written acknowledgment of a debt owed by a company normally containing provision or clauses on payment of interest and repayment of capital is called
14. The ratio that indicates the amount of net assets attributable to each ordinary share in issue is known as

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15. The item that shows cash generated or paid out from transactions relating to its trading activities with its customers in cash flow preparation is
16. The income that has been earned in the current accounting period but which has not yet been received at the reporting date is known as
17. In a trading system, where payment is delayed and ownership passes to the buyer immediately upon delivery is known as
18. In inventory valuation, a set of accounting steps common with establishing the appropriate amount for inventory balance at the end of a particular period is called
19. State any **TWO** methods of pricing of construction contracts.
20. In hire purchase accounting, state two methods or basis of allocating hire purchase interest over the hire period.

SECTION B (Marks)

ATTEMPT ANY FOUR QUESTIONS

(50)

QUESTION 1

The balances extracted from the books of Sealion Enterprises for the year ended December 31, 2014 were

	₦'000
Inventory	20
Motor vehicle (cost)	450
Capital	292
Salaries and wages	134
Trade payables	95
Provision for depreciation:	
Motor vehicle	102
Trade receivables	370
Motor vehicle expenses	15
Sales	1,800
Purchases	1,300

Additional information:

- i. Inventory at December 31, 2014 was ₦89,800
- ii. Provision for depreciation: Motor vehicle @ 10% on cost
- iii. Motor expenses of ₦2,200 was wrongly recorded in the salaries and wages account

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- iv. Accrued motor vehicle expenses was ₦3,500

You are required to:

Prepare the extended trial balance to include the original trial balance, Adjustments and Adjusted trial balance

(12½ Marks)

QUESTION 2

The summarised statement of profit or loss and other comprehensive income of Jokotade Limited as at December 31, 2014 is presented below

	₦'000
Revenue	21,560
Less: cost of sales	<u>17,248</u>
Gross profit	4,312
Add: Other Income	<u>208</u>
	4,520
Administrative expenses	<u>(3,656)</u>
Profit for the year	864
Other comprehensive Income:	
Revaluation of non-current assets	<u>3,136</u>
Total comprehensive Income for the year	<u>4,000</u>

The following additional information were extracted from the financial statements and relevant notes

- i. The ordinary share capital and reserves (extract) in the statement of financial position are

	₦'000
Ordinary share capital of 50k each (fully paid)	2,800
Retained earnings as at January 1, 2014	1,936
General reserve as at January 1, 2014	1,368
7½ of ₦1 preference shares of ₦1 each	800

- ii. Jokotade Limited issued 800,000 ordinary shares during the year and total proceeds from the issue was ₦800,000.
- iii. The management of Jokotade Limited recommended a transfer to general reserve an amount of ₦128,000.
- iv. During the year the company paid the following dividends:

	₦'000
Preference dividend	56
Ordinary dividend (interim)	64

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- v. The total equity and reserve balance of Jokotade Limited in the statement of financial position as at December 31, 2014 amounted to ₦11,744,000.
- vi. You are to assume that preference shares are equity

Required:

Prepare Statement of Changes in Equity of the company as at December 31, 2014 in accordance with IAS 1 (Presentation of Financial Statements)

(Total Marks) 12½

QUESTION 3

Kofi, Anan and Nkwrumah are in partnership, sharing profits and losses in the ratio 3:2:1 respectively and have the following information:

Statement of Financial Position as at December 31, 2014

	GH¢'000	GH¢'000
Non-Current Assets:		
Premises	1,200	
Motor van	700	
Furniture	<u>30</u>	1,930
Current Assets:		
Inventory	190	
Accounts receivable	210	
Cash and bank balances	<u>605</u>	
	1,005	
Less Accounts payable	<u>375</u>	<u>630</u>
		<u>2,560</u>
Capital Account:		
– Kofi	1,160	
– Anan	715	
– Nkwrumah	<u>520</u>	2,395
Current Accounts:		
– Kofi	210	
– Anan	79	
– Nkwrumah	<u>(124)</u>	<u>165</u>
		<u>2,560</u>

The following information was also made available in respect of the partnership

On January 1, 2015, Nkrumah retired from the partnership on the following terms:

Goodwill was valued at GH¢400,000. The current values of the premises and motor van were GH¢1,400,000 and GH¢600,000 respectively. The inventories were to be reduced by GH¢16,000 and allowance for doubtful debts was put at GH¢10,000. No goodwill account was to be maintained and the balances of the

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assets in the books were not to be altered for the purposes of the continuing partners.

Any adjustment considered to be necessary is to be made through the partners' Capital Accounts. Nkwrumah's current account balance should be left as loan in the partnership.

Required:

Prepare the revised Statement of Financial Position (in vertical format) as at January 1, 2015.

**Show all workings
Marks)**

(12^{1/2})

QUESTION 4

The trial balance of Danladi Bako Limited as at December 31, 2014 is as follows:

	Debit	Credit
	₦	₦
Ordinary share capital		150,000
purchases and Revenue	400,200	547,800
Inventory at January 1, 2014	35,010	
Returns	1,800	2,400
Wages	69,240	
Rent	19,500	
Motor expenses	5,580	
Insurance	1,140	
Irrecoverable debts	180	
Allowance for doubtful receivables January 1, 2014		882
Discounts	1,296	2,433
Light and cooling expenses	4,611	
Bank overdraft interest	111	
Motor vehicle at cost	36,000	
Accumulated depreciation Motor Van at January 1, 2014		18,360
Fixtures and fittings at cost	42,000	
Accumulated depreciation on fixtures and fitting at January 1, 2014		25,200
Land	150,000	
Receivables and payables	25,995	34,506
Bank	5,118	
Buildings at cost	150,000	
Aggregate depreciation on building at January, 1, 2014		9,000

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	Debit	Credit
	N	N
Retained earnings at January 1, 2014	<u> </u>	157,200
	<u>947,781</u>	<u>947,781</u>

You are given the following additional information

- i. Inventory as at December 31, 2014 was ~~N~~38,520.
- ii. Rent prepaid was ~~N~~1,500 and light and cooling expenses owed was ~~N~~690 as at December 31, 2014
- iii. Land is to be revalued to ~~N~~375,000 as at December 31, 2013
- iv. Following a final review of the receivables as at December 31, 2014, Danladi Bako decides to write off another debt of ~~N~~195. The company also wishes to maintain the allowance for doubtful receivables at 3% of the year end balance.
- v. Depreciation is to be provided on a straight line basis as follows:
 - Building at 2%
 - Fixtures and fittings, assuming a useful economic life of five years with no residual value
 - Motor vehicles at 25%

A full year's depreciation is charged in the year of acquisition and none in the year of disposal.

You are required to:

Prepare a Statement of Profit or Loss and other Comprehensive Income for the year ended December 31, 2014 (12¹/₂)

Marks)

QUESTION 5

Nationwide Inc. opened a branch in Barisonville. The head office in Monrovia maintains all records and charges goods to branch at cost. The following information was extracted from Nationwide Inc. records:

	L\$
Goods sent to branch by head office at cost	360,000
Returns from branch to head office at cost	16,000
Branch credit sales	300,000

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Cash sales sent to head office	84,000
Cash sales stolen	1,200
Goods stolen	400
Branch expenses paid by head office	12,800
Closing inventory at branch at cost	100,000
Cash received from debtors	232,000
Discounts allowed to branch receivables	12,000
Head office	
Opening inventory October 1, 2013	480,000
Purchases	2,800,000
Sales	3,600,000
Closing inventory September 30, 2014	280,000
Expenses	160,000

You are required to:

Prepare the necessary ledger accounts for the branch for the year ended September 30, 2014 and show the head office trading account.

(Total Marks) 12^{1/2}

QUESTION 6

Babu and Lukudi are in partnership sharing profits or losses in ratio 2:1 respectively. On October 31, 2014, the partners decided to dissolve the partnership. The statement of financial position at that date is set out below:

	R'000	R'000
Non-current Assets:		
Plant and equipment		75,000
Motor vehicles		<u>15,000</u>
		90,000
Current Assets:		
Inventories	120,000	
Accounts receivable	36,000	
Bank balance	<u>12,000</u>	
		<u>168,000</u>
		<u>258,000</u>
Capital		
Babu		120,000
Lukudi		<u>30,000</u>
		150,000
Accounts payable		<u>108,000</u>
		<u>258,000</u>

Notes:

- i. The plant and equipment were sold at R79m

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- ii. Babu took over one of the vehicles with a book value of ₦1.5m for ₦800,000. The remaining vehicles were sold for ₦12m.
- iii. Inventories were sold for ₦92m while account receivable realised ₦34.3m
- iv. The account payable gave a discount of ₦0.10 on every ₦1 owed.
- v. The realisation expenses were settled for ₦4.5m

You are required to prepare:

- a. Realisation Account
- b. Capital Accounts
- c. Bank Account

(12½

Marks)

SECTION A

PART I MULTIPLE-CHOICE QUESTIONS

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

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

EXAMINER'S COMMENT

The thirty questions part was attempted by all candidates. About 70% of them scored above average marks.

PART II: SHORT-ANSWER QUESTIONS

- 1. N17,500
- 2. N250,000
- 3. Diminishing or Reducing balance

Sum of the year's digits

Annuity and sinking fund
- 4. Dr Receipts and payments

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Cr Subscription account

5. Substance over form
6. Loss of ₦57,600
7. Current cost
8. Fair value
9. Drawings by partners
10.
 - i. Share of revaluation surplus
 - ii. Share of goodwill
11. Dissolution of partnership
12. Surplus will increase
13. Debentures or loan note or bonds
14. Net assets per share
15. Operating activities
16. Accrued income
17. Credit sale transaction
18. Inventory or stock taking
19.
 - (i) Fixed or lump sum contract
 - (ii) Cost-plus a fixed rate contract
 - (iii) Remeasure contract
 - (iv) Variable pricing contract
20.
 - (i) Straight line or fixed instalment method
 - (ii) Actual method

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(iii) Sum of the years digit method

WORKINGS

1. Pharmaceutical and medical products are exempted from VAT. The business VAT liability is 5% of N350,000 = N17,500
2. 20% on cost of goods sold = 16.7%
16.7% x N1,500,000 = N250,500
6.

Cost	N4,800,000
Year 2009	(N960,000)
Year 2010 (N4,800,000 - 960,000) x 20% -	(N768,000)
Year 2011 (N3,840,000 - 768,000) x 20% -	<u>(N614,400)</u>
Carrying value	<u>N2,457,600</u>

Loss = (N2,400,000 - N2,457,600 = (N57,600))

EXAMINER'S COMMENT

The twenty question part was attempted by all candidates and the performance was generally poor. About 10% of them scored above average.

SOLUTION 1

SEALION ENTERPRISES

EXTENDED TRIAL BALANCE AS AT 31 December, 2013

	Original Trial balance		Adjustments		Adjusted Trial Balance	
	Dr	Cr	Dr	Cr	Dr	Cr
	N000	N000	N000	N000	N000	N000
Inventory	20				20	
Motor vehicle (cost)	450				450	
Capital		292				292
Salaries & Wages	134			2.2	131.8	
Trade payables		95				95
Provision for depreciation:						
Motor vehicle		102		45		147
Trade receivables	370				370	
Motor vehicle expenses	15		2.2		20.7	
			3.5			
Sales		1,800				1,800
Purchases	1,300				1,300	
Inventory 31 December			89.8		89.8	
Income statement				89.8		89.8
Income statement:						

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Provision for depreciation (motor vehicle)			45		45	
Accruals: Motor vehicle expenses				3.5		3.5
	<u>2,289</u>	<u>2,289</u>	<u>140.5</u>	<u>140.5</u>	<u>2,427.3</u>	<u>2,427.3</u>

EXAMINER'S REPORT

The question which tests candidates' knowledge of extended trial balance was attempted by about 90% of the candidates. The candidates put up good performance as about 80% scored above average marks.

SOLUTION 2

JOKOTADE LIMITED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2013

	Share capital N'000	Share premium N'000	General Reserve N'000	Revaluation Reserve N'000	Retained Earnings N'000	Total N'000
Bal. as at 1/01/2013	3,600 (W1)	-	1,368	-	1,936	690
Total comprehensive income for the year	-	-	-	3,136	864	4,000
Issues of shares	(W2) 400	(W2) 560	-	-	-	960
Dividend paid	-	-	-	-	(W3) (120)	(120)
Transfer to general revenue	-	-	128	-	(128)	-
Bal. 31/12/2013	<u>4,000</u>	<u>560</u>	<u>1,496</u>	<u>3,136</u>	<u>2,552</u>	<u>11,744</u>

WORKINGS

(W1)	Share Capital	N'000
	Ordinary share capital	2,800
	7% N1 preference shares	<u>800</u>
		<u>3,600</u>
(W2)	Issues of shares & share premium	N'000
	Total proceed of share issues	960
Less:		
	Shares issued 800,000 x 50k (normal value)	(400)
	Share premium	<u>560</u>
(W3)	Dividend	N'000
	Preference	56
	Ordinary interim	<u>64</u>

EXAMINERS COMMENT

The question on preparation of statement of changes in Equity of a company was attempted by about 5% of the candidates. About 20% of those who attempted it scored below average marks. The candidates displayed poor understanding of the knowledge required to answer the question.

SOLUTION 3

KOFI ANAN AND NKURUMAH STATEMENT OF FINANCIAL POSITION AS AT JANUARY 1,

	2014	
Non-current assets	¢'000	¢'000
Premises	1,200.00	
Motor van	700.00	
Furniture	<u>30.00</u>	
		1,930.00
Current assets:		
Stock	190.00	
Debtors	210.00	
Cash & bank balances	605.00	
	1,005.00	
Less creditors	<u>375.00</u>	
		<u>630.00</u>
		<u>2,560.00</u>
Capital accounts:		
Kofi	1,112.60	
Anan	<u>683.40</u>	
		1,796.00
Current accounts:		
Kofi	210.00	
Anan	<u>79.00</u>	
		289.00
Loan: Nkurumah		<u>475.00</u>
		<u>2,560.00</u>

Workings

i. Nkurumah's account		¢'000	¢'000
Opening capital account balance			520
Add: Share of increase in value of assets:			
Goodwill -		400	
Premises -		<u>200</u>	
		600	
Less: Decrease in motor van	- 100		
Stock	- 16		
Prov. of doubtful debts	<u>10</u>		
		<u>126</u>	
		474 x $\frac{1}{6}$	<u>79.00</u>

INSIGHT

=

599.00
124.00
475.00

ii. Kofi's capital account:
 Opening balance 1,160.00
 Less: Share of Nkurumah's capital
 account - $\frac{3}{5} \times 79$ 47.40
 Closing balance 1,112.60

iii. Anan's capital account:
 Opening balance 715.00
 Less: Share of Nkurumah's capital account
 - $\frac{2}{5} \times 79$ 31.60
 Closing balance 683.40

ALTERNATIVE WORKING

Capital Accounts

	Kofi ¢'000	Anan ¢'000	Nkwurumah ¢'000		Kofi ¢'000	Anan ¢'000	Nkwurumah ¢'000
Goodwill	240.00	160.00		- Bal b/f	1,160.00	715.00	520.00
Current a/cs			124.00	Goodwill	200.00	133.00	67.00
Bal. c/d	1,157.00	713.00		Revaluation of assets	37.00	25.00	12.00
Loan a/cs	<u>1,397.00</u>	<u>873.00</u>	<u>475.00</u>		<u>1,397.00</u>	<u>873.00</u>	<u>599.00</u>
Assets a/c	44.00	30.00					
Bal c/f	<u>1,113.00</u>	<u>683.00</u>		Bal b/d	<u>1,157.00</u>	<u>713.00</u>	
	<u>1,157.00</u>	<u>713.00</u>			<u>1,157.00</u>	<u>713.00</u>	

Revaluation Account

	¢'000		¢'000
Motor van	100.00	Premises	200.00
Inventory	16.00		
Doubtful debts	10.00		
Share of gain – Capital Accounts:			
Kofi $\frac{3}{6} \times 74$	33.00		
Anan $\frac{2}{6} \times 74$	25.00		
Nkurumah $\frac{1}{6} \times 74$	<u>12.00</u>		
	<u>200.00</u>		<u>200.00</u>

EXAMINER'S REPORT

INSIGHT

The question on Partnership Account was attempted by about 80% of the candidates. About 60% displayed good understanding of the question, while about 20% still presented the solution in the "T" form, despite the instruction to present in vertical format and in effect lost good marks.

SOLUTION 4

Danladi Bako Limited
Statement of profit or Loss and other Comprehensive Income
for the year ended 31 December 2013

	N	N	N
Revenue			547,800
Return Inward			(1,800)
Net Sales			546,000
Cost of sales:			
Opening inventories		35,010	
Purchases	400,200		
Return outwards	(2,400)		
Net purchases		<u>397,800</u>	
Cost of goods available for sales		432,810	
Closing inventories		<u>(38,520)</u>	
Cost of goods sold			<u>394,290</u>
Gross profit			151,510
Discount received			2,433
Decrease in allowance for doubtful receivables			<u>108</u>
Total incomes			154,251
Less operating expenses			
Rent (19,500 – 1,500)		18,000	
Motor expenses		5,580	
Insurance		1,140	
Irrecoverable debts (180 + 690)		375	
Wages		69,240	
Discount allowed		1,296	
Light and cooling expenses (4,611 + 690)		5,301	
Bank overdraft interest		111	
Depreciation:			
Building (2% *150,000)		3,000	
Fixture & fittings (42,000/5)		8,400	
Motor vehicles (25% *36,000)		<u>9,000</u>	
Total opening expenses			<u>121,443</u>
Profit before tax			32,808
Other comprehensive income			
Gains on revaluation of land			<u>225,000</u>
Total comprehensive income			<u>257,808</u>

Workings

Allowances for doubtful receivables

INSIGHT

	-N
Balance b/f	882
Balance c/f (3% *(25,995 - 197)	<u>774</u>
Decrease in allowance for doubtful receivables	<u>108</u>

EXAMINER'S COMMENT

The question which tests candidates understanding of the Preparation of Statement of Profit or Loss was attempted by about 75% of the candidates and good performance was displayed. About 50% of the candidates prepared statement of financial position that was not required in the question and they could not also differentiate between sales and purchases in the trial balance.

SOLUTION 5

Nationwide Inc. Branch Inventory Account

	L\$		L\$
Goods sent to Branch	360,000	GSTB (Returns)	16,000
Gross profit	141,600	Branch receivables (Credit sales)	300,000
		H/O current a/c (cash sales)	84,000
		Cash sales stolen	1,200
		Goods stolen	400
	_____	Balance c/d	<u>100,000</u>
	<u>501,600</u>		<u>501,600</u>

Balance b/d 100,000

Goods sent to Branch Account

	L\$		L\$
Branch inventory (returns)	16,000	Bank inventory	360,000
Purchases	<u>344,000</u>		_____
	<u>360,000</u>		<u>360,000</u>

Branch receivables account

	L\$		L\$
Branch inventory (Credit sales)	300,000	Cash	232,000
		Discount allowed	12,000

INSIGHT

	Balance c/d	56,000
	<u>300,000</u>	<u>300,000</u>
Balance b/d	56,000	

Branch Profit or Loss account

	L\$		L\$
Discount allowed	12,000	Gross profit b/d	141,600
Cash stolen	1,200		
Goods stolen	400		
Branch expenses	12,800		
Net profit	<u>115,000</u>		
	<u>141,600</u>		<u>141,600</u>

Head office Trading Account for the year ended September 30, 2014

	L\$	L\$
Sales		3,600,000
Opening inventory	480,000	
Purchases	2,800,000	
Goods sent to branch	(344,000)	
Cost of goods available for sales	2,936,000	
Closing inventory	(280,000)	
Cost of goods sold		<u>2,656,000</u>
Gross profit		<u>944,000</u>

Defalcations account

	L\$		L\$
Branch stock a/c:			
Cash stolen	1,200	Profit or loss a/c	1,600
Goods stolen			
	<u>400</u>		
	<u>1,600</u>		<u>1,600</u>

EXAMINER'S REPORT

The question on branch account was attempted by about 80% of the candidates. Their performance was generally good, as about 70% of them scored above average marks.

SOLUTION 6

Babu and Lukudi

Realisation account

	N'000		N'000
Plant and equipment	75,000.00	Amount realized: Bank	79,000.00
Motor vehicles	15,000.00	Plant and equipment	12,000.00
Inventories	120,000.00	Remaining motor vehicles	92,000.00

INSIGHT

Account receivables	36,000.00	Inventories	34,300.00
Realisation expenses	4,500.00	Account receivables	10,800.00
		Discount from trade payables	
		Capital account – Babu	50,000
		M/V taken over	800.00
		Share of loss:	
		Babu	14,400.00
		Lukudi	<u>7,200.00</u>
	<u>250,000.00</u>		<u>250,000.00</u>

Partners capital account

	Babu	Lukudi		Babu	Lukudi
	N'000	N'000		N'000	N'000
Real (M/V taken over)	800	-	Balance b/f	120,000	30,000
Real loss	14,400	7,200			
Bank	<u>104,800</u>	<u>22,800</u>		<u>120,000</u>	<u>30,000</u>
	<u>120,000</u>	<u>30,000</u>			

Bank account

	N'000		N'000
Balance b/f	12,000	Trade payables	97,200
Amount realized:		Realisation expenses	4,500
Plant and equipment	79,000	Capital account:	
Remaining motor vehicles	12,000	Babu	104,800
Inventories	92,000	Lukudi	22,800
Account receivables	<u>34,300</u>		<u>127,600</u>
	<u>229,300</u>		<u>229,300</u>

Workings

Trade payables account

	N'000		N'000
Bank	97,200	Balance	108,000
Realisation:	<u>10,800</u>		<u>108,000</u>
	<u>108,000</u>		

EXAMINER'S COMMENT

About 80% of the candidates attempted the question which tests their knowledge of accounting treatment of dissolution of partnership. They put up good performance as about 75% of those who attempted the question scored above average marks.

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS- SEPTEMBER 2015
PUBLIC SECTOR ACCOUNTING
(NIGERIA VERSION)**

Time Allowed: 3 hours

**SECTION A: PART I
(30Marks)**

MULTIPLE-CHOICE QUESTIONS

ATTEMPT ALL QUESTIONS

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

1. The legal document that spells out the revenue allocation formula between the Federal, State and Local Governments is
 - A. The 1958 Finance (Control and Management) Act
 - B. The 1992 Constitution of Nigeria
 - C. The Fiscal Responsibility Act 2007
 - D. The 1999 Constitution of Nigeria
 - E. The 2007 Public Procurement Act

2. The Audit Ordinance (or Act) of 1956, stipulates that the Auditor-General shall, after the receipt of the accounts of the Federation from the Accountant-General submit same to the National Assembly within days
 - A. 150 days
 - B. 120 days
 - C. 90 days
 - D. 60 days
 - E. 30 days

3. Specific areas of the Constitution of the Federal Republic of Nigeria, 1999, which deal particularly with Public Sector Accounting, include the following **EXCEPT**
 - A. The creation of the Contingency Fund
 - B. The declaration of assets and liabilities by Ministers
 - C. The audit of public accounts
 - D. The power of the National Assembly to conduct investigations and procure all evidence needed

INSIGHT

- E. The investigation of reported cases of Financial Crimes and Advance Fee Fraud (419)
4. Which of the following is **NOT** a function of the Minister of Finance?
- A. He is responsible for revenue estimation and publication in the budget book
 - B. He is required to formulate all policies related to fiscal and monetary matters
 - C. He is responsible for the preparation of annual estimates of revenue and expenditure of the Federal Government
 - D. He is to ensure a favourable balance of payments position required to maintain adequate foreign exchange services
 - E. He is responsible for establishing the value of the Nigerian currency both internally and externally
5. The Auditor-General for the Federation is appointed by the President on the recommendation of the Federal Civil Service Commission subject to confirmation by the
- A. Head of Service
 - B. House of Assembly
 - C. Senate
 - D. House of Senate
 - E. House of Representatives
6. The Officer responsible for the administration of Inter-Governmental Financial transactions is called
- A. Accountant-General of the Federation
 - B. Federal Pay Officer
 - C. Auditor-General for the Federation
 - D. Revenue Collector
 - E. Minister of Finance
7. The authority for issuing imprest warrants rests with the
- A. Accounting officer
 - B. Sub Accounting officer
 - C. Auditor-General
 - D. Accountant-General
 - E. Minister of Finance
8. Last pay Certificate together with a certified true copy of Personal Emolument Card is issued to..... officer
- A. Newly recruited
 - B. Inter governmental transfer
 - C. Dismissed or terminated
 - D. A newly promoted

- E. A demoted
9. The Adjustment Voucher (TF 23) is designed to adjust.....transaction
- A. Basic payment
 - B. Correction of error
 - C. Inter Ministerial
 - D. Additional payment
 - E. Complete unclassified
10. Which of the following is **NOT** an objective of the Federal Government for setting up public enterprises?
- A. To create employment
 - B. To ensure survival of the industries
 - C. To bring the means of production into public ownership
 - D. To avoid duplication of facilities
 - E. To avoid high prices charged by private sector
11. Which of the following is **NOT** an objective of the Fiscal Responsibility Act?
- A. Promoting transparency in budget preparation and execution
 - B. Minimising risks and fluctuations in Government's fiscal operation
 - C. Ensuring high standard of financial disclosure
 - D. Ensuring prudent management of the nation's resources
 - E. Employing staff for Government to work on the Act
12. Which of the following is **NOT** a task of Public Sector Accounting?
- A. Analysing
 - B. Recording
 - C. Reporting
 - D. Summarising
 - E. Writing
13. Which of the following is the Independent organ of Government that reviews all contracts awarded, which are of significant value?
- A. Board of Enquiry
 - B. Bureau of Public Procurement
 - C. The Budget Monitoring and Price Intelligence Unit
 - D. The Federal Executive Council
 - E. The Board of Survey
14. The Legislative body that performs a post mortem function on financial matters is the
- A. Board of Survey

INSIGHT

- B. Public Accounts Committee
 - C. Audit Alarm Committee
 - D. Joint Committee of the Senate and House of Representative
 - E. Treasury Board
15. Which of the following is responsible for carrying out “Prepayment Audit” in the Ministry?
- A. The Accounting Officer
 - B. The Vote Controller
 - C. The Federal Pay Officer
 - D. The Auditor-General for the Federation
 - E. The Internal Auditor
16. Under IPSAS, Balance Sheet is replaced with
- A. Valued Added Statement
 - B. Ruled Sheet
 - C. Current Cost Accounting
 - D. Statement of Financial Position
 - E. Statement of Financial Instrument
17. Which of the following is **NOT** a characteristic of limited Self Accounting Unit?
- A. It does not operate central Pay Office
 - B. It maintains an accounting Code
 - C. It establishes an internal audit department
 - D. It forwards vouchers in support of transcripts
 - E. It is not allocated a clearance account
18. Which of the following is used to effect inter-departmental or inter-ministerial payments?
- A. Cheque
 - B. Monthly variable
 - C. Adjustment vouchers
 - D. General warrant
 - E. Treasury receipt
19. Which of the following is **NOT** a source of supplies to Government stores?
- A. Local purchase
 - B. Returned stores
 - F. Conversion and manufacture
 - G. Prisoners’ materials
 - H. Transfer from other stores
20. For Accounting purposes stores are classified into two, namely

INSIGHT

- A. Revenue and payment
 - B. Allocated and unallocated
 - C. Local and imported goods
 - D. Finished and uncompleted goods
 - E. Imported and exported goods
21. Store items purchased for general use which actual usage at the time of purchase, cannot be determined are
- A. Allocated stores
 - B. Last in First out
 - C. Unallocated stores
 - D. Local purchase order
 - E. Budgeted stores
22. Which of the following is **NOT** a function of the Board of Survey and Enquiry?
- A. Survey on cash and bank balances and stamps of all Federal Ministries and Extra Ministerial Departments
 - B. Survey of unserviceable items
 - C. Board's concern with Annual and Quarterly Surveys
 - D. Investigate allegation of misappropriation
 - E. Survey on the security personnel of the Finance Department
23. The International Public Sector Accounting Standard (IPSAS), which set out the preparation and presentation of financial statements is
- A. IPSAS 1
 - B. IPSAS 2
 - C. IPSAS 3
 - D. IPSAS 4
 - E. IPSAS 5
24. Which of the following is **NOT** classified under Operating Activities in International Public Sector Accounting Standards (IPSAS 2 - Statement of Cash Flow)?
- A. Value added tax
 - B. Personnel emolument
 - C. Overhead cost
 - D. Dividends received
 - E. Pension and gratuities
25. Which of the following is covered by the International Public Sector Accounting Standard 5 (IPSAS 5)?

INSIGHT

- A. Inventories
 - B. The effect of changes in foreign exchange rate
 - C. Borrowing cost
 - D. Construction contract
 - E. Cash flow statement
26. Pension Fund Custodians are licensed by the National Pension Commission to receive the
- A. Asset of Pension Fund Administrators
 - B. Asset of Pension Commission
 - C. Asset of Pension Contributor
 - D. Total contribution remitted by the employers
 - E. Total subvention given to the Pension Commission
27. Which of the following is the main function of National Pension Commission?
- A. Regulate, supervise and ensure effective administration of pensions
 - B. Collect, distribute and account for all pension of public officers
 - C. Receive, disburse and recall Pension Administrators
 - D. Manage and realize pension assets
 - E. Collect interest and commission from Pension Fund Administrators
28. The Director-General and Commissioners of the National Pension Commission hold office in the first instance for
- A. 8 years
 - B. 7 years
 - C. 5 years
 - D. 6 years
 - E. 4 years
29. A youth appointed as a member of the Independent Corrupt Practices and Other Related Offences Commission shall not be less than old.
- A. 15 years
 - B. 18 years
 - C. 17 years
 - D. 20 years
 - E. 21 years
30. The Act of Parliament No. 5 of December, 2002 which established the body that has the power to enforce the relevant provisions of the Bank

INSIGHT

and Other Financial Institutions Act 1991 is known as.....

- A. The Fiscal Responsibility Commission
- B. The National Council on Public Procurement
- C. The Code of Conduct Bureau
- D. The Economic and Financial Crimes Commission (EFCC)
- E. The Independent Corrupt practices and other Related Offences Commission (ICPC)

SECTION A: PART II SHORT-ANSWER QUESTIONS (20 Marks)

ATTEMPT ALL QUESTIONS

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

- i. Section 85 of Chapter 5 part 1 of the 1999 Constitution of the Federal Republic of Nigeria provides that public accounts should be audited by.....
- ii. The second schedule of the Finance (Control and Management) Act 1958 stipulates that the monies to be used to finance general capital expenditure of the Federal Government should come from an account known as.....
- iii. The use of taxation and government expenditure to regulate economic activities is known as.....
- 4. According to the Pension Reform Act 2004, the Pension Fund is managed by
- 5. Under the Financial Regulations No. 109, (2009) an accounting unit that has control over its record is called.....
- 6. A record maintained by the Accounting Officer of a Ministry or Department to monitor expenditure with reference to the amount approved in the annual estimates is called
- 7. Issuance of budgetary guidelines is one of the ways by which thearm of Government controls expenditure.
- 8. A division that ensures that the Ministries' and Departments' accounting system and maintenance of various books of accounts

INSIGHT

- conform to the approved regulations and procedures is called.....
9. Where adjustments affect an expenditure sub head in a current financial year account, the amount whether debit or credit, must be entered in.....
 10. Every issue of a receipt book or security book shall be accompanied by anote
 11. A budgetary technique which considers the past budget and adds arbitrary percentages to the past budget is referred to as.....
 12. The use of deception to obtain an advantage is considered
 13. Plant and machinery, motor vehicles and furnitures are examples of.....
 14. The documents used to transfer stock from one store to another is called.....
 15. ----- appoints members to the permanent Boards of Survey and Enquiry?
 16. The remuneration of the Auditor-General for the Federation shall be drawn from theFund of the Federation.
 17. The Auditor-General for the Federation determines whether accounts have been satisfactorily and faithfully kept in accordance with the law. This is known asAudit.
 18. Every Pension Fund Administrator shall maintain a Statutory Reserve Fund which shall be credited annually with.....% of the net profit after tax.
 19. Administrative expenses of Pension Fund Administrators are deducted from
 20. Under the EFCC Act No.5 of December 2002, the penalty for offences which relate to financial malpractices is.....

SECTION B:
(50MARKS)

ATTEMPT ANY FOUR QUESTIONS

QUESTION 1

All Local Governments in Gbandi are saddled with the responsibilities of promoting co-existence and developments among various communities and grass roots.

INSIGHT

The underlisted are some of the major sources of financing yearly expenditure among the three tiers of government in Gbandi as submitted by the Federal Ministry of Finance for the year 2014.

	₦'000
Income from Federal Government investment	10,000
Companies Income Tax	65,000
PAYE of Police personnel	5,000
Petroleum Profit Tax	100,000
Import duties	90,000
Export duties	60,000
Tariffs duties	80,000
Excise duties	90,000
Others from third tier of government in Gbandi	
Income from registration of births, marriage and death	20,000
Rents from shops and Local government properties	5,000

Required:

- a. Prepare the Federation Account for year 2014.
(7¹/₂ Marks)
- b. Calculate the total income from various sources for the Federal Government.
(2¹/₂ Marks)
- c. Calculate total income the Local Government derive from various sources.
(2¹/₂ Marks)

Note: Allocation for Federal Government	48.5%	
State Government	24%	
Local Government	20%	
Special Fund	7.5%	
		(Total
12¹/₂ Marks)		

QUESTION 2

- a. In the award and execution of Federal Government contracts in Nigeria, due processes must be complied with. What is "Due process"?
(2¹/₂ Marks)

INSIGHT

- b. Enumerate any **FIVE** benefits of “Due process”.
(5 Marks)
- c. Outline **THREE** advantages and **TWO** disadvantages of complying with the Financial Regulations of the Federal Government.
(5 Marks)

(Total 12½ Marks)

QUESTION 3

- a. State any **FOUR** conditions for opening new Personnel Emoluments Cards.

(4

Marks)

- b. Below are some items usually found in the Personnel Emoluments Card of an officer for each month.

	R
Housing allowance	20,000
Union dues	1,500
Meal allowance	7,500
Car refurbishing loan repayment	3,500
Basic salary	50,000
Transport allowance	10,000
Housing loan repayment	15,000
Payee tax rate is computed at 10% of basic salary	

Required:

Compute:

- i. Gross salary (3 Marks)
- ii. Net salary (3 Marks)
- c. Briefly describe salary variation advice. (2½ Marks)

(Total 12½ Marks)

QUESTION 4

INSIGHT

Oloto Grammar School is a mixed boarding school in Oपुरो Local Government. The school provided you with the following information for the year ended 31 December, 2014:

NUMBER OF STUDENTS

(i)

MALE	FEMALE	TOTAL
720	820	1540

- (ii) School fees - ~~₦~~60.00 per Student per term
- (iii) Subvention from Government - ~~₦~~80.00 per student per term.
- (iv) Science Foundation Fund grant - ~~₦~~600,000 per year
- (v) Special Trust Fund grant by government - ~~₦~~3,000,000
- (vi) Capital grant by the government - ~~₦~~7,000,000

The school incurred the following expenses during the year

	₦
Administrative expenses	370,000
Teachers' salary	700,000
Science education project	240,000
Vocational education	180,000
Games and sports	190,000
Medical	120,000
Cash balance as at 1/1/14	348,000

You are required to prepare the:

- a. Domestic Account for the year ended 31 December 2014. (8 Marks)
 - b. Cash book for the year ended 31 December, 2014. (4 ½ Marks)
- (Total Marks) 12½**

QUESTION 5

- a. The following information is provided concerning a particular raw material used by the Ministry of Water Resources of ADAMGA STATE.

Average usage	50 units per day
Minimum usage	30 units per day
Lead-Time	72-78 days
Ordering cost per order	₦ 400
Demand per annum	20,000 units
Carrying cost per unit per annum	₦ 4.00

INSIGHT

Required:

Calculate:

- i. Economics Ordering Quantity (EOQ). (2 Marks)
 - ii. Re-order level. (2Marks)
 - iii. Minimum Inventory level. (2 Marks)
 - iv. Maximum Inventory level (2 Marks)
- b. State any **THREE** vouchers used in Government stores management. (4 ½ Marks)
- (Total 12½ Marks)**

QUESTION 6

- a. A Board of Enquiry is always convened or constituted if any loss is reported.

Required:

- i. State any **FIVE** conditions when a Board of Enquiry is necessary. (7½ Marks)
 - ii. List any **THREE** conditions when a Board of Enquiry may not be necessary. (3Marks)
- b. Loss or shortage of fund is depletion of government Funds at a given time (FR 2501).

Required:

List any **FOUR** ways by which loss of Funds can arise. (2 Marks)

(Total 12½ Marks)

SECTION A: MULTIPLE CHOICE QUESTIONS

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

INSIGHT

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

Examiner's comment

This part consists of thirty (30) compulsory questions which covers every segments of the syllabus. The performance was good as candidates showed enough understanding of the question. More than 60% of the candidates scored above 50% of total marks obtainable.

SECTION B – SHORT ANSWER QUESTIONS

1. Auditor-General for the Federation
2. Development fund
3. Fiscal policy
4. Pension fund administrator
5. Self accounting
6. Departmental Vote Expenditure Allocation book (DVEA Book)
7. Executive
8. Inspectorate Division
9. Journal Voucher
10. Receipt Book Issue Note
11. Traditional, Incremental, Historical or Line by Line
12. Fraudulent or dishonest
13. Non expendable stores
14. Transfer Vouchers
15. Accountant-General of the Federation
16. Consolidated Revenue Fund
17. Finance or compliance
18. 12.50% of PAT
19. All income earned from investment of Pension Fund Administration
20. 5 years imprisonment or fine of ₦50,000 or both

Examiner's comment

INSIGHT

A compulsory Twenty (20) Short-Answer Question, which covers the whole syllabus. Most of the candidates did not understand this area as their performance was very poor. Less than 50% of the candidates scored above 50% of total marks obtainable.

SOLUTION TO QUESTION 1

(a)

FEDERATION ACCOUNT FOR THE YEAR ENDED 31 DECEMBER, 2014

	N'000	N'000
Company Income Tax		65,000
Petroleum Profit Tax		100,000
Import duties		90,000
Export duties		60,000
Tariffs duties		80,000
Excise duties		<u>90,000</u>
Total income		485,000
Distribution:		
Federal Government (48.5% x 485,000)	235,225	
State Government (24% x 485,000)	116,400	
Local Government (20% x 485,000)	97,000	
Special Fund (7.5% x 485,000)	<u>36,375</u>	<u>485,000</u>
Balance carried forward		<u>NIL</u>

(b)

FEDERAL GOVERNMENT CONSOLIDATED REVENUE FUND

	N'000
Share from Federation Account	235,225
Income from Federal Government Investment	10,000
PAYE of Police Personnel	<u>5,000</u>

INSIGHT

		<u>250,225</u>
(c)	LOCAL GOVERNMENT TOTAL INCOME	
		N'000
	Share from Federation Account	97,000
	Income from registration of births, marriage and death	20,000
	Rent from shops and local council properties	<u>5,000</u>
		<u>122,000</u>

Examiner's comment

The question was set to test candidates understanding of the preparation of the Federation Account and Consolidated Revenue Fund.

About 97% of the candidates attempted this question of which about 80% of them scored above 60% of total marks obtainable.

SOLUTION TO QUESTION 2

(a) Due Process

This is the mechanism for ensuring strict compliance with the openness, competition and cost accuracy, rules and procedures that should guide contract awards within the three tiers of government in Nigeria.

It is the instrument used by the Budget Monitoring and Price Intelligent Unit which is tasked with implementing Nigeria's Public Procurement Reform Programme.

(b) Benefits of Due Process

- i) Safeguard of public money and assets
- ii) Improvement in the system of planning and diligent project analysis, leading to the accuracy of costing and prioritising of investments
- iii) Improvement in fiscal management through more efficient and effective expenditure
- iv) Improvement in technical efficiency through un-impaired and enhanced information flow
- v) Enhancement of transparency and accountability in governance
- vi) Rebuilding of public confidence in government financial activities
- vii) Ensuring that government received value for money spent
- viii) It applies the principle of competition and right costs, thereby saving money for government which will be better used in other sectors

INSIGHT

- ix) It moderates and brings succor to the foreign investors who, hitherto, believed that the country is corrupt and that no genuine business can survive.
- (c) Advantages of complying with the Financial Regulation of the Federal Government are as follows:
 - i) It ensures consistency in policies amongst various departments of government
 - ii) It ensures uniformity of practices
 - iii) It helps to train staffers of the government on the controls that have been put in place
 - iv) It serves as a guide on compliance or framework

The disadvantages are as follows:

- i) It is very rigid
- ii) It does not encourage initiative
- iii) The job becomes monotonous
- iv) There is low morale amongst workers due to inability to effect changes that will facilitate job performance

SOLUTION TO QUESTION 3

- (a)
 - i) New employees
 - ii) Transfer of service
 - iii) Posting
 - iv) Secondment from one service to another
- (b) Computation of Gross Salary

	N	N
Basic Salary		50,000.00
Add: Housing Allowance	20,000.00	
Transport Allowance	10,000.00	
Meal Allowance	<u>7,500.00</u>	<u>37,500.00</u>
Gross salary		87,500.00
Less: Deduction:		
Union Dues	1,500.00	
Car Refurbishing Loan Repayment	3,500.00	
Housing Loan Repayment	15,000.00	

INSIGHT

Tax (10% of 50,000)	5,000.00	<u>25,000.00</u>
Net salary		<u>62,500.00</u>

(c) **SALARY VARIATION ADVICE**

This is an advice from Personnel Section of the Ministry to Variation Control Officer of any changes likely to affect an officer's salary e.g. promotion, increment, resignation and dismissal.

Examiner's comment

The question is on opening of new Personnel Emolument Cards and also tested the candidates' understanding on the Computation of Gross Salary, Net salary and description of Salary Variation Advice. About 90% of the candidates attempted the questions and over 80% of them scored over 70% of allocated marks.

SOLUTION TO QUESTION 4

OLOTO GRAMMAR SCHOOL, OPURO LOCAL GOVERNMENT DOMESTIC ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER 2014

	N		N
Expense		School fees:	
Administrative	370,000	1 st term	92,400
Teachers salaries	700,000	2 nd term	92,400
Science education	240,000	3 rd term	92,400
Games and sports	190,000		
Medical	120,000	<u>Government subvention</u>	
Vocational education	180,000	1 st term	123,200
Excess income	2,446,800	2 nd term	123,200
		3 rd term	123,200
		Science foundation	600,000
	_____	Special trust	<u>3,000,000</u>

INSIGHT

4,246,800

4,246,800

OLOTO GRAMMAR SCHOOL, OPUTO LOCAL GOVERNMENT CASH BOOK

	N		N
Opening Balance	348,000		
School fees			
1 st term	92,400	Administrative	370,000
2 nd term	92,400	Salaries	700,000
3 rd term	92,400	Science education	240,000
		Vocational education	180,000
Government subvention	369,600	Games and sports	190,000
Science foundation	600,000	Medical	120,000
Special trust fund	3,000,000	Balance c/d	9,794,800
Capital prov.	<u>7,000,000</u>		
	<u>11,594,800</u>		<u>11,594,800</u>

Examiner's Comment

This is School's Account. It tested candidates' knowledge on the Preparation of Domestic Account and the Cashbook. About 60% of the candidates attempted the question of which about 80% scored above 60% of the allocated marks.

SOLUTION TO QUESTION 5

(a)

i) Economic Order Quantity (EOQ)

$$\sqrt{\frac{2.DC}{CC}} = \frac{\sqrt{2 \times 20,000 \times \text{N}400}}{\text{N}4.00} = 2000\text{units}$$

ii) Re-Order Level

Maximum Consumption x Maximum Re-order Period

$$70 \times 78 = 5460\text{units}$$

iii) Minimum stock level

Re-order level - (Average Consumption x Average Re-Order Period)

INSIGHT

$$= 5460 - (50 \times 75)$$

$$5460 - 3750 = 1710 \text{ units}$$

iv) Maximum Stock level

Re-order level + Re-order Quantity – (Minimum Consumption
x Minimum Re- order period)

$$= 5460 + 2000 - (30 \times 72)$$

$$= 7460 - 2160 = 5300$$

(b) (i) Tally Card

(ii) Store Issue Voucher (SIV)

(iii) Store Receipt Voucher (SRV)

(iv) Store Register Book (for petro)

(v) Store Survey Sheet (SSS)

Examiner's comment

This set to test candidates' understanding of the calculation of various ordering levels in Stores Accounting and various vouchers in use in Government Stores management. About 70% of the candidates attempted the question with only about 45% of them scored above 50% of total marks obtainable.

SOLUTION TO QUESTION 6

(a)

(i) **When a Board of Enquiry is Necessary**

i) If fraud is probable

ii) If the loss is substantial

iii) If several Officers are involved.

iv) If the responsibility of Officers is not clearly defined

v) If the loss took place over a period of time and

vi) If collusion is suspected

(ii) **When a Board of Enquiry may not be necessary**

i) If the loss is a small one

ii) If it is an isolated case and

INSIGHT

iii) If the identity of the Officer responsible is indisputable.

(b) **Ways which Loss of Funds can arise.**

- i) Burglary or Theft
- ii) Fraud/misappropriation
- iii) Unpaid advances
- iv) Unremitted Revenue
- v) Revenue Abandoned
- vi) Over-payment to Contractors/ Suppliers

Examiner's Comment

This question tested on how loss of funds is treated and when Board of Enquiry should be constituted or otherwise. Part 'b' is on Loss or shortage of Funds, stating ways it could arise. About 75% of the candidates attempted the question. Less than 45% of them scored about 50% of marks allocated.

AT/142/PII.7

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATION – SEPTEMBER 2015
QUANTITATIVE ANALYSIS**

Time Allowed: 3 Hours

SECTION A: PART I MULTIPLE-CHOICE QUESTIONS (30 MARKS)

ATTEMPT ALL QUESTIONS

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

1. The major disadvantage of the price relative is that it
 - A. Satisfies identity property
 - B. Satisfies time reversal property
 - C. Satisfies cyclical property
 - D. Is not a summary index
 - E. Is usually expressed in percentage

2. The demand for an item is 1,600 units per annum, the cost of an order is ₦36 and holding cost per unit of an item is ₦5 per annum. The number of orders per year is
 - A. 152
 - B. 76
 - C. 73
 - D. 31
 - E. 11

3. Mr. Kodjo's car will not do more than 80 kilometres per hour. What is the inequality for the time taken (t) on a journey of d kilometres, if $d = st$?
 - A. $t \geq \frac{80}{d}$
 - B. $t > \frac{d}{80}$
 - C. $t \leq \frac{d}{80}$

- D. $t < \frac{d}{80}$
- E. $t = \frac{d}{80}$
4. The standard deviation of the following set of numbers: 1, 2, 3, 4 and 5 is
- A. 1.40
- B. 1.41
- C. 1.42
- D. 1.43
- E. 1.44
5. A linear programming problem is infeasible if there is/are value(s) of the decision variables which satisfy all the constraints
- A. No
- B. Single
- C. Two
- D. Three
- E. Four
6. The point of intersection of the supply and demand curves on the same graph is the
- A. Equilibrium
- B. Fixed point
- C. Variable point
- D. Revenue point
- E. Break-even point
7. Which of the following is **NOT** an example of time series data?
- A. Monthly salaries of workers in a company
- B. Enrolment of students in school
- C. Daily production of bottled water in a company
- D. Registered candidates for an examination over a number of years
- E. Daily sales of a supermarket
8. The following table gives the unadjusted and adjusted seasonal indices for four quarters using the method simple average percentage

INSIGHT

Seasonal indices \ Quarters	I	II	III	IV
Unadjusted	102.5	98.5	103.7	98.3
Adjusted	X	97.8	Y	97.6

Find X and Y respectively

- A. 98.7 and 100.5
 - B. 100.7 and 101.5
 - C. 101.7 and 102.9
 - D. 101.8 and 103.0
 - E. 102.3 and 103.3
9. An exponential function is given by $y = a^x$, where a is the base and x is the exponent. If the base is greater than 1, then y becomes
- A. An exponentially growing function
 - B. An exponentially decaying function
 - C. An implicit function
 - D. A logarithmic function
 - E. A quadratic function
10. A statistic of a distribution is a quantity computed from
- A. A population
 - B. The normal distribution
 - C. A sample
 - D. The Poisson distribution
 - E. Average of data from both sample and population
11. In a marketing survey for the introduction of a new product in a town, a sample of 400 persons was drawn. When they were approached for sale of the product, 80 of them purchased the product. Compute the 95% confidence interval for the percentage of persons who would buy the product in the town.
- A. 16% to 24%
 - B. 17% to 24%
 - C. 18% to 24%
 - D. 19% to 24%

INSIGHT

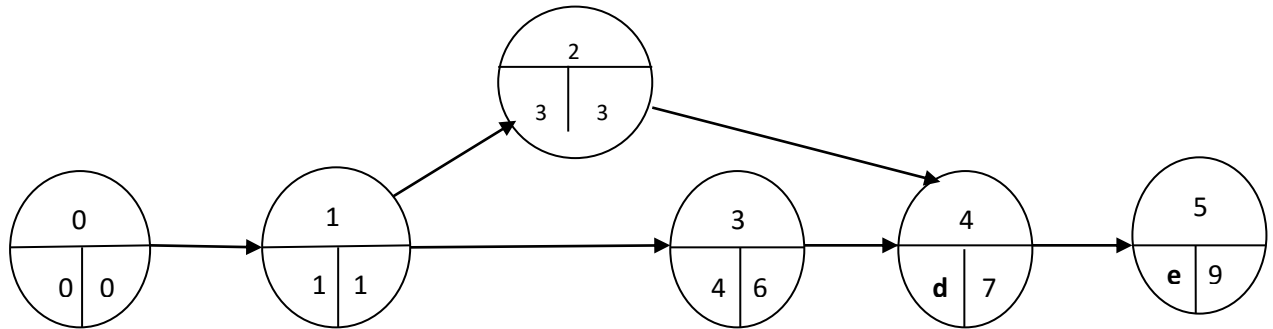
- E. 20% to 24%
12. A demand curve is elastic if elasticity is
- A. Less than one
 - B. Equal to one
 - C. Greater than one
 - D. Equal to zero
 - E. Not equal to one
13. The demand function for a certain item is $p = 182,000 - 2q^2$, where p is the price and q is the quantity produced and sold. Determine the marginal revenue when $q = 100$.
- A. 122,000
 - B. 124,000
 - C. 142,000
 - D. 152,000
 - E. 162,000
14. If DEMISAT has estimated its marginal profit function to be $10e^{0.15q}$, find the total profit when $q = 40$?
- A. 26,828
 - B. 26,829
 - C. 26,892
 - D. 26,895
 - E. 26,896
15. The Vogel's Approximation method makes use of
- A. Difference between transportation costs
 - B. The highest transportation cost
 - C. The least transportation cost
 - D. The highest penalty
 - E. The lowest penalty
16. The error committed based on the method of selecting a sample from a population being studied is known as
- A. Editing error
 - B. Coding error
 - C. Sampling error
 - D. Tabulating error
 - E. Enumerator's error

INSIGHT

17. The type of model most frequently used in Operations Research is a model.
- A. Stochastic
 - B. Probabilistic
 - C. Mathematical
 - D. Symbolic
 - E. Linear
18. Which of the following points is **NOT** a major reason for holding stock?
- A. To ensure that sufficient goods are available to meet anticipated demand
 - B. To take advantage of bulk purchase discounts
 - C. To prevent production processes from flowing smoothly and efficiently
 - D. To absorb variations in demand and production
 - E. To meet possible shortages in future
19. Which of the following is **NOT** included in a carrying cost?
- A. Handling costs
 - B. Insurance and security
 - C. Transport costs
 - D. Storage charges
 - E. Stores staffing and running costs
20. In regression analysis, the two equations usually stated as $\sum y = an + b\sum x$ and $\sum xy = a\sum x + b\sum x^2$ are known as
- A. Regression equations
 - B. Normal equations
 - C. Algebraic equations
 - D. Simultaneous equations
 - E. Straight-line equations
21. The region, where all the constraints are simultaneously satisfied, is known as the
- A. Maximum profit region
 - B. Equilibrium region
 - C. Break-even region
 - D. Feasible region
 - E. Minimum profit region

INSIGHT

22. The activities required to complete a project are as shown in the network below



Find the values of d and e

- A. 3 and 5 respectively
 - B. 5 and 7 respectively
 - C. 7 and 9 respectively
 - D. 9 and 9 respectively
 - E. 9 and 10 respectively
23. The amount by which the objective function increases as a result of availability of one unit less or more of the scarce resource is the of binding constraints
- A. Optimal cost
 - B. Shadow cost
 - C. Least cost
 - D. Binding cost
 - E. Basic cost
24. Which of the following is **NOT** a disadvantage of telephone method of collecting data?
- A. There is no clustering in the sample
 - B. The interviewer cannot control the order of questions
 - C. The interviewer cannot secure spontaneous reaction
 - D. Rate of impersonation is very high
 - E. The interviewer is not in a position to observe certain attributes of the respondents
25. A Committee of 5 members is to be formed from 7 Accountants and 3 Economists, what is the probability that the Committee consists of at least 3 Accountants?

- A. $\frac{10}{21}$
- B. $\frac{13}{21}$
- C. $\frac{15}{21}$
- D. $\frac{16}{21}$
- E. $\frac{18}{21}$

26. The scores of some students in an accounting class is tabulated below.

Score	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79
Number of students	1	3	20	15	21

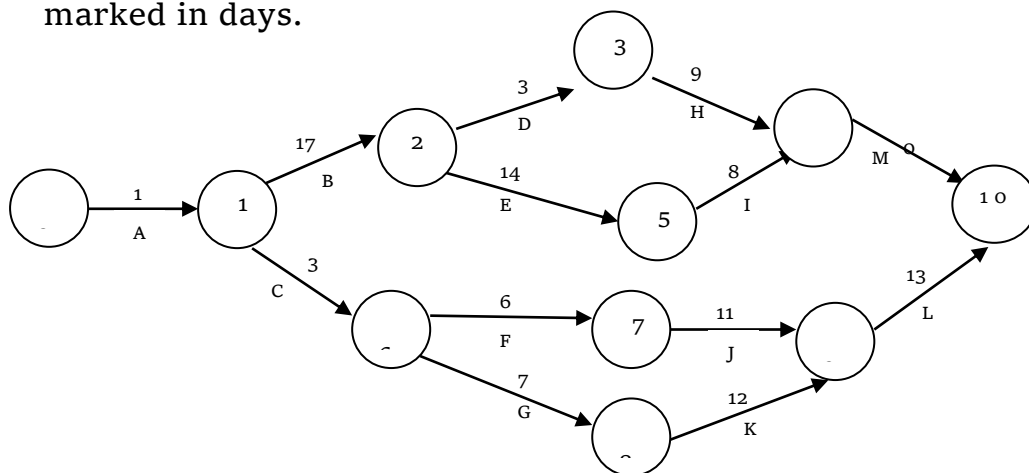
The 60th percentile (P_{60}) is

- A. 57.5
- B. 67.5
- C. 77.5
- D. 87.5
- E. 97.5
27. An investment is estimated to grow at the rate of 15% per annum. If the worth of the investment now is GH¢750,000, in what year will the investment be worth GH¢3.28m?
- A. 11.56 years
- B. 10.71 years
- C. 10.66 years
- D. 10.61 years
- E. 10.51 years
28. A firm rents its premises and the rental agreement provides for a regular annual increase of ~~N~~100,000. If the rent in the first year is ~~N~~400,000, what will be the rent in the tenth year?

INSIGHT

- A. ~~N~~1,450,000
- B. ~~N~~1,400,000
- C. ~~N~~1,350,000
- D. ~~N~~1,300,000
- E. ~~N~~1,250,000

29. The activities to be carried out by the ALYAP Manufacturing Company on a project are as shown in the network below. The durations are marked in days.



Identify the path with the least duration.

- A. A - B - D - H - M
 - B. A - B - E - I - M
 - C. A - C - F - J - L
 - D. A - C - G - K - L
 - E. A - B - F - J - L
30. The price index that tends to overestimate price changes is known as
- A. Simple aggregate price index
 - B. Paasche's price index
 - C. Marshal Edgeworth price index
 - D. Laspeyres' price index
 - E. Fisher's price index

SECTION A: PART II SHORT-ANSWER QUESTIONS
(20 Marks)

ATTEMPT ALL QUESTIONS

INSIGHT

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

1. The typical method for calculating price index uses weights.
2. If C is a constant and X is a random variable, the mathematical expectation of $E(CX)$ is
3. If the primal problem of a linear programming is a minimizing one, the dual problem will be a
4. A stock allowance made to cover errors in forecasting the lead time or demand during the lead time is called
5. The elasticity of the function $y = f(x)$ is the of the in y to the relative change in x .
6. The discount rate that occurs when the net present value is zero is known as
7. The difference between the 8th and 52nd terms of the arithmetic progression, whose first three terms are 210, 205 and 200, is
8. The use of graphical method in solving a linear programming problem requires only two
9. The variation caused by unpredictable events such as flood, disasters, etc, is known as
10. In transportation problem, the method that makes use of penalties in allocation of goods is known as method.
11. Chronological classification deals with classification with respect to
12. Market equilibrium occurs at a point where the quantity of a commodity demanded isto the quantity supplied.
13. The calculation of the is also known as Backward pass.
14. In building a model for a typical Operations Research problem, one must ensure that the model incorporates thefeatures of the problem being studied.
15. The harmonic mean of 3, 4 and 5 is

INSIGHT

16. If $3 - x \leq 1 \leq 5 - x$, the value of x lies within
17. The two common methods of measuring the association between two variables are and
18. Replacement analysis is the process by which the various cost consequences involved are studied so that the replacement decision is taken.
19. If a sample of 5 items having the weights (kg) of 6, 7, 8, 13 and 15 is randomly taken from a population, the standard error of the mean is
20. A hypothesis that completely specifies the value of population parameter under study is known ashypothesis.

INSIGHT

**SECTION B: ATTEMPT ANY FOUR QUESTIONS OUT OF WHICH AT
LEAST ONE MUST COME FROM EACH SUB-SECTION
(50 Marks)**

SUB-SECTION 1

QUESTION 1

The Structural Adjustment Programme (SAP) pushed the prime lending rate to an all-time record of 23%. The President of the country, in an attempt to reduce the burden on the masses, introduced a deflationary budget in January 2013, leading to what a banker termed a downward trend in the prime lending rate. To verify whether or not the prime rate has actually fallen, copies of questionnaires were sent out to 12 different banks and their replies were as follows: 18%, 23%, 14%, 22%, 19%, 16%, 15%, 13%, 12%, 18%, 24% and 22%.

You are required to:

Test the hypothesis that the banking prime rate has actually fallen. (Use $\alpha = 5\%$ level of significance)

(Total

12½Marks)

QUESTION 2

The data below shows the daily returns (N'000) from a particular branch to the head office of a bank for 60 days.

10	75	35	37	23	52	53	68	3	49
15	24	40	30	27	55	11	28	13	25
41	39	41	2	43	10	2	14	17	22
57	57	30	17	16	20	30	15	25	34
27	25	45	85	19	47	33	98	13	70
14	10	67	26	25	53	62	68	76	88

You are required to:

- Summarize the above data with the aid of frequency distribution table with classes 0 – 10, 10 – 20, etc. (5 Marks)
- Construct the frequency histogram to examine the spread of the data. (4½ Marks)
- From the frequency table, determine the
 - number of days the branch made returns to the head office.
 - number of days the branch made a return of more than N70,000.

INSIGHT

- iii. percentage of the days during which the branch made returns of at most ~~N~~49,000. (3 Marks)

(Total 12½ Marks)

SUB-SECTION II

QUESTION 3

The estimated revenue and cost functions of AKTDE Bookshop are given respectively as $R(x) = 2x$ and $C(x) = x+10$ where x is the number of books bought and sold.

You are required to:

- a. Use the graphical approach to identify the Break-Even Point (BEP) for the bookshop (7 Marks)
- b. Use your graph to determine the Break-Even Revenue (BER) and Break-Even Quantity (BEQ) (2Marks)
- c. Interpret your answers in (b) (1½ Marks)
- d. Identify clearly, the profit and loss areas on your graph (2Marks)

(Total 12½ Marks)

QUESTION 4

An executive resolved to purchase a house in 20 years. His programme is to deposit ~~N~~100.00 in a new savings account on the first of November 1992 and on the first of each subsequent month, he will add ~~N~~40.00 more to the savings account than the last deposit.

You are required to:

- a. Calculate what he will deposit into this account on the first of November 2012. (3½ Marks)
- b. Determine how much he would have in the account on the first of November 2012 (2½ Marks)

INSIGHT

- c. If the bank will be paying an interest of 18 percent per annum compounded monthly, determine how much more or less the Executive will have (or borrow) to purchase a house which price will be ₦5 million at the end of November 2012?

(6½ Marks)

(Total 12½ Marks)

SUB-SECTION III

QUESTION 5

A company's 3-wheeler vehicle costs ₦120,000. It is the company's policy to replace vehicles as they wear out gradually due to increasing cost of maintenance to put them in good condition. The following data have been estimated on annual maintenance cost and resale value:

Year	1	2	3	4	5	6
Resale value at year end (₦)	96,000	76,000	57,800	42,000	28,500	17,500
Annual maintenance cost (₦)	6,400	9,000	13,500	16,500	18,750	20,500

You are required to:

Determine the least cost point at which the company should replace the vehicle with a new one.

(Total 12½ Marks)

QUESTION 6

The activities for a simple project are as given in the table below:

Activity	Preceding Activity
A	-
B	-
C	A
D	A
E	A
F	C

INSIGHT

G	C
H	C
J	B, D
K	F, J
L	E, H, G, K
M	E, H
N	L, M

You are required to:

- a. Draw the Activity-On -Arrow diagram for this project
(6½ Marks)
- b. List all the possible paths in the network (4 Marks)
- c. State the necessity for introduction of dummy in the network (2 Marks)

(Total 12½ Marks)

SOLUTION

SECTION A PART 1

MULTIPLE - CHOICE QUESTION

- | | |
|-----|---|
| 1. | D |
| 2. | E |
| 3. | B |
| 4. | B |
| 5. | A |
| 6. | A |
| 7. | B |
| 8. | C |
| 9. | A |
| 10. | C |
| 11. | A |
| 12. | C |
| 13. | A |
| 14. | B |
| 15. | D |
| 16. | C |
| 17. | C |
| 18. | C |
| 19. | C |
| 20. | B |
| 21. | D |
| 22. | C |
| 23. | B |
| 24. | A |
| 25. | A |
| 26. | B |
| 27. | A |
| 28. | D |

29. C

30. D

Examiners' Comment

These questions are in three sections:

- ✓ 1 – 10, candidates' performance was just fair with about 75% of them scoring 5 out of 10 marks;
- ✓ 11 – 20, candidates' performance was just above average;
- ✓ 21 – 30, performance here was also just fair.

Generally, the candidates' performance was fair. The syllabus is fairly covered.

WORKINGS

$$\begin{aligned}
 2. \quad Q &= \sqrt{\frac{2cd}{h}} = \sqrt{\frac{2(36)(1600)}{5}} \\
 &= \sqrt{\frac{115,200}{5}} \\
 &= 151.79 \cong 152
 \end{aligned}$$

∴ Number of orders per year is

$$\begin{aligned}
 \frac{\text{Demand}}{Q} &= \frac{1600}{152} \\
 &= 10.53 \cong 11 \text{ orders}
 \end{aligned}$$

$$8. \quad 102.5 + 98.5 + 103.7 + 98.3 = 403 \text{ (which is supposed to be 400)}$$

$$x = \frac{102.5 \times 400}{403} = 101.7$$

$$y = \frac{103.7 \times 400}{403} = 102.9$$

$$11. \quad p = \frac{80}{400} = 0.2; \quad 1 - p = 0.8$$

$$\begin{aligned}
 \text{C.I.} &= \bar{p} \pm 1.96 \sqrt{\frac{pq}{n}} = 0.2 \pm 1.96 \sqrt{\frac{(0.2)(0.8)}{400}} \\
 &= 0.2 \pm 0.04 \Rightarrow 0.16 \leq p < 0.24
 \end{aligned}$$

13. (q) = $182000q - 2q^3$

$$\frac{dR}{dq} = 182000 - 6q^2$$

When $q = 100$

$$\frac{dR}{dq} = 182000 - 60000 = 122000$$

$$\begin{aligned} 14. \quad \int_0^{40} (10e^{0.15q}) dq &= \frac{10e^{0.15q}}{0.15} \Big|_0^{40} \\ &= \frac{10e^6}{0.15} - \frac{10e^0}{0.15} \\ &= 26,828.6 \cong 26,829 \end{aligned}$$

22. $d = 0 + 1 + 2 + 4 = 7$

$e = d + 2 = 9$

25. The possibilities are

3 Accountants and 2 Economists or

4 Accountants and 1 Economist or

5 Accountants and 0 Economist

i.e. the required probability is

$$= \left(\frac{3}{7} \times \frac{2}{3} \right) + \left(\frac{4}{7} \times \frac{1}{3} \right) + \left(\frac{5}{7} \times \frac{0}{3} \right)$$

$$= \frac{10}{21}$$

26. $p_{60} = L_1 + \frac{\left(\frac{60N}{100} - \sum f_i \right)}{fp_{60}},$

$$= 59.5 + \left(\frac{36 - 24}{15} \right) 10$$

$$= 59.5 + \frac{120}{15}$$

$$= 67.5$$

$$N = 60$$

$$\frac{60}{100} \times \frac{60}{1} = 36$$

$$L_1 = 59.5; \quad c = 10$$

$$\sum f_1 = 24; \quad fp_{60} = 15$$

INSIGHT

27. n^{th} term = N3.28m; $a = 750,000$; $r = 1.15$

$$\therefore 3,280,000 = 750,000 (1.15)^{n-1}$$

Divide both sides by 750,000

$$4.3733 = (1.15)^{n-1}$$

$$\log 4.3733 = (n - 1) \log (1.15)$$

$$n - 1 = \frac{\log 4.3733}{\log(1.15)} = 10.5573$$

$$\therefore n = 10.5573 + 1 = 11.56$$

28. Rent in 10th year = $a + (n - 1) d$

Where $a = 400,000$; $n = 10$; $d = 100,000$

$$= 400,000 + (10 - 1) 100,000$$

$$= 400,000 + 900,000$$

$$= \text{N}1,300,000$$

29.

$$\text{A} - \text{B} - \text{D} - \text{H} - \text{M} = 1 + 17 + 3 + 9 + 10 = 40 \text{ days}$$

$$\text{A} - \text{B} - \text{E} - \text{I} - \text{M} = 1 + 17 + 14 + 8 + 10 = 50 \text{ days}$$

$$\text{A} - \text{C} - \text{F} - \text{J} - \text{L} = 1 + 3 + 6 + 11 + 13 = 34 \text{ days}$$

$$\text{A} - \text{C} - \text{G} - \text{K} - \text{L} = 1 + 3 + 7 + 12 + 13 = 36 \text{ days}$$

The path with the lowest duration is A - C - F - J - L

SECTION A PART II

SHORT ANSWER QUESTION

1. Constant
2. $CE(x)$
3. Maximizing one
4. Buffer stock or safety stock

INSIGHT

5. Ratio, relative change (in that order)
6. Internal Rate of Return (IRR)
7. 220
8. Decision variables
9. Irregular or random
10. Vogel's Approximation
11. Time or Date
12. Equal
13. Latest Start Time
14. Essential/Basic
15. 3.83 or 3.8 or 3.846 or 3.8297 or 3.85
16. $2 \leq x \leq 4$
17. Pearson's Product Moment; Spearman's Rank Correlation Coefficient
18. Optimum
19. 1.58 or 1.6
20. Simple Hypothesis

Examiner's comment:

Generally, candidates did not perform well here as less than 30% of them doing fairly well. The syllabus is fairly covered.

WORKINGS

$$\begin{aligned} 7. \quad T_8 &= a + 7d \\ &= 210 + 7(-5) \\ &= 175 \\ T_{52} &= a + 51d \\ &= 210 + 51(-5) \\ &= -45 \\ \therefore T_8 - T_{52} &= 175 - (-45) \\ &= 220 \end{aligned}$$

$$15. \quad \text{Harmonic mean (H)} = \frac{N}{\sum \frac{1}{x}}$$

INSIGHT

$$= \frac{3}{\frac{1}{3} + \frac{1}{4} + \frac{1}{5}} = \frac{3}{\frac{20+15+12}{60}}$$

$$= \frac{180}{47} = 3.83$$

19. $\bar{x} = \frac{49}{5} = 9.8$

$$S^2 = \frac{14.44 + 7.84 + 3.24 + 10.24 + 27.04}{5}$$

$$= \frac{62.8}{5} = 12.56$$

$$\therefore S = \sqrt{12.56} = 3.54$$

Hence,

$$\text{S.E.} = \frac{S}{\sqrt{n}} = \frac{3.54}{\sqrt{5}}$$

$$= \frac{3.54}{2.24} = 1.58$$

SECTION B

SOLUTION TO QUESTION 1

$H_0: \mu = 23$ or Prime lending rate has not actually fallen

$H_1: \mu < 23$ or Prime lending rate has actually fallen

X	$(x - \bar{x})^2$	x^2
18	0	324
23	25	529
14	16	196
22	16	484
19	1	361
16	4	256
15	9	225
13	25	169
12	36	144
18	0	324
24	36	576
22	16	484

OR

INSIGHT

$$\begin{aligned}
 & \begin{array}{c|cc} 216 & 184 & 4072 \end{array} \\
 \bar{x} &= \frac{\sum x}{n} = \frac{216}{12} = 18 \\
 S^2 &= \frac{\sum (x - \bar{x})^2}{n-1} = \frac{184}{12-1} = 16.7272 \\
 \therefore S &= \sqrt{16.7272} = 4.09
 \end{aligned}$$

OR

$$\begin{aligned}
 S &= \sqrt{\frac{\sum x^2}{n-1} - \frac{(\sum x)^2}{n(n-1)}} \\
 &= \sqrt{\frac{n \sum x^2 - (\sum x)^2}{n(n-1)}} \\
 &= \sqrt{\frac{12(4072) - (216)^2}{12(12-1)}} \\
 &= 4.09
 \end{aligned}$$

$$\text{Test statistic is t-test} = \frac{\bar{x} - \mu}{s / \sqrt{n}}$$

$$|t| = \frac{18 - 23}{4.09 / \sqrt{12}} = \frac{-5}{1.18} = 4.24$$

$$\text{But } t_{n-1}(5\%) = t_{11}(5\%) = 1.80$$

Since $t_{cal} > t_{tab}$ we reject H_0 , and we conclude that the banking prime lending rate has actually fallen.

Examiner's Comment

This is on hypothesis testing of small samples using the t-test. Less than 5% of the candidates attempted the question with only 3% of them scoring 5 out of the maximum mark of 12½. The performance was generally poor. The main pitfall identified was their shallow knowledge of the principle governing hypothesis testing especially with respect to small samples.

Candidates' should be advised not to ignore any aspect of the syllabus.

SOLUTION TO QUESTION 2

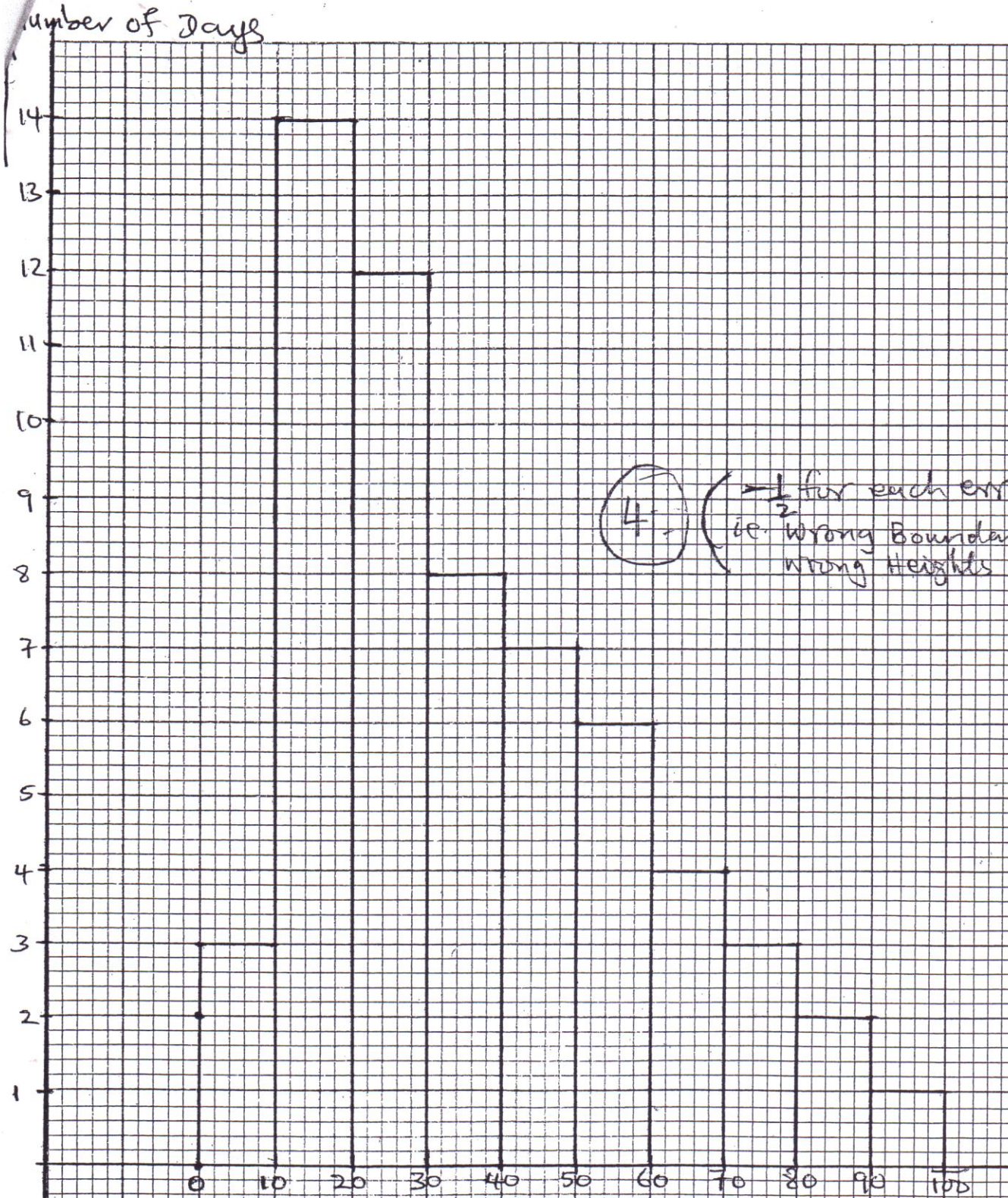
(a)

X (R'000)	Tally	F
0 - 10	III	3
10 - 20	IIII IIII IIII	14
20 - 30	IIII IIII II	12
30 - 40	IIII III	8
40 - 50	IIII II	7
50 - 60	IIII I	6
60 - 70	IIII	4
70 - 80	III	3
80 - 90	II	2
90 - 100	I	1
		60

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

No of Question.....

Candidate's No.....



Title: Histogram Showing the Distribution of Daily Rainfall

(c) (i) Number of days the branch made returns to the head office is Σf

$$= 3 + 14 + 12 + 8 + 7 + 6 + 4 + 3 + 2 + 1$$

$$= 60 \text{ days}$$

(ii) Number of days the branch made returns of at least N70,000 is

$$= 3 + 2 + 1$$

$$= 6 \text{ days}$$

(iii) Number of days the branch made returns of at most N49,000

$$= 7 + 8 + 12 + 14 + 3$$

$$= 44$$

\therefore the percentage of the total number of days

$$= \frac{44}{60} \times \frac{100}{1} = 73.33\%$$

Examiner's Comment

The question tests candidates' knowledge of handling statistical data with respect to using "continuous type of class intervals." The constructed frequency table is used to draw a histogram. About 99% of the candidates attempted the question with about 20% scoring the average mark. The major pitfall identified was their inability to differentiate between class limits and class boundaries. They also had difficulty in understanding the "continuous types of class intervals."

Candidates should note that a class interval of 1 to 10 implies a class interval containing 1 and all numbers less than 10.

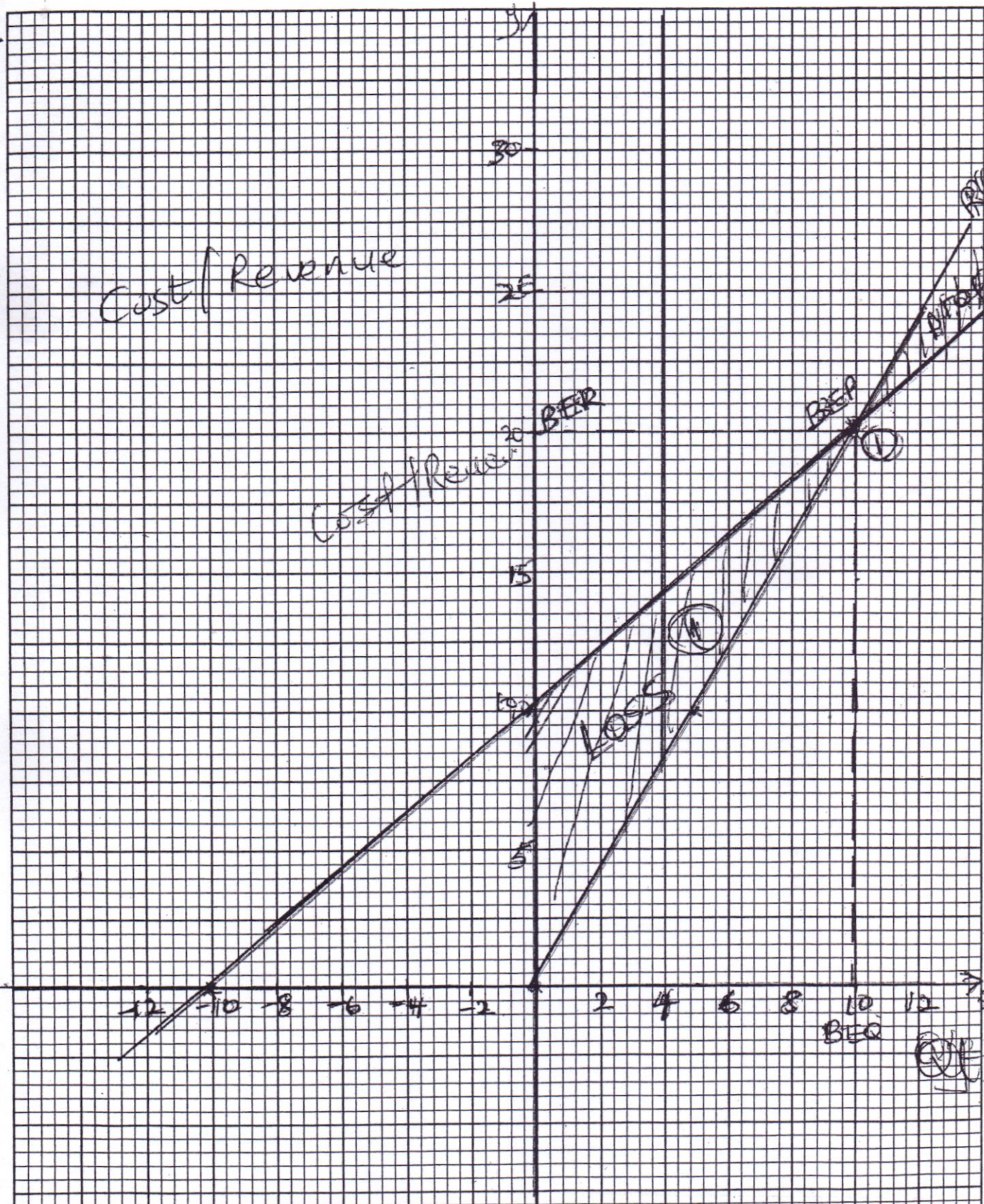
SOLUTION TO QUESTION 3

- i. For $C(x) = x + 10$
 When $x = 0$; $C(x) = 10$
 $\therefore (0, 10)$ is a point on the line
 When $C(x) = 0$; $x = -10$
 $\therefore (-10; 0)$ is a point on the line
 For $R(x) = 2x$
 When $x = 0$; $R(x) = 0$
 $\therefore (0, 0)$ is a point on the line
 By using any value of x
 i.e. when $x = 5$; $R(x) = 10$
 $\therefore (5, 10)$ is a point on the line
 The two graphs are as shown

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

No of Question.....

Candidate's No.....



- a. The break-even point (BEP) for the bookshop is the point of intersection of the two straight lines i.e. (10, 20)
- b. From the graph, the break-even revenue and break-even quantity respectively are

$$\text{BER} = 20 \quad \text{and} \quad \text{BEQ} = 10$$
- c. The implication of $\text{BEQ} = 10$ and $\text{BER} = 20$ is that books are bought and sold for the same amount which is 20. This means there is no loss and there is no profit.
- d. The loss and profit areas are as indicated on the graph.

Examiner's Comment:

The question is on the Break-Even Analysis. Candidates' knowledge of Break-Even Point (BEP), Break-Even Revenue (BER) and Break-Even Quantity (BEQ) is tested. Candidates are expected to deduce the BEP from the relevant graphs of Revenue and Cost. About 50% of the candidates attempted the question with about 20% scoring marks above average. The pitfall identified were the inability of the candidates to draw straight line graphs and not drawing their graphs according to scale.

SOLUTION TO QUESTION 4

100		140		180		?
Nov. 1992	;	Dec. 1992	;	Jan. 1993	;	Nov. 2012

$$\text{Number of months, } n = 240 + 1 = 241$$

- a. Deposit on the first of November 2012

$$\begin{aligned}
 a_{241} &= a + (n - 1) d \\
 &= 100 + (241 - 1) (40) \\
 &= 100 + 240 (40) \\
 &= 100 + 9,600 \\
 &= \text{N}9,700
 \end{aligned}$$

- b. $a = 100$; $\ell = 9,700$; $n = 241$

$$S_n = \frac{n}{2}[a + \ell] \quad \text{or} \quad \frac{n}{2}[a + (n-1)d]$$

$$S_n = \frac{241}{2}[100 + 9,700]$$

INSIGHT

$$= 241 \left(\frac{9,800}{2} \right) = \text{N}1,180,900$$

c. $ax^n, (a+d)x^{n-1}, (a+2d)x^{n-2}, \dots, [a+(n-2)d]x^2; [a+(n-1)d]x$

$$S_n = \frac{[a+(n-1)d]x - ax^{n+1}}{1-x} + dx^2 \left[\frac{x^{n-1} - 1}{(x-1)^2} \right], \quad x = 1.015$$

$$= \frac{(9,700)(1.015) - (100)(1.015)^{242}}{1 - 0.015} + 4000(1.015)^2 \left[\frac{(1.015)^{240} - 1}{(1.015 - 1)^2} \right]$$

$$= \frac{9845.5 - 3670.98174}{0.985} + 41.209 \left[\frac{34.63281555}{2.25 \times 0.000225} \right]$$

$$= 6,268.546457 + 6,343,038.649$$

$$= \text{N}6,349,307.195$$

The amount has exceeded N5,000,000

$$\text{N}6,349,307.195 - \text{N}5,000,000 = \text{N}1,349,307.20 \text{ (gain)}$$

Examiner's Comment

Candidates' knowledge of Mathematics of Finance is tested in the question. It tests the candidates' ability to solve problem in irregular annuity. About 80% of the candidates attempted the average mark. Parts (a) and (b) of the question should have been easy for the candidates but most of them did not write out the relevant formulae correctly and they could not determine the value of n (i.e. the number of months) correctly. Part (c) was poorly attempted as 90% of the candidates did not attempt it at all.

SOLUTION 5

Year	A	B	C	D	E	F
	Annual Capital loss	Cumulative Capital loss	Annual maintenance cost	Cumulative maintenance cost	Cumulative total cost	Average annual cost
1	24,000	24,000	6,400	6,400	30,400	30,400
2	20,000	44,000	9,000	15,400	59,400	29,700
3	18,200	62,200	13,500	28,900	91,100	30,366.67
4	15,800	78,000	16,500	45,400	123,400	30,850
5	13,500	91,500	18,750	64,150	155,650	31,130
6	11,000	102,500	20,500	84,650	187,150	31,191.67

Sample calculation

For annual capital loss (A)

$$\text{First entry} = 120,000 - 96,000 = 24,000$$

Cumulative total cost (E) = Cumulative Capital Cost + Cumulative Maintenance Cost

$$\text{First entry} = 24,000 + 6,400 = 30,400$$

$$\text{Average annual Cost (F)} = \frac{\text{Cumulative total Cost}}{\text{Year}}$$

$$\text{First entry} = \frac{30400}{1} = 30,400$$

$$\text{Second Entry} = \frac{59400}{2} = 29700$$

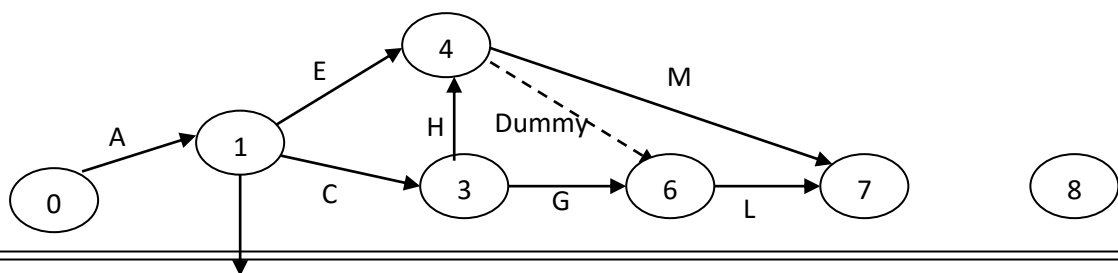
From the table, it shows that the average annual cost is minimal in the second year. Hence, the best replacement point is at the end of the year 2 i.e. the 3-wheeler vehicle should be replaced in the second year.

Examiner's Comment

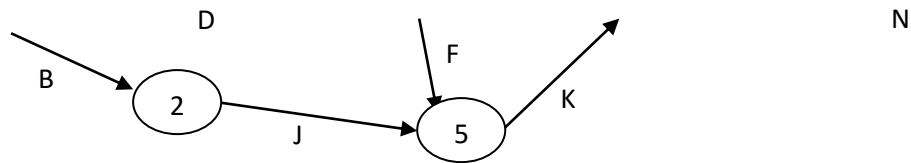
This question is on Replacement Theory with emphasis on Maintenance Cost. On the whole, about 40% of the candidates attempted the question. 30% did excellently well; 35% performed averagely well while about 35% performed poorly. The pitfall identified was that majority of them that did not do well. Most of them used the Least Squares method to solve the question. This is not correct, hence, the very poor performance

SOLUTION TO QUESTION 6

a.



INSIGHT



b. All the possible paths are

1. A - E - M - N
2. A - E - Dummy - L - N
3. A - C - H - M - N
4. A - C - H - Dummy - L - N
5. A - C - G - L - N
6. A - C - F - K - L - N
7. A - D - J - K - L - N
8. B - J - K - L - N

c. Dummies are used to sustain the network drawing pattern and rules when

- i. two activities start and end in the same event, i.e. a case of loops
- ii. there is case of dandlers, i.e. when a particular activity is disconnected from the entire network.

A dummy is introduced between nodes 4 and 6 in order to preserve the logic sequence of the network. It is necessary because of the requirements of the preceding activities E and H to L.

Examiner's Comment

Network Theory is the subject of this question. Ability of the candidates to draw Network diagram based on Activity-On Arrow concept is tested. The introduction of Dummy in Network diagram is also tested. About 98% of the candidates attempted the question with less than 20% of them obtaining above average. The inability of most of the candidates to draw the required diagram was the major pitfall identified.

AT/151/PII.8

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATION- SEPTEMBER 2015
INFORMATION TECHNOLOGY**

Time Allowed: 3 Hours

SECTION A: PART I MULTIPLE-CHOICE QUESTIONS (30 MARKS)

ATTEMPT ALL QUESTIONS

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

1. A printer that works by having wires or embossed characters, strikes on a piece of paper or ribbon to form impression on a page is called
 - A. Page Printer
 - B. Ink-Jet Printer
 - C. Non-Impact Printer
 - D. Impact Printer
 - E. Thermal Transfer Printer
2. The part of the processor where arithmetic and logic operations are carried out is referred to as
 - A. Control Unit
 - B. External Memory
 - C. Central Processing Unit(CPU)
 - D. Arithmetic Logic Unit
 - E. Main Memory
3. A support equipment that transmits data to or receives output information from the Central Processing Unit (CPU) over a communication line is classified as

INSIGHT

- A. MODEM
 - B. Offline equipment
 - C. Online equipment
 - D. Communication terminal
 - E. Terminals
4. The processor speed of a microcomputer is measured in
- A. Byte
 - B. Bits
 - C. Hertz
 - D. Gigabyte
 - E. Megabyte
5. A temporary holding area for data that is subjected to repeated access is called a
- A. Cache
 - B. Processor
 - C. Main storage
 - D. ROM
 - E. Front-end processor
6. An Operating System (OS) may contain a Graphical User Interface (GUI) which includes, graphics and icons and are commonly navigated by using a mouse. Identify an example of the above OS from the list below.
- i. Windows 3.1
 - ii. Windows 98
 - iii. Windows ME
- A. i only
 - B. ii only
 - C. i, ii and iii
 - D. iii only
 - E. ii and iii
7. An operating system that allows for many users to use the same computer at the same time is known as
- A. Multi - user
 - B. Multiplexor
 - C. Operating system user
 - D. Same user
 - E. Different user

8. Which of the following is **NOT** a software application for most personal computers?
- A. Database Management System
 - B. Web browser
 - C. Word processing
 - D. Batch processing
 - E. Spreadsheet
9. Application software can be broadly divided into the following classes. Identify the correct one
- i. Word processor
 - ii. Spread sheet
 - iii. Database Management System
 - iv. Browser
- A. i and iv
 - B. i, ii, iii and iv
 - C. i, iii, and iv
 - D. i and ii
 - E. ii, iii and iv
10. A software which allows users to store information, create content and media as well as.....is called application software
- i. Access information
 - ii. Run the computer hardware
 - iii. Process other users' applications
 - iv. Process other users' hardcopies
- A. i only
 - B. i and ii
 - C. i, ii and iii
 - D. i, ii and iv
 - E. i, ii, iii and iv
11. An organized collection of logically related data is known as

INSIGHT

- A. Data house
 - B. Database
 - C. Data mining
 - D. Data warehouse
 - E. Data model
12. Which of the following is **NOT** a characteristic of good Information?
- A. Accuracy
 - B. Timely
 - C. Reliable
 - D. Voluminous
 - E. Relevant
13. A number system that has its digits as 0 and 1 is known as
- A. Octal number system
 - B. Decimal Number system
 - C. Hexadecimal Number System
 - D. Double number system
 - E. Binary Number System
14. Decimal number 29 in base two is
- A. 1 1 1 0 1
 - B. 1 0 1 1 1
 - C. 1 1 0 1 1
 - D. 1 0 0 0 1
 - E. 1 0 0 1 1
15. Which of the following is **NOT** an information processing technique?
- A. Centralized
 - B. Decentralized
 - C. Distributed
 - D. Associated
 - E. Time sharing
16. Which of these items carry an electronic signal between sender and receiver?
- A. Modem

INSIGHT

- B. Communication protocol
 - C. Transmission media
 - D. Telecommunication
 - E. Front End Processor
17. Which of the following is **NOT** a way to gain access to a network?
- A. LAN Server
 - B. Usenet
 - C. Point - to - point protocol
 - D. LAN client
 - E. Online service
18. What is the standard description language for web pages?
- A. Home page language
 - B. Hypermedia Markup Language
 - C. Java
 - D. Hypertext Markup Language
 - E. Uniform Resource Locator
19. The type of communication in which the receiver gets the message minutes, hours or days after it is sent is known as:
- A. Asynchronous Communication
 - B. Synchronous Communication
 - C. Serial Communication
 - D. Voice Communication
 - E. Phone Communication
20. Which communication channel allows data to be transmitted in both directions but not simultaneously?
- A. Simplex
 - B. Full Duplex
 - C. Half Duplex
 - D. Synchronous transmission
 - E. Asynchronous transmission

INSIGHT

21. Which of the following is **NOT** the reason why it is often necessary to revisit previous stages in the System Development Life Cycle?
- A. Design oversights or errors
 - B. System errors discovered
 - C. Changes in system requirements
 - D. Requirements have been ill-defined
 - E. Management gives its approval
22. Which of these approaches reduces errors in systems development?
- A. Education and training
 - B. Active involvement by senior staff
 - C. Prototyping
 - D. New approach to business self-image
 - E. Problem definition
23. An organization not having its own computer system can process data electronically using the following methods **EXCEPT**
- A. Senior system analyst
 - B. Manual processing
 - C. Electronic Accounting machines
 - D. Service bureau
 - E. Rental of computer time
24. Which of the following is **NOT** included in a Feasibility Study Report?
- A. Current system issues
 - B. Terms of reference
 - C. Internal Rate of Return
 - D. Executive summary
 - E. Conclusion
25. Which of the following is **NOT** a disadvantage of using computer service bureaux?

INSIGHT

- A. Loss of control over time taken to process data
 - B. Insufficient workload to justify the installation of in-house computer
 - C. Inability of a client staff to gain experience in computing
 - D. Possible loss of competitive advantage where client depends solely on bureau
 - E. Secrecy of the client may be impaired
26. The **TRUE** identity of a user of information may be determined using
- A. Firewall
 - B. Identification
 - C. Authentication
 - D. Proxy server
 - E. Gateway
27. What is the name given to the formal investigative technique used to evaluate digital information for judicial review?
- A. Computer forensic
 - B. Computer data diddling
 - C. Computer ethics
 - D. Computer phreaking
 - E. Computer auditing
28. The sending of bogus messages purportedly from legitimate institution to pry personal information from consumers by convincing them to go to a spoof website is called
- A. Phishing
 - B. Vishing
 - C. Piggybacking
 - D. Phreaking
 - E. Masquerading
29. A centrally managed group of web pages containing texts, images and all types of multimedia files presented to internet users in an easily accessible way is called
- A. E-mail
 - B. Web-centre page
 - C. Web
 - D. Web Centre
 - E. Website

INSIGHT

30. Which of the following is a process in Forensic Computing?

- A. Specialisation
- B. Separation
- C. Preservation
- D. Authentication
- E. Combination

SECTION A: PART II

SHORT-ANSWER QUESTIONS

(20 Marks)

ATTEMPT ALL QUESTIONS

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

1. The computer crime committed by copying software illegally is known as
2. A software that accesses and manages both traffic and security between clients and servers in a network is known as.....
3. The system software associated with the conversion of a source program to an object program is known as
4. An electronic device that is capable of accepting data, processing data and producing information at a very high speed with accuracy is called
5. A computer that measures in continuous variable is called
6. An optical scanning equipment used to record purchases as source data entry and generates an electronic cash register is called
7. Processing technique that is performed in one computer or in a cluster of coupled computers in a single location is known as.....
8. A number system that has its digits between 0 and 7, with highest number 7 and least number 0 is known as
9. In users' interaction with the personal computer, what is the meaning of the acronym GUI?.....
10. Computer files can be viewed physically and
11. A record showing who has accessed a computer system and what operations he or she has performed during a given period is referred to as
12. What is the name given to the unsolicited messages usually found in e-mails and mobile devices?

INSIGHT

13. The real-time exchange of information between people who are not in the same physical space is called
14. What name refers to the computer-to-computer exchange of business documents in a standard electronic format between business partners?
15. A preliminary study undertaken by an organization to find out if it will be feasible for it to acquire, maintain and profit from the use of a computer system is called
16. The Change of the old file data into the form required by the new system is referred to as
17. At the implementation stage, the changing from the old system to the new system is called
18. Any company that provides individuals or organizations with access to the Internet is referred to as.....
19. Data gathered based on the websites visited and the items clicked on is called data
20. Any of the several types of software that enables users of computers in remote locations to work together on the same project is called

SECTION B

ATTEMPT ANY FOUR QUESTIONS

(50 Marks)

QUESTION 1

- a. List **FIVE** special keys of a standard keyboard (2½ Marks)
- b. State **FIVE** contents of the primary memory in a PC (6 Marks)
- c. Describe what you understand by an Immediate Access Storage (IAS) and give **ONE** example (4 Marks)

(Total 12½ Marks)

QUESTION 2

A computer administrator requires **TWO** types of software

You are required to:

- a. State what you understand by a software application package (2½ Marks)

INSIGHT

- b. List **FIVE** operating systems used in a PC (5 Marks)
- c. List and Explain **FIVE** functions of a computer administrator (5Marks)

(Total 12½Marks)

QUESTION 3

Files are essential parts of a Computer System

You are required to:

- a. Describe **SIX** types of files (6 Marks)
- b. Explain the following terms as used in file processing
- i. Hit rate
 - ii. Volatility
 - iii. Access time (6½ Marks)

(Total 12½ Marks)

QUESTION 4

ONE of the major developments in Information Communication Technology (ICT) is the use of Electronic Data Interchange (EDI)

You are required to:

- a. Define the term “Electronic Data Interchange” (EDI) (1½ Marks)
- b. Enumerate any **THREE** benefits of EDI (3 Marks)
- c. Describe what roles each of the following hardware devices play in a network
- i. Bridge
 - ii. Repeater
 - iii. Switch
 - iv. Hub (8 Marks)

(Total 12½ Marks)

QUESTION 5

INSIGHT

One technique of systems development is Systems Development Life Cycle which comprises of many phases including feasibility study

You are required to:

- a. Define feasibility study (2½ Marks)
 - b. List **FOUR** key members of a Feasibility Study Committee (2 Marks)
 - c. Justify the importance of each member in (b) above (4 Marks)
 - d. List **FOUR** functions of a Feasibility Study Committee (4 Marks)
- (Total 12½ Marks)**

QUESTION 6

Cloud Computing and e-mail services are relatively new developments in the ICT world

Required:

- a.
 - i. What is cloud computing (1 Mark)
 - ii. List **FIVE** cloud computing providers (2½ Marks)
 - b.
 - i. What is an e-mail (1 Marks)
 - ii. Explain briefly **FOUR** benefits of using an e-mail service (8 Marks)
- (Total 12½ Marks)**

SECTION A: PART I ANSWER (Multiple Choice)

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

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

Examiner's Comment:

This section consisted of thirty compulsory questions which covered almost all sections of the syllabus. The performance was good as over 60% of the candidates scored above 50% of the allocated marks.

SECTION A: PART II ANSWER

1. Software piracy
2. Network Operating System (NOS)
3. Language Translator
4. Computer system
5. Analog computer
6. Point – of – Sale (POS)
7. Centralized processing

8. Octal Number System/Base 8 Number System
9. (GUI) Graphical user interface
10. Logically
11. Log
12. Spam
13. Teleconferencing
14. Electronic Data Interchange (EDI)
15. Feasibility study
16. File conversion
17. Changeover
18. Internet Service Provider (ISP)
19. Clickstream
20. Groupware

Examiner's Comment:

This section consisted of twenty compulsory questions which covered almost all sections of the syllabus. The performance was bad, as over 50% of the candidates scored below 40% of the allocated marks.

The major pitfall was that most candidates could not give correct expected technical terms. Candidates must study very hard in order to be familiar with the technical terms

SOLUTION TO QUESTION 1

- a. Contents of a standard keyboard include
 - i. Function keys (F1 – F12)
 - ii. Ctrl key
 - iii. Alt key
 - iv. Shift key
 - v. Tab key
 - vi. Cap lock key
 - vii. Page up/Page down keys
 - viii. Back space key
 - ix. Delete key
 - x. Enter key
 - xi. Home/End keys
 - xii. Insert key
 - xiii. Esc key

- b. Contents of the Primary Memory in a Personal computer include:
- i. Programs - which contain instructions that will be used for processing
 - ii. Data - that have been read from an input device or a secondary storage.
 - iii. Data that are currently being processed.
 - iv. Output information that is ready to be sent to an output device
 - v. Programs that start/boot the computer system
- c. Immediate Access Storage (IAS) - refers to the location in the computer system where data and stored instructions can be accessed and addressed very quickly.

Example - Data and programs needed for immediate uses are in the main/primary memory. Another example is the cache memory.

Examiner's Comment:

This question tests the understanding of the candidates on the features of the standard computer keyboard. It also demands for the contents of the primary memory and the nature of the Immediate Access Memory.

The performance was good as over 60% of the candidates scored above 50% of the allocated marks. The major pitfall was that many of the candidates could not give the contents of the primary storage.

Candidates are advised to be very familiar with this basic topic

SOLUTION TO QUESTION 2

- a. Application Software is the generic name for all the computer programs that cause a computer to perform useful task beyond the running of the computer itself.

Application software consists of programs designed to perform specific tasks for users.

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Examples of such tasks include, assisting with graphics and multimedia projects to support homes, personal and educational activities and to facilitate communications.

Specific application software products called software packages are available from software vendors and either source.

- b. Types of operating system in personal computers include:
- i. DOS
 - ii. Windows
 - iii. Unix
 - iv. linux
 - v. OS/2
 - vi. Xenix
 - vii. Apple
 - viii. Mac OS
- c. Functions of Computer System Administrator include:
- i. Quickly arranged repairs for hardware in occasion of failure
 - ii. Monitor system performance
 - iii. Create backup and recovery policy
 - iv. Setup security system for computers e.g. password and physical security
 - v. Review system audit logging and access control
 - vi. Coordination of IT department
 - vii. Oversees the welfare of the departmental staff
 - viii. Purchases of computer resources for the organization.
 - ix. Involvement in the employment of computer departmental staff
 - x. Ensure that systems are well maintained.

Examiner's Comments:

This question tests candidates knowledge on Software Applicant Packages and Operating Systems used on PC. It also demands for the functions of Computer Administrator. Almost all the candidates attempted this question and the performance was very good, as over 60% of the candidates scored over 55% of the allocated marks.

Candidates are advised to read wide for improved performance in the future.

SOLUTION TO QUESTION 3

- a. Types of Files include:
- i. Master File:

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This is a file that contains records that rarely change e.g. names, address, payroll, etc

- ii. Transaction file:
This is a file that contains records that are used to update the master file e.g. purchases, orders, invoices, overtime records, etc.
- iii. Backup file:
This is a duplicated file of an existing file that is kept for security reasons.
- iv. Reference file:
This is a file that can be easily referenced i.e. contents are stable and cannot be denied.
- v. Archival File:
This is a historical file that can be used anytime needed.
- vi. Output file:
This is a file that contains the result of processing e.g. print out.
- vii. Data file:
This is a file that contains data/information to be used for processing e.g. database files

b.

- i. Hit Rate
This is used to measure the rate of processing of master files in terms of active records.

$$\text{Hit rate} = \frac{\text{Number of records in a file}}{\text{Number of processed records}}$$

- ii. Volatility
This is the frequency with which records are added or deleted from a file. If the frequency is high, the file is said to be volatile.

- F. Access time on disk
This is the time that elapsed between the moment the command is given to transfer data from disk to main storage and the moment the transfer is completed.

Examiner's Comment:

This question tests candidates knowledge on types of processing files and some technical terms associated with Data Processing. This question is very unpopular as less than 35% of the candidates attempted it and the performance was very poor. Only very few candidates scored over 40% of the allocated marks.

The major pitfall was that many candidates could not define the technical terms. Candidates are advised to use standard texts when preparing for future examinations.

SOLUTION TO QUESTION 4

- a. Electronic Data Interchange (EDI) is an inter-company application-to-application communication of data in standard format, permitting the recipient to perform the function of a standard business transaction.

Electronic Data Interchange (EDI) can also be defined as the computer-to-computer exchange of structured data, sent in a form that allows for automatic processing without manual intervention.

- b. Benefits of Electronic Data Interchange (EDI) include:

- i. Rapid fulfillment of orders due to reduced times in placing and receiving orders, reduced time of information in transit and integration with other processes.
- ii. Fewer errors in data entry and less time spent by the buyer and supplier on exception handling.
- iii. Reduced costs resulting from reduce staff time, material savings (e.g. paper and forms) and improved inventory control
- iv. Increased competitiveness.

- c.

- i. Bridge in a network – is used to connect two or more networks that use the same communication protocol. It examines each message on the network, passing each message known to be destined for someone on the same network and forwarding them to someone on another network
- ii. Repeater – is a device that strengthens received signals and then sends them on the next leg of their journey to the next destination. In other words, repeaters are necessary to increase transmission strength by regenerating signals and retransmitting them.
- iii. Switch – is a telecommunication device that routes incoming data from any one of many input ports to a specific output port that will take the data towards its intended destination. A network switch determines from the physical device address in each incoming message frame which output port the message should be forwarded.

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- iv. Hub – is a network device for connecting multiple ethernet devices together and making them act as a single network segment.

Examiner's Comment:

This question tests candidates knowledge on Electronic Data Interchange and the definitions of some terminal equipment in Networking. This question was very unpopular among the candidates as only about 25% of them attempted the question and their performance were very poor. The major pitfall was that many candidates could not define the terminal equipment.

Candidates are advised to get more familiar with Networking.

SOLUTION TO QUESTION 5

- a. Feasibility study
This is a preliminary study undertaken by an organization to find out if it will be feasible for them to acquire, maintain and profit from the use of computer system.
- b. Members of a feasibility study committee consist of
 - i. One member of each department in the company
 - ii. A member of the executive committee of the company
 - iii. A senior system analyst
 - iv. An external/outside consultant
- c. The importance of each of the above member includes:
 - i. Department member is there to brief the committee on the activities of the department, the potentials and weaknesses as it affects computerization
 - ii. The executive member is there to give status, recognition to the committee and also to view the financial requirements of the project and communicate same to the management.
 - iii. The senior system analyst is there as a specialist who carries out fact findings about the system

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- iv. The outside consultant is there to bring his wealth of experience on such similar projects and to ensure the integrity of the system.
- d. Functions of a feasibility study committee includes:
 - i. To analyse the current operations of the company.
 - ii. To determine if the implementation of a computer system can be justified
 - iii. To devise a list of requirements and criteria to be fulfilled by the prospective computer.
 - iv. To evaluate carefully the bids/quotations received from computer vendors, manufacturers and leasing firms.
 - v. To devise a plan for the company to prepare for the installation of the computer system, if management gives its approval.

Examiner's Comment:

This question tests candidates knowledge on Feasibility Study which is a phase in Systems Development Life Cycle. This question was very popular with the candidates as over 70% of them attempted it and their performance was very poor, as over 60% of the candidates scored over 50% of the allocated marks.

SOLUTION TO QUESTION 6

- a.
 - i. Cloud Computing refers to the hosting of computer related services over the internet.
 - ii. Cloud computing Providers include:
 - ✓ Microsoft
 - ✓ Google
 - ✓ CISCO
 - ✓ Apple
 - ✓ Sales force
 - ✓ Yahoo
 - ✓ Amazon
 - ✓ AT&T
 - ✓ Rival Verizon
 - ✓ Enomaly
 - ✓ Gogrid
 - ✓ Netsuite
 - ✓ Rackspace
 - ✓ Rightscale
- b. An Electronic Mail (e-mail) is a system used for creating, sending/receiving and storing data in a digital format over a network of computers.

- c. Benefits of using Electronic Mail (e-mail) include:
- i. Easy to use – allows mails to be sent quickly
 - ii. Environmental friendly – no need of physical transportation or paper.
 - iii. Speed – can be delivered instantly
 - iv. Informal and conversational – since sending and receiving may be instantaneous
 - v. Data storage – e-mail service providers offer their customers/users with enough space for storage of data
 - vi. Provision of attachments – allows users feature of attachments to make users send huge chunks of data in a single mail.
 - vii. Easier for safe reference – where a person has to reply an e-mail, he/she can use the provision of attaching previously send/received mails. Such e-mail can be used for the purpose of reference in the communication process.
 - viii. An advertising tool – nowadays, many individuals and business organizations use e-mail services to advertise their products, services, etc. Thus, e-mail can be used as a marketing tool.
 - ix. Advantages of technological development – with the development in computer technology, it has enabled users to send e-mails not only from their desktops or laptops but also from their smart phones.

Examiner's Comment:

This question tests candidates knowledge on Cloud Computing and E-mail.

Many candidates attempted this question and the performance was very good.

Candidates are advised to read widely for improved performance.