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.
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.
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINCIPLES AND PRACTICE OF FINANCIAL ACCOUNTING</td>
<td>4 - 25</td>
</tr>
<tr>
<td>PUBLIC SECTOR ACCOUNTING</td>
<td>26 - 46</td>
</tr>
<tr>
<td>QUANTITATIVE ANALYSIS</td>
<td>47 – 72</td>
</tr>
<tr>
<td>INFORMATION TECHNOLOGY</td>
<td>73 - 92</td>
</tr>
</tbody>
</table>
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:

\[
\begin{align*}
\text{N} & = 270,000 \\
\text{Sales} & = 360,000 \\
\text{Closing inventory} & = 45,000
\end{align*}
\]

Gross profit is 25% on cost of goods sold.

3. Calculate the opening inventory
   A. N 45,000
   B. N 48,000
   C. N 63,000
   D. N 65,000
   E. N 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
   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  
   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 8 million. 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 ₦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.

<table>
<thead>
<tr>
<th>Income and Expenditure</th>
<th>Accumulated Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>₦’m</td>
<td>₦’m</td>
</tr>
<tr>
<td>A. 20</td>
<td>30</td>
</tr>
<tr>
<td>B. 30</td>
<td>20</td>
</tr>
<tr>
<td>C. 10</td>
<td>30</td>
</tr>
<tr>
<td>D. 30</td>
<td>10</td>
</tr>
<tr>
<td>E. 20</td>
<td>20</td>
</tr>
</tbody>
</table>

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

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ATSWA PART II MARCH 2015 7
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
   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 account?
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. Salah 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 Salah 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

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

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 executable 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 ………………………

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 ………………………


20. In hire purchase accounting, state two methods or basis of allocating hire purchase interest over the hire period.
SECTION B     ATTEMPT ANY FOUR QUESTIONS               (50 Marks)

QUESTION 1

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

\[ \text{₦’000} \]

<table>
<thead>
<tr>
<th>Item</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>20</td>
</tr>
<tr>
<td>Motor vehicle (cost)</td>
<td>450</td>
</tr>
<tr>
<td>Capital</td>
<td>292</td>
</tr>
<tr>
<td>Salaries and wages</td>
<td>134</td>
</tr>
<tr>
<td>Trade payables</td>
<td>95</td>
</tr>
<tr>
<td>Provision for depreciation:</td>
<td></td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>102</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>370</td>
</tr>
<tr>
<td>Motor vehicle expenses</td>
<td>15</td>
</tr>
<tr>
<td>Sales</td>
<td>1,800</td>
</tr>
<tr>
<td>Purchases</td>
<td>1,300</td>
</tr>
</tbody>
</table>

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
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

\[ \text{₦’000} \]

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>21,560</td>
</tr>
<tr>
<td>Less: cost of sales</td>
<td>17,248</td>
</tr>
<tr>
<td>Gross profit</td>
<td>4,312</td>
</tr>
<tr>
<td>Add: Other Income</td>
<td>208</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>(3,656)</td>
</tr>
<tr>
<td>Profit for the year</td>
<td>864</td>
</tr>
<tr>
<td>Other comprehensive Income:</td>
<td></td>
</tr>
<tr>
<td>Revaluation of non-current assets</td>
<td>3,136</td>
</tr>
<tr>
<td>Total comprehensive Income for the year</td>
<td>4,000</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Description</th>
<th>N’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary share capital of 50k each (fully paid)</td>
<td>2,800</td>
</tr>
<tr>
<td>Retained earnings as at January 1, 2014</td>
<td>1,936</td>
</tr>
<tr>
<td>General reserve as at January 1, 2014</td>
<td>1,368</td>
</tr>
<tr>
<td>7/2 of N1 preference shares of N1 each</td>
<td>800</td>
</tr>
</tbody>
</table>

ii. Jokotade Limited issued 800,000 ordinary shares during the year and total proceeds from the issue amounted to N960,000.

iii. The management of Jokotade Limited recommended a transfer to general reserve an amount of N128,000.

iv. During the year the company paid the following dividends:

<table>
<thead>
<tr>
<th>Description</th>
<th>N’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference dividend</td>
<td>56</td>
</tr>
<tr>
<td>Ordinary dividend (interim)</td>
<td>64</td>
</tr>
</tbody>
</table>

v. The total equity and reserve balance of Jokotade Limited in the statement of financial position as at December 31, 2014 amounted to N11,744,000.

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 12½ Marks)

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

<table>
<thead>
<tr>
<th></th>
<th>GH¢’000</th>
<th>GH¢’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Current Assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premises</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Motor van</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>30</td>
<td>1,930</td>
</tr>
<tr>
<td>Current Assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory</td>
<td>190</td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>605</td>
<td>1,005</td>
</tr>
<tr>
<td></td>
<td>630</td>
<td>2,560</td>
</tr>
<tr>
<td>Less Accounts payable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>375</td>
<td>630</td>
</tr>
<tr>
<td>Capital Account:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kofi</td>
<td>1,160</td>
<td></td>
</tr>
</tbody>
</table>
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 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**  
(12½ Marks)

**QUESTION 4**

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

<table>
<thead>
<tr>
<th></th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary share capital</td>
<td></td>
<td>150,000</td>
</tr>
<tr>
<td>purchases and Revenue</td>
<td>400,200</td>
<td>547,800</td>
</tr>
<tr>
<td>Inventory at January 1, 2014</td>
<td>35,010</td>
<td></td>
</tr>
<tr>
<td>Returns</td>
<td>1,800</td>
<td>2,400</td>
</tr>
<tr>
<td>Wages</td>
<td>69,240</td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td>19,500</td>
<td></td>
</tr>
<tr>
<td>Motor expenses</td>
<td>5,580</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>1,140</td>
<td></td>
</tr>
<tr>
<td>Irrecoverable debts</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Allowance for doubtful receivables January 1, 2014</td>
<td></td>
<td>882</td>
</tr>
<tr>
<td>Discounts</td>
<td>1,296</td>
<td>2,433</td>
</tr>
<tr>
<td>Light and cooling expenses</td>
<td>4,611</td>
<td></td>
</tr>
<tr>
<td>Bank overdraft interest</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>Motor vehicle at cost</td>
<td>36,000</td>
<td></td>
</tr>
<tr>
<td>Accumulated depreciation Motor Van at January 1, 2014</td>
<td></td>
<td>18,360</td>
</tr>
<tr>
<td>Fixtures and fittings at cost</td>
<td>42,000</td>
<td></td>
</tr>
<tr>
<td>Accumulated depreciation on fixtures and fitting at January 1, 2014</td>
<td></td>
<td>25,200</td>
</tr>
<tr>
<td>Land</td>
<td>150,000</td>
<td></td>
</tr>
</tbody>
</table>
Debit Credit
N  N

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  
Retained earnings at January 1, 2014  157,200  
  947,781  947,781

You are given the following additional information
i. Inventory as at December 31, 2014 was N38,520.
ii. Rent prepaid was N1,500 and light and cooling expenses owed was N690 as at December 31, 2014
iii. Land is to be revalued to N375,000 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 N195. 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 (12½ 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
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

ATSWA PART II MARCH 2015
14
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 12½ Marks)

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:

<table>
<thead>
<tr>
<th>N’000</th>
<th>N’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current Assets:</td>
<td></td>
</tr>
<tr>
<td>Plant and equipment</td>
<td>75,000</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>15,000</td>
</tr>
<tr>
<td></td>
<td>90,000</td>
</tr>
<tr>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>120,000</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>36,000</td>
</tr>
<tr>
<td>Bank balance</td>
<td>12,000</td>
</tr>
<tr>
<td></td>
<td>168,000</td>
</tr>
<tr>
<td></td>
<td>258,000</td>
</tr>
<tr>
<td>Capital</td>
<td></td>
</tr>
<tr>
<td>Babu</td>
<td>120,000</td>
</tr>
<tr>
<td>Lukudi</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>150,000</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>108,000</td>
</tr>
<tr>
<td></td>
<td>258,000</td>
</tr>
</tbody>
</table>

Notes:

i. The plant and equipment were sold at N’79m
ii. Babu took over one of the vehicles with a book value of N’1.5m for N’800,000. The remaining vehicles were sold for N’12m.
iii. Inventories were sold for N’92m while accounts receivable realised N’34.3m
iv. The account payable gave a discount of N’0.10 on every N’1 owed.
v. The realisation expenses were settled for N’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
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. ₦17,500
2. ₦250,000
3. Diminishing or Reducing balance
   Sum of the year’s digits
   Annuity and sinking fund
4. Dr Receipts and payments
   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
    (iii) Sum of the years digit method

WORKINGS

1. Pharmaceutical and medical products are exempted from VAT. The business VAT liability is 5% of ₦350,000 = ₦17,500
2. $20\%$ on cost of goods sold = $16.7\%$
   
   $16.7\% \times \text{₦1,500,000} = \text{₦250,500}$

6. 
   Cost $\text{₦4,800,000}$
   Year 2009 $\text{(₦960,000)}$
   Year 2010 ($\text{₦4,800,000} - \text{₦960,000}) \times 20\% = \text{(₦768,000)}$
   Year 2011 ($\text{₦3,840,000} - \text{₦768,000}) \times 20\% = \text{(₦614,400)}$
   Carrying value $\text{₦2,457,600}$

   Loss $= (\text{₦2,400,000} - \text{₦2,457,600}) = \text{(₦57,600)}$

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

<table>
<thead>
<tr>
<th></th>
<th>Original Trial balance</th>
<th>Adjustments</th>
<th>Adjusted Trial Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dr $\text{₦000}$</td>
<td>Cr $\text{₦000}$</td>
<td>Dr $\text{₦000}$</td>
</tr>
<tr>
<td>Inventory</td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Motor vehicle (cost)</td>
<td>450</td>
<td></td>
<td>450</td>
</tr>
<tr>
<td>Capital</td>
<td></td>
<td>292</td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Wages</td>
<td>134</td>
<td>2.2</td>
<td>131.8</td>
</tr>
<tr>
<td>Trade payables</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision for depreciation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>102</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle expenses</td>
<td>15</td>
<td>2.2</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>1800</td>
<td>1,800</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>1,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income statement</td>
<td></td>
<td>89.8</td>
<td></td>
</tr>
<tr>
<td>Income statement:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision for depreciation (motor vehicle)</td>
<td>45</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Accruals: Motor vehicle expenses</td>
<td></td>
<td>3.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>

|                        | 2,289                  | 2,289       | 140.5                  | 140.5          | 2,427.3       | 2,427.3       |

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

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

**WORKINGS**

(W1) Share Capital N’000
- Ordinary share capital 2,800
- 7% N1 preference shares 800
- 3,600

(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 560

(W3) Dividend N’000
- Preference 56
- Ordinary interim 64
- 120

**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**

<table>
<thead>
<tr>
<th>Description</th>
<th>₦’000</th>
<th>₦’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premises</td>
<td>1,200.00</td>
<td></td>
</tr>
<tr>
<td>Motor van</td>
<td>700.00</td>
<td></td>
</tr>
</tbody>
</table>

**ATSWA PART II MARCH 2015**

20
### Current assets:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock</td>
<td>190.00</td>
</tr>
<tr>
<td>Debtors</td>
<td>210.00</td>
</tr>
<tr>
<td>Cash &amp; bank balances</td>
<td>605.00</td>
</tr>
<tr>
<td></td>
<td>1,005.00</td>
</tr>
<tr>
<td>Less creditors</td>
<td>375.00</td>
</tr>
<tr>
<td></td>
<td>630.00</td>
</tr>
<tr>
<td></td>
<td>2,560.00</td>
</tr>
</tbody>
</table>

### Capital accounts:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kofi</td>
<td>1,112.60</td>
</tr>
<tr>
<td>Anan</td>
<td>683.40</td>
</tr>
<tr>
<td></td>
<td>1,796.00</td>
</tr>
</tbody>
</table>

### Current accounts:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kofi</td>
<td>210.00</td>
</tr>
<tr>
<td>Anan</td>
<td>79.00</td>
</tr>
<tr>
<td></td>
<td>289.00</td>
</tr>
</tbody>
</table>

### Loan: Nkurumah

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>475.00</td>
</tr>
<tr>
<td>2,560.00</td>
</tr>
</tbody>
</table>

### Workings

**i. Nkurumah’s account**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening capital account balance</td>
<td>520.00</td>
</tr>
<tr>
<td>Add: Share of increase in value of assets:</td>
<td></td>
</tr>
<tr>
<td>Goodwill</td>
<td>400.00</td>
</tr>
<tr>
<td>Premises</td>
<td>200.00</td>
</tr>
<tr>
<td>Less: Decrease in motor van</td>
<td>100.00</td>
</tr>
<tr>
<td>Stock</td>
<td>16.00</td>
</tr>
<tr>
<td>Prov. of doubtful debts</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>126.00</td>
</tr>
<tr>
<td></td>
<td>474 x (\frac{1}{6}) = 79.00</td>
</tr>
<tr>
<td></td>
<td>599.00</td>
</tr>
<tr>
<td></td>
<td>124.00</td>
</tr>
<tr>
<td></td>
<td>475.00</td>
</tr>
</tbody>
</table>

**ii. Kofi’s capital account:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening balance</td>
<td>1,160.00</td>
</tr>
<tr>
<td>Less: Share of Nkurumah’s capital</td>
<td></td>
</tr>
<tr>
<td>account - (\frac{3}{5}) x 79</td>
<td>47.40</td>
</tr>
<tr>
<td>Closing balance</td>
<td>1,112.60</td>
</tr>
</tbody>
</table>

**iii. Anan’s capital account:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening balance</td>
<td>715.00</td>
</tr>
<tr>
<td>Less: Share of Nkurumah’s capital</td>
<td></td>
</tr>
<tr>
<td>account - (\frac{2}{5}) x 79</td>
<td>31.60</td>
</tr>
<tr>
<td>Closing balance</td>
<td>683.40</td>
</tr>
</tbody>
</table>
### ALTERNATIVE WORKING

#### Capital Accounts

<table>
<thead>
<tr>
<th></th>
<th>Kofi</th>
<th>Anan</th>
<th>Nkwurumah</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£'000</td>
<td>£'000</td>
<td>£'000</td>
</tr>
<tr>
<td>Goodwill</td>
<td>240.00</td>
<td>160.00</td>
<td>-</td>
</tr>
<tr>
<td>Current a/cs</td>
<td>1,157.00</td>
<td>713.00</td>
<td>1,160.00</td>
</tr>
<tr>
<td>Revaluation</td>
<td>475.00</td>
<td>599.00</td>
<td>1,397.00</td>
</tr>
<tr>
<td>Loan a/cs</td>
<td>1,397.00</td>
<td>873.00</td>
<td>1,397.00</td>
</tr>
<tr>
<td>Assets a/c</td>
<td>44.00</td>
<td>30.00</td>
<td>200.00</td>
</tr>
<tr>
<td>Bal c/f</td>
<td>1,113.00</td>
<td>683.00</td>
<td>1,113.00</td>
</tr>
<tr>
<td></td>
<td>1,157.00</td>
<td>713.00</td>
<td>1,157.00</td>
</tr>
</tbody>
</table>

#### Revaluation Account

<table>
<thead>
<tr>
<th></th>
<th>£'000</th>
<th>£'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor van</td>
<td>100.00</td>
<td>Premises 200.00</td>
</tr>
<tr>
<td>Inventory</td>
<td>16.00</td>
<td></td>
</tr>
<tr>
<td>Doubtful debts</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>Share of gain – Capital Accounts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kofi 3/6 x 74</td>
<td>33.00</td>
<td></td>
</tr>
<tr>
<td>Anan 2/6 x 74</td>
<td>25.00</td>
<td></td>
</tr>
<tr>
<td>Nkwurumah 1/6 x 74</td>
<td>12.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200.00</td>
<td>200.00</td>
</tr>
</tbody>
</table>

#### EXAMINER’S REPORT

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

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>547,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Inward</td>
<td>(1,800)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Sales</td>
<td>546,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost of sales:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening inventories</td>
<td>35,010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>400,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return outwards</td>
<td>(2,400)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net purchases</td>
<td>397,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods available for sales</td>
<td>432,810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing inventories</td>
<td>(38,520)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>394,290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross profit</td>
<td>151,510</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discount received</td>
<td>2,433</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease in allowance for doubtful receivables</td>
<td>108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total incomes</td>
<td>154,251</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less operating expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>L$</th>
<th>L$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods sent to Branch</td>
<td>360,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>141,600</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>501,600</td>
</tr>
<tr>
<td>Balance b/d</td>
<td>100,000</td>
</tr>
</tbody>
</table>
## 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.
Babu and Lukudi

Realisation account

<table>
<thead>
<tr>
<th></th>
<th>N'000</th>
<th>N'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant and equipment</td>
<td>75,000.00</td>
<td>Amount realized: Bank 79,000.00</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>15,000.00</td>
<td>Plant and equipment 12,000.00</td>
</tr>
<tr>
<td>Inventories</td>
<td>120,000.00</td>
<td>Remaining motor vehicles 92,000.00</td>
</tr>
<tr>
<td>Account receivables</td>
<td>36,000.00</td>
<td>Inventories 34,300.00</td>
</tr>
<tr>
<td>Realisation expenses</td>
<td>4,500.00</td>
<td>Account receivables 10,800.00</td>
</tr>
</tbody>
</table>

Discount from trade payables
Capital account – Babu 50,000
M/V taken over 800.00
Share of loss:
Babu 14,400.00
Lukudi 7,200.00

250,000.00

Partners capital account

<table>
<thead>
<tr>
<th></th>
<th>Babu</th>
<th>Lukudi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real (M/V taken over)</td>
<td>800</td>
<td>Balance b/f</td>
</tr>
<tr>
<td>Real loss</td>
<td>14,400</td>
<td>7,200</td>
</tr>
<tr>
<td>Bank</td>
<td>104,800</td>
<td>22,800</td>
</tr>
<tr>
<td></td>
<td>120,000</td>
<td>30,000</td>
</tr>
</tbody>
</table>

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

Bank account

<table>
<thead>
<tr>
<th></th>
<th>N'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance b/f</td>
<td>12,000</td>
</tr>
<tr>
<td>Amount realized:</td>
<td>Realisation expenses 4,500</td>
</tr>
<tr>
<td>Plant and equipment</td>
<td>79,000</td>
</tr>
<tr>
<td>Remaining motor vehicles</td>
<td>12,000</td>
</tr>
<tr>
<td>Inventories</td>
<td>92,000</td>
</tr>
<tr>
<td>Account receivables</td>
<td>34,300</td>
</tr>
<tr>
<td></td>
<td>229,300</td>
</tr>
</tbody>
</table>

Workings

Trade payables account

<table>
<thead>
<tr>
<th></th>
<th>N'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>97,200</td>
</tr>
<tr>
<td>Realisation:</td>
<td>Balance 108,000</td>
</tr>
<tr>
<td></td>
<td>108,800</td>
</tr>
<tr>
<td></td>
<td>108,800</td>
</tr>
</tbody>
</table>

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
PART II EXAMINATIONS - MARCH 2015
PUBLIC SECTOR ACCOUNTING
(NIGERIAN VERSION)

Time Allowed: 3 hours

SECTION A: PART I MULTIPLE-CHOICE QUESTIONS

ATTEMPT ALL QUESTIONS (30 Marks)

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

1. Under the country’s constitution, the Auditor-General for the Federation is appointed by:
   A. Two-third majority of the workforce of the Federal Audit Department
   B. Two-third majority of the members of the House of Representatives
   C. The Governor of the state of origin of the most Senior Audit staff on the recommendation of the Chairman of his local government area
   D. The President of the country on the recommendation of the Federal Civil Service Commission and subject to the Senate’s approval.
   E. The President of the Institute of Chartered Accountants of Nigeria on the recommendation of Council members subject to the Senate’s approval

2. The Finance (Control and Management) Act which was later amended by CAP 144 (Laws of Federation of Nigeria 1990) was first established in:
   A. 1948
   B. 1958
   C. 1968
   D. 1978
   E. 1988

3. The purposes of Public Sector Accounting include:
   i. Demonstrating the propriety of transactions and their conformity with the established rules and regulations
   ii. Measuring current performance
   iii. Providing useful information for the efficient control and effective management of government operations
4. Which of the following is NOT the duty of the National Council on Public Procurement as stipulated in the Act?

A. Consider and approve policies on public procurement
B. Approve the appointment of the Directors of the Bureau of Public Procurement
C. Receive and consider for approval, the audited accounts of the Bureau of Public Procurement
D. Disapprove the changes to be made in the procurement process
E. Give such other directives and perform other functions as may be necessary to achieve the objectives of the Act.

5. According to the Financial Regulations, Act 2009 Section 114, the Head of Finance and Accounts of a Ministry/Extra ministerial office and other arms of government shall perform the following duties, among others EXCEPT:

A. Ensuring compliance with Financial Regulations and the accounting code by all staff under his control and supervision
B. Maintaining proper accounting records such as books of accounts, main and subsidiary ledgers
C. Ensuring adequate supervision of the disbursement of funds and proper monitoring and accounting for revenue
D. Constitute a procurement committee
E. Advising the accounting officer on all financial matters as well as the more technical provisions of these regulations and other Treasury and Finance circulars

6. With reference to the Model Financial Memoranda for Local Government, the Duties and Responsibilities of the Finance Department include all the following EXCEPT:

A. The care and custody of the Local Government finance whether in cash or held in the Local Government Bank Account
B. Seeing that all revenue due to the Local Government is collected promptly, properly and also paid promptly into the Local Government Funds.
C. Participating in the preparation of the Local Government estimates and development plans on the form and manner prescribed
D. Keeping the prescribed account and records of the Local Government’s financial transactions up to date at all times
E. Facilitate the work of the Audit Alarm Committee
7. Which of the following is/are the role(s) of the Accountant-General of the Federation?
   i. Management of the investment of the Federal Government
   ii. Serving as the Chief Accounting Officer of the nation’s receipts and payments
   iii. Establishing and supervising the Federal Pay Offices in the states
   A. i
   B. i and iii
   C. ii
   D. i, ii and iii
   E. iii

8. In public sector accounting, authority to write off the arrears of revenue is vested in the
   A. Auditor-General
   B. Accountant-General
   C. Director of Finance and Accounts
   D. Minister of Finance
   E. Permanent Secretary

9. Which of the following are the functions of Treasurer of the Local Government?
   i. Having responsibility for the administrative control of the finance department of the Local Government
   ii. Verification of accounting records to ensure their correctness
   iii. Being a signatory to the Local Government cheques and vouchers
   iv. Sign all cheques and other documents relating to contract supplies prior to approval.
   A. i, ii, iii and iv
   B. i, ii and iii
   C. i, ii and iv
   D. i and ii
   E. i and iii

10. Budget becomes ………………………after it has been approved by the National Assembly or House of Assembly.
    A. General Warrant
    B. Appropriation Act
    C. Annual estimated figures
    D. Executive document
    E. Ministerial approval
11. The whole system of controls, that is financial or otherwise established to ensure that incomes and expenditures are in line with the budgets and that wastage is reduced to the bearest minimum is called

A. Internal controls  
B. Financial controls  
C. Internal audit  
D. Budgetary control  
E. Human control

12. Which of the following is **NOT** an advantage of Traditional Budgeting Techniques?

A. It requires skilled manpower  
B. It is cheaper to produce  
C. It is simple to operate  
D. It guarantees the continuity of projects  
E. It does not need excellent statistical resources

13. Approval for acceptance of foreign cheque can only be given by

A. Minister of Finance  
B. Accounting Officer  
C. Accountant General  
D. Sub Accounting Officer  
E. Director cash supplies

14. Cheque drawn, debit and credit advices collected daily are recorded in

A. Cash book  
B. Bank statement  
C. Voucher register  
D. Voucher schedule  
E. Cheque summary register

15. Idle funds in account of Missions abroad may be invested in short term deposit with prior approval of

A. Accountant-General  
B. Minister of Finance  
C. Minister of Foreign Affairs  
D. President  
E. Permanent Secretary, Foreign Affairs
16. Which of the following is a non-personal advance?
   A. Correspondence advance
   B. Motor vehicle advance
   C. Loss of Government fund advance
   D. Salary advice
   E. Salary payslip

17. What category of public sector is Federal Radio Corporation of Nigeria?
   A. Local Government
   B. Public Limited Company (PLC)
   C. Government Parastatal
   D. Federal Government
   E. State Government

18. Which of the following is NOT a composite activity of Government Accounting?
   A. Profit forecast
   B. Recording
   C. Reporting
   D. Summarizing
   E. Interpreting

19. Which of the following is NOT a reason why unallocated stores are held?
   A. To acquire stores in constant demand
   B. To increase overall cost
   C. To make stocks immediately available when required for a project
   D. To save storage space by holding minimum stocks requirement
   E. To reduce stock at interval for necessary use

20. An order authorizing the local purchase of goods and services locally in a requesting department is known as
   A. Extra-ministerial order
   B. Internally generated purchase order
   C. Local Purchase Order
   D. Chief Accounting Order
   E. Order from the above
21. A non-expendable store is
A. Brush  
B. Shovel  
C. Road stuff  
D. Stationary item  
E. Motor vehicle

22. On the day of survey, the procedures below should be followed by the board member EXCEPT
A. The board member will first report to the head cashier who will link the member to the cash office  
B. The cashier will be instructed of the day’s transaction (if any) and balance his books  
C. The board member will count the cash according to specification or review the stamp machine  
D. The board member endorses and certifies the original and duplicate copies of the cash book.  
E. The cashier may be allowed to continue his duties after he has signed the report with the board member

23. Which of the following is NOT a step in preparing transcript?
A. Balancing of Analysis Book  
B. Posting to the Analysis Book  
C. Ticking of vouchers to the Cash Book  
D. Posting to the Cash Book  
E. Collection of vouchers and original Cash Book

24. The Auditor-General for the Federation is expected to write his report, stating whether in his opinion
i. The Account show a true and fair view  
ii. Proper books of accounting records are being kept  
iii. There are adequate safeguards over the custody of public funds  
iv. Public moneys are expended for the purpose for which they are meant  
A. ii only  
B. i only  
C. i, ii, iii and iv  
D. iii only  
E. iv only

25. Which of the following is NOT a department in the office of the Accountant-General of the Federation?
A. Treasury Inspectorate Department  
B. Finance and Accounts Department
C. Culture Department
D. Treasury Services Department
E. Revenue and Funds Department

26. Any amount payable as a retirement benefit under the Pension Reform Act 2004, shall be
   A. Taxed under Personal Income Tax
   B. Taxed under Companies Income Tax
   C. Taxed under Capital Gains Tax
   D. Taxed under Value Added Tax
   E. Exempted from tax

27. The contribution of any employee to which the Pension Reform Act 2004 applies, shall be made at least at the rate of
   A. 7½%
   B. 15%
   C. 2½
   D. 10%
   E. 0%

28. Any person proposing to act as a custodian of Pension Fund or Pension Fund Administrator shall seek registration with
   A. Head of Service Office Pension Department
   B. Office of the Accountant-General Pension Department
   C. National Pension Commission
   D. Office of the Auditor-General Pension Department
   E. Office of the Attorney-General Pension Matters

29. Which of the following action does NOT constitute money laundering?
   A. Monies or assets that have obvious link with criminal activities
   B. Money worth $10,000 fraudulently obtained from a foreign country’s Automatic Teller Machine
   C. Money or Assets used to fund terrorism
   D. A transfer by a son legally employed in America to his father in Nigeria through an approved financial institution
   E. Receipt of $1,000,000 in Nigeria as sales proceeds for trafficking hard drugs abroad.
30. A member of the Board of the Securities and Exchange Commission shall cease to hold office *EXCEPT*

A. He/she participates in formulating policies for the regulation and development of the capital market  
B. Is of unsound mind  
C. Becomes bankrupt or makes compromise  
D. If convicted for a felony or any offence involving dishonesty  
E. Is guilty of serious misconduct in relation to his duties

**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 functions of the Accountant-General can be basically grouped into two ……………………… and …………………….

2. The organ of the National Assembly which is responsible for the handling of the queries raised by the Auditor-General for the Federation is …………………….

3. An institution that acts on behalf of the government on issues relating to financial transaction is ……………………..

4. Annual returns in duplicate of all Government strong-rooms and safes will be rendered by all Ministries and extra ministerial departments and other arms of government to the ……………………..

5. Any external auditor appointed by a Pension Fund Administrator is responsible to …………………….. for the protection of pension fund.

6. Pension funds shall only be managed by ……………………..

7. What other statutory revenue allocation accrues to Local Government Councils, apart from the releases from the Federation Account?

8. An arrangement in which the private sector is co-opted into financing socio-economic infrastructure that are usually and exclusively provided by the government is called ……………………..

9. An officer who controls a vote delegated to him by an Accounting Officer is called ……………………..

10. The process of putting together the financial information that will enable an organization or a Nation to plan and execute its set goals and objectives is ……………………..

11. A ministry or department which maintains only the incomplete records of the above-the-line receipts and payments is known as ……………………..
12. The administrative instructions issued by the Accountant-General of the Federation to guide the day-to-day operations of government activities are ………………… and ………………….

13. Stores ledgers are maintained to record all receipts and issues from …………………

14. The system which calculates the physical balance after each issue or receipt of materials is called …………………

15. Which officer convenes the Board of Enquiry in case of any loss of fund in a Ministry or Department?

16. Investment property is treated under IPSAS ………………………………..

17. The audit techniques adopted to ensure the existence of assets and liabilities and their valuation at a date is known as ………………………………..

18. State the private business in which public officers are allowed by the code of conduct law to engage in.

19. In the absence of the Appropriation Act, Section 82 of Chapter V part I of the 1999 Constitution authorizes the President to withdraw money from the Consolidated Revenue Fund for ………………… months.

20. It is required that detailed statements of revenue and expenditure submitted for auditing should be arranged according to ………………… and …………………

SECTION B: ATTEMPT ANY FOUR QUESTIONS (50 MARKS)

QUESTION 1

The ICPC was established by the Corrupt Practices and Other Related Offences Act, 2000, to examine the practices, systems and procedures of public bodies and where, in the opinion of the Commission, such practices, systems or procedures aid or facilitate fraud or corruption, to direct and supervise a review of them.

Required:
State any FIVE actions that may constitute offences and their penalties under the Act.

(12½ Marks)

QUESTION 2

Baba Onigba State of Iludun extracted the following information from their treasury’s final account for the year ended December 31, 2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>Tax collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>₦1,313</td>
</tr>
<tr>
<td>2013</td>
<td>₦1,150</td>
</tr>
</tbody>
</table>

ATSWA PART II MARCH 2015

34
Required:

Prepare Cash Flow Statement in compliance with 1PSAS 2. 

QUESTION 3

A Vote Book (DVEA. TR BK 46R), being a record of expenditure and liabilities incurred in respect of votes or funds placed at the disposal of a department or ministry is to ensure that there is no extra budgetary spending.

The following financial information is in respect of purchase of stationery in the Ministry of Men Affairs.

01/08/13: Authorised Appropriation: ₦2,000,000

02/08/13: Paid ₦46,000 for pencils purchased from Yemi Bookshop on PV. No:001

07/08/13: Paid ₦51,000 for biros purchased from Yemi Bookshop PV No. 002

12/08/13: Issued LPO No: 0031 to Yinkus Bookshop for ₦90,000 for photocopying papers

16/08/13: Paid Yinkus Bookshop on PV No: 003

20/08/13: Paid for stapple pins of ₦25,000 from Challenge Bookshop on PV No: 004

25/08/13: PV 000: 005 of ₦140,000 was raised for payment to CSS Bookshop in respect of carbon papers purchased
26/08/13: Issued LPO No: 0032 for supply of calculators to Kayode Stores Limited for ₦400,000

28/08/13: Paid ₦350,000 on PV No: 006 for the purchase of file Jackets from Ajayi Stores Limited

29/08/13: Paid Kayode Stores Limited on PV. No: 007

31/08/13: Issued LPO No: 0033 for supply of Higher Education Books to Abiola Bookshop Ltd. for ₦400,000

Required:

Record the above transactions in a DVEA book of the Ministry of Men Affairs in respect of the purchase of stationery. (12½ Marks)

QUESTION 4

The Office of the Auditor-General for Local Government was established in 1989 in line with the Civil Service Reform of 1988 which was excised from the State Audit Department as it was then known.

Required:

a. Highlight the framework documents that govern the operations of the Auditor-General for Local Government. (3½ Marks)

b. Itemise SIX statutory functions of the Auditor-General for Local Government. (9 Marks)

(Total 12½ Marks)

QUESTION 5

a. List FIVE similarities between self-accounting and sub-accounting ministries. (7 ½ Marks)

b. Identify FIVE steps in preparing transcripts. (5 Marks)

(Total 12½ Marks)

QUESTION 6

Oliver Local Government approved a project “Ola Street” improvement program, expected to cost ₦500,000,000. Ministry of Rural Development provides a soft loan of ₦300,000,000 for this project, the remaining fund requires the participation of Corporate Institutions resident in the street, which they paid willingly. A purchase order was issued for materials worth ₦320,000,000; Engineering cost was ₦15,000,000; and compensation of ₦30,000,000 to the
land owners. The Commissioner for Rural Development announced the State donation of ₦250,000,000 for this project. Transport and freight cost ₦50,000. Interest on soft loan is at 4% per year. Equipment rental costs ₦20,000,000, wages of workers paid amounted to ₦90,000,000.

The project is expected to be completed within the year. The soft loan is repayable at the end of the project.

**Required:**

a. Compute a Contract Account in compliance with IPSAS 11. (10½ Marks)

b. Briefly state **TWO** of the disclosure requirements in IPSAS 11. (2 Marks)

(Total 12½ Marks)
SECTION A

PART I   MULTIPLE-CHOICE QUESTIONS

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

Multiple Choice Questions are 30 questions which cover all the areas of the syllabus.

It is a compulsory question. In the multiple choice question 1 – 10, all the candidates attempted the questions and they scored over 60% of marks allocated.

In multiple choice questions 11 – 20, well over 80% of the candidates attempted the question and performance was poor as only about 35% of the candidates scoring above 40%.

Multiple choice questions 20 – 30, no major pitfall was noticed, scores hovered around 70% of marks allotted.

PART II  SHORT-ANSWER QUESTIONS

1. Management function and Routine functions
2. Public Account Committee
3. Central Bank
4. Accountant-General
5. National Pension Commission
6. Pension Fund Administrators
7. Allocation from the state internally generated revenue (IGR)
8. Public Private Partnership (PPP)
9. Officer Controlling Expenditure
10. Budgeting
11. Non-self Accounting Unit
12. Treasury and Finance Circulars
13. Stores
14. Perpetual Inventory System
15. FR. 2531 – The Accountant-General
16. IPSAS 16
17. Verification
18. Farming in part or all its entireties
19. 6 months
20. Heads and Sub-Heads

EXAMINER'S COMMENT

This is a compulsory question and this recorded 100% attempt. All the areas of the syllabus were covered.

SAQ 1-10 – performance was fair as scores clustered around six out of ten marks obtainable by about 50% of the candidates.

SAQ 11–20 – this portion recorded poor performance as more than 70% of the candidates scoring below 30% of marks obtainable.

SECTION B

Offences & Penalties under the corrupt practices and other related offences Act 2000 include:

SOLUTION 1

<table>
<thead>
<tr>
<th>SECTION</th>
<th>OFFENCES</th>
<th>PENALTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Accepting gratification</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>9</td>
<td>Giving or Accepting gratification</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>10</td>
<td>Acceptor or giver of gratification</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>11</td>
<td>Concealing offences relating to</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>12</td>
<td>Fraudulent acquisition of property</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>13</td>
<td>Fraudulent receipt of property</td>
<td>3 Years Imprisonment</td>
</tr>
<tr>
<td>14</td>
<td>Offences committed through postal</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>15</td>
<td>Deliberate frustration of investigation of the commission</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>16</td>
<td>Making false statements or return</td>
<td>7 Years Imprisonment</td>
</tr>
<tr>
<td>17</td>
<td>Gratification by and through agents</td>
<td>5 Years Imprisonment</td>
</tr>
<tr>
<td>18</td>
<td>Bribery of Public Officer</td>
<td>5 Years Imprisonment</td>
</tr>
<tr>
<td>19</td>
<td>Using office or position for</td>
<td>5 Years Imprisonment</td>
</tr>
<tr>
<td>20</td>
<td>Forfeiture of gratification and other penalties</td>
<td>Forfeit the gratification and pay fine</td>
</tr>
<tr>
<td>21</td>
<td>Bribery in relation to auctions</td>
<td>3 Years Imprisonment</td>
</tr>
<tr>
<td>22</td>
<td>Bribery for given assistance etc in regards to contracts</td>
<td>₦1 million or 7 Years Imprisonment</td>
</tr>
<tr>
<td>23</td>
<td>Duty to report bribery transactions</td>
<td>2 Years Imprisonment</td>
</tr>
<tr>
<td>24</td>
<td>Dealing with property acquired through gratification</td>
<td>5 Years Imprisonment</td>
</tr>
<tr>
<td>25</td>
<td>Making false or misleading statements to the Commission</td>
<td>5 Years Imprisonment</td>
</tr>
</tbody>
</table>
EXAMINER’S COMMENT

The question tested candidates’ knowledge of ICPC Act under the Offences and Punishments. Less than 50% of the candidates attempted this question and were confusing the requirements to Offences punishable under the Money Laundering Act. Performance was very poor as there was no single candidate that scores above 40% of marks obtainable. The candidates are enjoined to cover the syllabus in subsequent examinations.

SOLUTION 2

BABA ONIGBA STATE ILUDUN
CASH FLOW STATEMENT FOR THE PERIOD ENDED 31ST DECEMBER 2013

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>₦M</td>
<td>₦M</td>
</tr>
<tr>
<td>CASH FLOW FROM OPERATION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECEIPTS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxation</td>
<td>1,313</td>
<td>1,150</td>
</tr>
<tr>
<td>Sales of services</td>
<td>987</td>
<td>750</td>
</tr>
<tr>
<td>Grants</td>
<td>875</td>
<td>675</td>
</tr>
<tr>
<td>Interest received</td>
<td>982</td>
<td>759</td>
</tr>
<tr>
<td>Accrued from operating surplus</td>
<td>821</td>
<td>525</td>
</tr>
<tr>
<td>Operating receipt</td>
<td>4,978</td>
<td>3,859</td>
</tr>
<tr>
<td>Less payment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee cost</td>
<td>(1,450)</td>
<td>(1,210)</td>
</tr>
<tr>
<td>Pension</td>
<td>(350)</td>
<td>(290)</td>
</tr>
<tr>
<td>Suppliers</td>
<td>(150)</td>
<td>(120)</td>
</tr>
<tr>
<td>Other Administrative expenses</td>
<td>(301)</td>
<td>(207)</td>
</tr>
<tr>
<td>(a) Net operating cash flow</td>
<td>2,251</td>
<td>1,827</td>
</tr>
</tbody>
</table>

INVESTING ACTIVITIES:
RECEIPTS:
Proceed from sales of treasury bill | 639   | 495   |
Proceed from sales of bond          | 789   | 653   |
Proceed from sales of equipment     | 115   | 100   |
Total investment receipts           | 1,543 | 1,248 |
PAYMENTS:
Purchases of equipment              | (700) | (651) |
(b) Net cash flow on Investments    | 843   | 598   |
FINANCING ACTIVITIES
RECEIPTS
LOAN                                | 340   | 240   |
Payments: Repayment of loan         | (140) | (120) |
EXAMINER’S COMMENT
The question tested candidates’ knowledge on the Preparation of Cash flow Statement in Compliance with IPSAS 2. About 70% of the candidates attempted the question. Major pitfall was the inability of the candidates to distinguish between Income and Expenditure Accounts with Cash Flow Statement.

Performance was poor as over 65% of the candidates scored below 40% of marks obtainable.

SOLUTION 3
MANAGING FINANCE OF GOVERNMENT MARCH 2014

MINISTRY OF MEN AFFAIRS
VOTE BOOK

HEAD 508
Sub-Head 005
Service-Stationeries

<table>
<thead>
<tr>
<th>Line</th>
<th>Date</th>
<th>PV</th>
<th>Particular</th>
<th>Pmt</th>
<th>Cum.R</th>
<th>Bal</th>
<th>Liab Ref</th>
<th>Liab Incurred</th>
<th>Liab clear</th>
<th>Liab outstanding</th>
<th>Remark</th>
<th>Uncomp Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/8/13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,000,000</td>
</tr>
<tr>
<td>2</td>
<td>2/8/13</td>
<td>001</td>
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<td></td>
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<td></td>
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<td></td>
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<td>9</td>
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<td>File Jak</td>
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<td></td>
<td></td>
<td></td>
<td>1,298,000</td>
<td></td>
</tr>
<tr>
<td>10</td>
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<td>007</td>
<td>Kayode Stores</td>
<td>400,000</td>
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<td></td>
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<td>898,000</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>30/8/13</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>898,000</td>
</tr>
</tbody>
</table>

Purchase of foreign currency (315) (301)
Interest on loan (101) (89)
(c) Net cash flow from financing 99 39
Net increase/(decrease) in cash and cash equivalent 1,666 2,695
Cash and cash equivalent of beginning of period 2,701 2,013
Cash and cash equivalent 4,369 4,710

ATSWA PART II MARCH 2015
42
EXAMINER’S COMMENT

The question tested candidates’ knowledge on Vote Book Preparation. About 90% of the candidates attempted the question and showed fair understanding of the requirements of the examiner.

Performance was fair as about 50% of the candidates scored above 60% of marks obtainable.

It was a booster question for any well prepared candidate.

SOLUTION 4

The constitutional and financial responsibilities of principal officers of government:

(a) The office of the Auditor General for Local Government operates within the following framework:

(i) The local government financial memoranda
(ii) Guideline on local government operations
(iii) Updated circulars issued from time to time
(iv) Civil Service Reform Act 1988
(v) Appropriate Act
(vi) Gazette

(b) Statutory functions of the Auditor-General for Local Government

(i) He is responsible for the audit of the financial statement of local government

(ii) He evaluates the integrity and validity of the financial statements of all local government and writes report on them

(iii) He approves sanctions/surcharges through the local government service commission

(iv) Issuing annual statutory audit reports

(v) Carrying out prepayment audit of gratuity and pension of local government retirees, teaching and non-teaching staff of primary schools in the state

(vi) Executing pre-payment audit of major projects of local government

(vii) Ensure that proper and adequate system of account is maintained and established
(ix) Ensure that effective and efficient internal control system is established on the local government

(x) Heading the losers and Audit Alarm Committee at the local government level

EXAMINER’S COMMENT

The question is divided into two parts, while part ‘a’ tested on the Framework governing the Operation of the Auditor-General for Local Government, part ‘b’ was on Statutory Function of the Auditor-General.

Over 90% of the candidates attempted this question. In part ‘a’, only about 20% of the candidates scored above 30% of marks obtainable and in part ‘b’, about 60% scored 50% and above of marks obtainable.

SOLUTION 5

(a) Similarities between self accounting and sub-accounting ministries includes
   i. Both do not forward vouchers of their units to the Accountant-General of the Federation
   ii. Both render expenditure in Heads total in their transcripts
   iii. Both operates a central pay office
   iv. Both give a breakdown of expenditure totals at the end of each financial year
   F. Both establish an internal audit unit
   vi. Both are approved by the Minister of finance to be of the status
   vii. Both operate current accounts with banks

(b) Steps in preparing transcripts include:
   i. Collection of vouchers and original cash book
   ii. Ticking of vouchers to the cash book
   iii. Posting into analysis book
   iv. Balancing of analysis book
   v. Sorting into heads and sub-heads
vi. Compilation of the transcript

vii. Pre-listing of payment vouchers

viii. Preparation of voucher schedule

EXAMINER’S COMMENT

The question is divided into two parts. Part ‘a’ of the question tested on the difference between Self Accounting and Sub-Accounting Units, while the ‘b’ part was on the process of Preparing Transcripts. About 95% of the candidates attempted this question.

In part ‘a’, less than 10% of the candidates scored above 10% of marks obtained, while in part ‘b’, about 90% of them scored over 75% of the marks allocated.

SOLUTION 6

OLIVER LOCAL GOVERNMENT

OLA STREET PROJECT IMPLEMENTATION ACCOUNTS

<table>
<thead>
<tr>
<th>DR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N’M</strong></td>
<td><strong>N’M</strong></td>
</tr>
<tr>
<td>Materials 320</td>
<td>Soft loan 300</td>
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<tr>
<td>Engineering 15</td>
<td>State donation 250</td>
</tr>
<tr>
<td>Compensation 30</td>
<td>Corporate participation 200</td>
</tr>
<tr>
<td>Equipment rental 20</td>
<td></td>
</tr>
<tr>
<td>Interest on loan 12</td>
<td></td>
</tr>
<tr>
<td>Freight 0.05</td>
<td></td>
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<tr>
<td>Wages 90</td>
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<td><strong>487.05</strong></td>
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<td>Balance c/d 262.95</td>
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<tr>
<td>750</td>
<td>750</td>
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<tr>
<td>Repayment of loan 300</td>
<td>Balance due 37.05</td>
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<tr>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Loan due for payment 37.05</td>
<td></td>
</tr>
</tbody>
</table>

Disclosure requirement under IPSAS 11

(1) Equity: (a) The amount of contract revenue

(b) Method used to determine the contract revenue
(c) The method used to determine the stage of completion of contract in progress

(2) (a) Aggregate amount of cost of incurred and recognized surplus
(b) Amount of advances received
(c) The amount of retention

(3) (a) The gross amount due from customer for contract
(b) The gross amount due to customer as liabilities

EXAMINER’S COMMENT

The question is on Contract Account in compliance with IPSAS 11. Many of the candidates ran away from this question as only about 45% attempted it. The performance was high as about 70% of the candidates that attempted the question scored about 70% of total marks obtainable.
ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME
PART II EXAMINATION - MARCH 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. Mr A offers the barman ₦1,000 for a round of 5 bottles of beer. He glances at the change he gives him and sees that there is at least ₦100. The inequality that expresses the price of a bottle of the beer is
   A. $1,000 - 5x \leq 100$
   B. $5x - 1,000 \geq 100$
   C. $1,000 - 5x \geq 100$
   D. $5x - 1,000 \leq 100$
   E. $5x \leq 100$

2. The basis of the Operations Research (OR) approach is that of constructing ...................................... in an objective and factual manner and experimenting to show the results of various possible courses of action.
   A. Equation
   B. A Graph
   C. Models
   D. Tableau
   E. Symbol

3. If the degree of association between two variables ranges between 0 to 1 then the relationship is said to be a
   A. Perfect positive correlation
   B. Zero correlation
   C. Positive Correlation
   D. Perfect negative correlation
4. If \( f(x) = ax^2 + bx + c \), \( f(x) \) becomes a linear function when
   A. \( a > 0 \)
   B. \( a < 0 \)
   C. \( a = 0 \)
   D. \( a \neq 0 \)
   E. \( a = b \)

5. The following are the properties of a median **EXCEPT** that
   A. It is unique
   B. It is not sensitive to extreme values
   C. It is used to locate the middle number in a set of data
   D. Its value is not affected even if the distribution has open classes in the beginning or end of the distribution.
   E. It is easy to calculate

6. The Coefficient of variation is computed as
   A. \( \frac{\sigma}{x} \times 100\% \)
   B. \( \frac{s^2}{x} \times 100\% \)
   C. \( \frac{\bar{x}}{\sigma} \times 100\% \)
   D. \( \frac{\sigma^2}{x} \times 100\% \)
   E. \( \frac{s}{\sqrt{\sigma^2}} \times 100\% \)

7. The computed value, which when compared with the tabulated value, which enables one to decide whether to accept or reject a hypothesis, is known as
   A. Hypothesis Statistic
   B. Calculated Statistic
   C. Computed Statistic
   D. Test Statistic
   E. Point Statistic

8. A mother-care shop owner sells, on the average, 215 packets of disposable nappies per day with a standard deviation of 25. He has been told that other shops in the area perform better in sales. He therefore decides to engage in an extensive advertisement campaign and later checks whether there has been general improvement in sales. The corresponding alternative hypothesis is stated as
   A. \( H_1 : \mu \geq 215 \)
B. $H_1 : \mu = 215$
C. $H_1 : \mu > 215$
D. $H_1 : \mu \neq 215$
E. $H_1 : \mu < 215$

9. All of the following are true of a transportation problem **EXCEPT**
   A. It is a linear programming problem
   B. It is an example of a network optimisation problem
   C. The total available and the total requirement are known quantities
   D. The solution at every stage is feasible
   E. It is always presented in a matrix form

10. Part of the PERT/CPM procedure that involves moving forward through the project network to determine the Earliest Start and Earliest Finish Times of each activity is called
   A. Backward Pass
   B. Forward Pass
   C. Immediate Predecessor
   D. Critical activity
   E. Project network

The diagram below is the network of a construction project.

11. Find the time it would take to complete the project
   A. 36 days
   B. 38 days
   C. 40 days
   D. 42 days
   E. 50 days

12. The Shadow cost is also known as
   A. Sensitive cost
   B. Optimal cost
C. Dual cost  
D. Minimal cost  
E. Maximal cost  

13. The coefficient of a slack variable within the objective function in a maximising Linear Programming problem is always  
A. -2  
B. -1  
C. 0  
D. +1  
E. +2  

14. Problems to be solved by Linear Programming must conform with the following EXCEPT that  
A. A choice of alternative actions must be possible  
B. Decision variables must be more than two  
C. The problem must be expressible numerically  
D. All variables involved must have linear relationship  
E. There must be one or more restrictions on available resources  

15. Which of the following is NOT true for a random experiment?  
A. The outcomes are independent  
B. The sample space is finite  
C. The outcomes are predictable  
D. The outcomes are called sample points  
E. The sample space is synonymous with universal set  

16. If the cost function is \( 2x^2 + 6x - 18 \) and the revenue function is \( 3x^2 - 2x \), then the marginal profit, when \( x=5 \), is  
A. 1  
B. 2  
C. 3  
D. 14  
E. 23  

17. If a business establishes its profit function to be \( 0.05e^{3x^2} + 0.2e^x + 1000 \), find the marginal profit to the nearest thousand when \( x = 2 \)  
A. 95,000  
B. 96,000  
C. 97,000  
D. 98,000  
E. 99,000
18. Which of the following costs should be minimum in order to determine the optimum replacement point of an item that fails suddenly

A. Total annual cost  
B. Average annual cost  
C. Maintenance cost  
D. Depreciation cost  
E. Labour cost

19. In preparing a frequency table, all of the following terms are relevant **EXCEPT**

A. Class interval  
B. Class limit  
C. Class boundary  
D. Sample survey  
E. Class size or width

20. What is the Present Value of an annuity of ₦35,000 for 7 years at 5.5% compounded annually?

A. ₦413,451.02  
B. ₦411,600.42  
C. ₦313,021.67  
D. ₦312,956.72  
E. ₦198,903.85

21. What compound interest rate will be required to obtain ₦220,000 after 4 years with an initial principal of ₦100,000?

A. 21.9%  
B. 12.5%  
C. 11.5%  
D. 11.2%  
E. 11.01%

22. An accounting firm uses 400 units of an item per year. It is found that the carrying costs are ₦4 per annum and ordering cost is ₦50 per order. What is the Economic Order Quantity?

A. 50  
B. 80  
C. 100  
D. 150  
E. 250
23. The annual demand for a product is 20,000 units while the ordering cost is ₦10 per order with holding cost of ₦3 per unit per annum. If the re-order quantity is 1,500, the total cost per annum is
   A. ₦133.33
   B. ₦400.00
   C. ₦2,383.33
   D. ₦2,550.00
   E. ₦100,003.00

24. All of the following are the advantages of the postal method over the personal interview method EXCEPT that,
   A. Postal method is relatively cheaper than interview
   B. Investigator’s bias will not occur
   C. Respondents will feel free to answer some sensitive questions
   D. Rate of non-response is usually high
   E. Respondents will have enough time to consult sources

25. Which of the following is NOT a method of determining seasonal indices?
   A. Simple average percentage
   B. Percentage moving average
   C. Least squares
   D. Link relative
   E. Ratio to trend

26. The following statements are correct about the Moving Average method of measuring the trend EXCEPT that the
   A. method is suitable for forecasting
   B. method is simpler than the least squares method
   C. extreme values are always at the end
   D. method is not good for non-linear trend
   E. method removes the effect of cyclic fluctuations completely

27. The weekly cost function of a manufacturing company is modelled as $C(x)=30x + 200$, find the unit cost
   A. 130
   B. 210
   C. 220
   D. 230
   E. 240
28. If the marginal cost function of an item is $3q^2 - 2q + 2000$, determine the total cost when $q=10$
   A. 20,000
   B. 20,900
   C. 21,000
   D. 21,100
   E. 22,000

29. The prices of an accounting machine in the years 2013 and 2014 were ₦50,000 and ₦60,000 respectively. Using the year 2013 as the base year, the price relative is
   A. 120.00%
   B. 83.33%
   C. 80.00%
   D. 20.00%
   E. 16.67%

30. The Laspreyer’s method for calculating price index uses
   A. Current year’s weights
   B. Both current and base year’s weights
   C. Base year’s weights
   D. Total weight
   E. Average weights

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

ATTEMPT ALL QUESTIONS

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

1. If the arithmetic mean of 1, 2, y, 4 and 5 is 3, the value of y is .........................
2. The graphical representation of time series values against different points is known as .........................
3. The standard Linear Programming problem in canonical form is required before a ......................... method can be applied
4. The amount of spare time associated with an activity is known as.................................
5. The two types of policy used when replacement of an item is done based on sudden failure are ................................. and .................................
6. The statistical error committed if $H_0$ is rejected when it ($H_0$) is true is called .................................
7. The test-statistic for a large sample in the hypothesis testing of the mean is known as the .................................
8. The multiplication law of probability is applicable to both ................................. events and ................................. events.
9. The solution to a Linear Programming problem is always at ......................... point of the boundary of the................................. region
10. The price index obtained by using the arithmetic mean of the base year’s quantity and current year’s quantity as weight is called................................. price index
11. Another name for the cumulative frequency polygon is the .........................
12. A sample which reflects all the general characteristics of the parent population is called a ................................
13. In Operations Research (OR), the term used to describe an input variable which has an arbitrary or constant value in the model, is known as .................................
14. If the revenue and cost functions of a business are represented by R(x)-C(x)< 0, then the business is said to be running at ........................................
15. If the cost function is $3x^2+4x–2$, the marginal cost function is .................
16. A situation where there is demand for an item but the item is not in store is referred to as ........................................
17. The maximum cost is obtainable when the marginal cost function is ......................
18. A project is said to be desirable if the Net Present Value is ...........................
19. The Present Value of N$2.8 million at 15% simple interest rate over six years is ........................................
20. A typical transportation problem is concerned with a number of ......................... and a number of .................................

SECTION B: Attempt any FOUR questions out of which at least one must come from each sub-section (50 Marks)

SUB-SECTION I

QUESTION I

FADAWAS Textiles Company quarterly data for textile material sales (in N’000,000) for four consecutive years is given in the table below:

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<th>Year</th>
<th>Quarter</th>
<th>Quarter</th>
<th>Quarter</th>
<th>Quarter</th>
</tr>
</thead>
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<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
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<td>17</td>
<td>21</td>
<td>25</td>
<td>32</td>
</tr>
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<tr>
<td>4</td>
<td>33</td>
<td>37</td>
<td>45</td>
<td>47</td>
</tr>
</tbody>
</table>

You are required to:

a. Calculate the moving average of order 4. (4 Marks)

b. Estimate the seasonal variation using percentage moving average. (8½ Mark)

(Total 12½ Marks)
QUESTION 2

The following table indicates the distribution of marks obtained at the Quantitative Analysis of ATSWA Examination by a group of 120 candidates:

<table>
<thead>
<tr>
<th>Marks</th>
<th>Number of Candidates</th>
</tr>
</thead>
<tbody>
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<td>01-19</td>
<td>8</td>
</tr>
<tr>
<td>20-39</td>
<td>16</td>
</tr>
<tr>
<td>40-49</td>
<td>19</td>
</tr>
<tr>
<td>50-59</td>
<td>27</td>
</tr>
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<td>60-69</td>
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</tr>
<tr>
<td>70-79</td>
<td>13</td>
</tr>
<tr>
<td>80-89</td>
<td>10</td>
</tr>
<tr>
<td>90-99</td>
<td>4</td>
</tr>
</tbody>
</table>

You are required to:

a.  
   i.  Draw the cumulative frequency curve.
   ii. If the pass mark is 40 and distinction is 75, estimate the number of candidates who passed and the number who obtained distinctions.
       (6 Marks)

b.  
   Compute the coefficient of
   i.  Quartile deviation
   ii. Variation  
       (6½ Marks)

   (Total 12½ Marks)

SUB-SECTION II

QUESTION 3

a.  
   A manufacturing company, from the past experience and estimates for the future, has decided that the cost of production of its sole product, P, an advanced process machine is
   \[ C = 900 + 3x + 0.02x^2 \]
   where \( C \) = total cost in \( \text{₦}000,000 \)
   \( x \) = quantity produced (and sold).

   The marketing department has estimated that the price of the product is related to the quantity produced and sold by the equation
   \[ P = 107 - 2x, \]
   where \( P \) = price per unit in \( \text{₦} '000,000 \)
   \( x \) = quantity sold.
You are required to:

Calculate the maximum profit. (7½ Marks)

b. The demand and cost functions of GLABOW Nigeria Limited are given below:

\[ P = 32,500 - 4q^2 \]
\[ C = 8,000 + 17,400q \]

Where:
- \( P \) is the price per item
- \( q \) is the quantity produced and sold
- \( C \) is the total cost.

You are required to calculate:

i. The marginal revenue function (3 Marks)

ii. The marginal profit function (2 Marks)

(Total 12½ Marks)

QUESTION 4

a. An investor purchased some shares for N8,000. When the price per share increased by N2.50, he sold all but 2000 of the shares for N4000. How many shares did he buy originally? (6½ Marks)

b. A model for the sales of a product, \( S \), in terms of the amount spent on advertising, \( A \), and the price of the product, \( P \), is given by

\[ S = 1,500(50 - Pe^{0.001A}) \]

You are required to:

i. State the expression which represents advertising expenditure in terms of sales and price. (4 Marks)

ii. If desired sales are N15,000 and the price is N30, how much should be spent on advertising? (2 Marks)

(Total 12½ Marks)
QUESTION 5

DAMABEN garments company produces two types of suits namely: fitted and padded. They both require three main processes: cutting, sewing and packaging. A fitted suit requires 3 hours of cutting, 5 hours of sewing and 2 hours of packaging while a padded suit requires 2 hours of cutting, 4 hours of sewing and 2.5 hours of packaging. The company has 450 working hours of cutting, 800 working hours of sewing and 500 working hours of packaging. Each fitted suit sells for GH¢6,500 and each of padded suit sells for GH¢5,800.

You are required to:

a. Use the above information to formulate the relevant Linear Programming problem. (4½ Marks)

b. Determine the optimal level of production using graphical method. (8 Marks)

(Total 12½ Marks)

QUESTION 6

The demand for an item is 5,000 per month, the ordering cost is N40 per order, holding cost per item is N0.80 per annum and the price per unit of item is N15.

You are required to:

a. Determine the best number of units to order so as to minimize the total cost. (4½ Marks)

b. Determine the associated minimum cost, if no discount is allowed. (4 Marks)

c. If a discount rate of 2% is offered for orders of 30,000 units and above by the supplier, calculate the total cost. (4 Marks)

(Total 12½ Marks)
SECTION A

PART I  MULTIPLE-CHOICE QUESTIONS  (30 Marks)

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

(Workings)
11. Paths | Durations
---|---
A – B – D – H – M | 1 + 17 + 3 + 9 + 10 = 40 days
A – B – E – I – M | 1 + 17 + 14 + 8 + 10 = 50 days
A – c – F – J – L | 1 + 5 + 6 + 11 + 13 = 36 days
A – C – G – K – L | 1 + 5 + 7 + 12 + 13 = 38 DAYS

\[ (E) = 50 \text{ Days} \]

16. Profit = \[ 3x^2 - 2x - 2x^2 - 6x + 18 \]
= \[ x^2 - 8x + 18 \]
\[
\frac{dp}{dx} = 2x - 8
\]

When \( x = 5 \)
\[
\frac{dp}{dx} = 2(5) - 8 = 2
\]

17. \[ P(x) = 0.05 e^{3x^2} + 0.2 e^{2x} + 1000 \]
\[
\frac{dp(x)}{dx} = 0.3xe^{3x^2} + 0.4e^{2x}
\]

When \( x = 2 \),
\[
\frac{dp}{dx} = 0.6 e^{12} + 0.4 e^4
\]
= 97,871
≈ 98,000
20. \( P = \frac{A}{r} \left[ 1 - (1 + r)^{-n} \right] \)

\( A = 35,000 ; r = 0.055 ; n = 7 \)

\[ P = \frac{35,000}{0.055} \left[ 1 - (1 + 0.055)^{-7} \right] \]

\[ = \$198,903.85 \]

21. \( A_n = P(1 + r)^n \)

\( 220,000 = 100,000(1 + r)^4 \)

\( (1 + r)^4 = 2.2 \)

\( (1 + r) = (2.2)^{\frac{1}{4}} = 1.21788 \)

\( r \approx 0.21788 \)

\( r \approx 21.79 \)

22. \( EOQ = \sqrt{\frac{2Cd}{Cc}} \)

\( = \sqrt{\frac{2 \times 50 \times 400}{4}} = 100 \)

23. \( TC = \text{Ordering Cost} + \text{Holding Cost} \)

\[ = \frac{cd}{Q} + \frac{Qh}{2} \]

\( = \frac{10(20,000)}{1,500} + \frac{(1,500)(3)}{2} = \$2,383.333 \)

27. If \( C(x) = 30x + 200 \)

Then unit cost implies \( x = 1 \)

\[ C(1) = 30(1) + 200 = 230 \]
29. \[ PR = \frac{P_n}{P_o} \times 100 \]
\[ = \frac{60,000}{50,000} \times 100 = 120.00\% \]

**EXAMINER'S COMMENT**

Virtually every part of the syllabus contributes to this section. On the average, the candidates’ performance was fairly good with an average score of 60%.

**SHORT-ANSWER QUESTIONS**

1. 3
2. Time plot
3. Simplex
4. Float
5. Individual replacement; group replacement
6. Type 1 error
7. \( Z \) - test
8. Independent, conditional or dependent
9. “Corner”, “Feasible” (in that order)
10. Marshal Edge -worth
11. Cumulative Frequency Curve or Ogive
12. Representative sample
13. Parameter
14. Loss
15. \( 6x + 4 \)
16. Stock out
17. Zero
18. Positive
19. \( N1.478,684.20 \)
20. Sources; destinations
Workings

2. A.M = \( \sum_{n} x \)

\[
3 = \frac{1 + 2 + y + 4 + 5}{5}
\]

⇒ 12 + y = 15

\[
y = 15 - 12 = 3
\]

15. MC = \( \frac{dc(x)}{dx} \)

When \( C(x) = 3x^2 + 4x - 2 \)

then \( \frac{dc(x)}{dx} = 6x + 4 \)

19. \( A_n = P\left(1 + r^n\right) \)

\[
2.8 = P\left[1 + (0.15)^6\right]
\]

\[
2.8 = 1.9P
\]

\[
\therefore \ P = \frac{2.8}{1.9} = 1.47368420
\]

\[
\therefore \ P = \#1,473,684.20
\]

EXAMINER’S COMMENT

No part of the syllabus is left out in compiling questions for this section. Relatively, the candidates’ performance was fair with an average score of 75%.
## SOLUTION 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
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<tr>
<td></td>
<td></td>
<td>Sales ('000,000)</td>
<td>4-Quarter Moving totals</td>
<td>4-Quarter Centered Moving totals</td>
<td>Centered Moving Average or Trend <em>(C5 ÷ 8)</em></td>
<td>Seasonal Variation</td>
<td></td>
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<td>1</td>
<td>I</td>
<td>17</td>
<td>-</td>
<td>-</td>
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<td>119.22</td>
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<td>I</td>
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<td>92.20</td>
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<td>162</td>
<td>321</td>
<td>40.125</td>
<td>92.20</td>
<td>92.20</td>
</tr>
</tbody>
</table>

### Simple Calculations

Seasonal Variation \[= \frac{\text{Actual}}{\text{Trend}} \times \frac{100}{1}\]

For Yr 1 (III) \[= \frac{25}{24.125} \times \frac{100}{1} = 103.63\]

For Yr 1 (IV) \[= \frac{32}{25} \times \frac{100}{1} = 128\]

### EXAMINER’S COMMENT

The question tests candidates’ knowledge of the Time Series with particular attention to the Moving Average of Order 4 and Seasonal Variation. About 60% of the candidates attempted the question with an average score of 5 marks out of the maximum of 12½ marks. The major pitfall identified is the inability of the candidates to compute the moving average and seasonal variation. Some of them also have problem in centering the moving averages. Candidates are advised to make adequate preparation to ensure better performance in subsequent examinations.
SOLUTION 2

<table>
<thead>
<tr>
<th>Marks</th>
<th>Classes</th>
<th>X</th>
<th>F</th>
<th>Cf</th>
<th>Fx</th>
<th>$F(x - \bar{x})^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – 19</td>
<td>0.5 – 19.5</td>
<td>10</td>
<td>8</td>
<td>8</td>
<td>80</td>
<td>15863.37</td>
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<tr>
<td>20 – 39</td>
<td>19.5 – 39.5</td>
<td>29.5</td>
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<td>24</td>
<td>472</td>
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<td>40 – 49</td>
<td>39.5 – 49.5</td>
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<td>19</td>
<td>43</td>
<td>845.5</td>
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<td>50 – 59</td>
<td>49.5 – 59.5</td>
<td>54.5</td>
<td>27</td>
<td>70</td>
<td>1471.5</td>
<td>0.0243</td>
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<td>60 – 69</td>
<td>59.5 – 69.5</td>
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<td>23</td>
<td>93</td>
<td>1483.5</td>
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<tr>
<td>70 – 79</td>
<td>69.5 – 79.5</td>
<td>74.5</td>
<td>13</td>
<td>106</td>
<td>968.5</td>
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<tr>
<td>80 – 89</td>
<td>79.5 – 89.5</td>
<td>84.5</td>
<td>4</td>
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<tr>
<td>90 – 99</td>
<td>89.5 – 99.5</td>
<td>94.5</td>
<td>120</td>
<td>-</td>
<td>6544</td>
<td>50641.86</td>
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</tbody>
</table>

\[ \bar{x} = \frac{\sum fx}{\sum f} = \frac{6544}{120} = 54.53 \]

Variance \[ = \frac{\sum f(x - \bar{x})^2}{\sum f - 1} = \frac{50641.86}{119} = 425.56 \]

\[ \therefore \sigma = \sqrt{425.56} = 20.63 \]

\[ Q_1 = Lq_1 + \left( \frac{N - Cf_{b1}}{f_{q1}} \right) Cq_1 \]
\[ = 39.5 + \left( \frac{30 - 24}{19} \right) 10 = 42.66 \]

\[ Q_3 = Lq_3 + \left( \frac{3N}{4} - Cf_{b3} \right) Cq_3 \]
\[ = 59.5 + \left( \frac{90 - 70}{23} \right) 10 = 68.20 \]

b(i). Coefficient of quartile deviation \[ = \left( \frac{Q_3 - Q_1}{Q_3 + Q_1} \right) \]

\[ CQD = \left( \frac{68.20 - 42.66}{68.20 + 42.66} \right) = \left( \frac{25.54}{110.86} \right) = 0.23 \]
b(ii). Coefficient of Variation is

\[ CV = \frac{\sigma}{\bar{x}} \times 100\% = \frac{20.63}{54.53} \times 100\% = 27.8\% \]

**EXAMINER’S COMMENT**

The question tests candidates’ knowledge of Measures of Dispersion and Presentation of data. It also demands from the candidates their knowledge of coefficient of quartile deviation and coefficient of variation. Candidates are expected to calculate both the first quartile (Q1) and the third quartile (Q3) to be able to calculate the coefficient of Deviation. About 98% of all the candidates attempted the question with less than 10% scoring an average of 6½ marks out of 12½. The major pitfalls of the candidates are their inability to present the data correctly and in understanding the concept of measures of dispersion, calculation of first and third quartiles.

**SOLUTION 3**

a. Profit = Revenue – Cost

Revenue = Px

P denotes Price

∴\( \pi \) = Px – C

= \((107 - 2x) \times -(900 + 3x + 0.02x^2)\)

= \(107x - 2x^2 - 900 - 3x - 0.02x^2\)

= \(104x - 900 - 2.02x^2\)

∴\( \pi \) = \(-2.02x^2 + 104x - 900\)

\[ \frac{d\pi}{dx} = -4.04x + 104 \]

At the tp. \( \frac{dp}{dx} = 0 \)

0 = -4.04 x +104

∴ 4.04x = 104

\[ x = \frac{104}{4.04} = 25.74 \]

\[ \frac{d^2\pi}{dx^2} = -4.04 < 0 \]

∴ \( x = 25.74 \) gives maximum value of profit

Profit = \( \pi \)

= \(-2.02x^2 + 104x - 900\)

= \(-2.02 (25.74)^2 + 104 (25.74) - 900\)

= \(-1,338.35 + 2,676.96 - 900\)
3a. A Litre

\[ R(x) = (107 - 2x)x \]
\[ = 107x - 2x^2 \]
\[ \frac{dR(x)}{dx} = MR = 107 - 4x \]
\[ C(x) = 900 + 3x + 0.02x^2 \]
\[ \frac{dC(x)}{dx} = MC = 3 + 0.04x \]

Profit is maximised when \( MR = MC \)

i.e. \( 107 - 4x = 3 + 0.04x \)
\[ 104 = 4.04x \]
\[ x = \frac{104}{4.04} = 25.74 \]

b(i). \( P = 32500 - 4q^2 \)

But Revenue \( R = p.q \)
\[ \Rightarrow (32500q - 4q^2)q \]

i.e. \( R = 32500q - 4q^3 \)

Marginal Revenue \( = \frac{dR}{dq} \)

Since \( R \) is now a function of \( q \)
\[ \frac{dR}{dq} = 32500 - 12q^2 \]

ii. \( R = 32500q - 4q^3 \)
\[ C = 8000 + 17400q \]

But Profit is \( \pi = R - C \)
\[ \therefore \pi = 32500q - 4q^3 - 8000 - 17400q \]

i.e. \( \pi = 15100q - 4q^3 - 8000 \)
\[ \therefore \text{Marginal Profit function is} \]
\[ \frac{d\pi}{dq} = 15100 - 12q^2 \]

EXAMINER'S COMMENT

The question is majorly on the application of calculus to business. Candidates are expected to know basic differentiation in getting marginal expressions. About 95% of the candidates
attempted the question with about 45% of them scoring 6 marks out of 12½. The noticed pitfall of the candidate is their inability to differentiate the given functions correctly.

**SOLUTION 4**

i(a). Let \( x \) represent the number of the shares originally bought.

The price of these must have been \( \frac{8,000}{x} \) each.

\[ \therefore \text{He sells } (x - 2,000) \text{ shares for } \left( \frac{8,000}{x} + 2.5 \right) \text{ and obtains } \mathbf{N} 4,000 \]

That is

\[ (x - 2,000) \left( \frac{8,000}{x} + 2.5 \right) = 4,000 \]

\[ (x - 2,000) \left( \frac{8,000 + 2.5x}{x} \right) = 4,000 \]

Multiplying both sides by \( x \)

\[ (x - 2,000)(8,000 + 2.5x) = 4,000x \]

\[ 8,000x + 2.5x^2 - 16,000,000 + 5,000x = 4,000x \]

\[ 8,000x + 2.5x^2 - 16,000,000 + 5,000x = 4,000x \]

\[ 2.5x^2 + 9000x - 16,000,000 = 0 \]

\[ x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \]

\[ x = \frac{-9,000 \pm \sqrt{9,000^2 - 4(2.5)(16,000,000)}}{2(2.5)} \]

\[ x = \frac{-9,000 \pm \sqrt{81,000,000 + 160,000,000}}{5} \]

\[ x = \frac{-9,000 \pm \sqrt{155,241.7}}{5} \]

\[ x = \frac{6524.17}{5} \text{ or } -\frac{24,524.17}{5} \]
\[ \begin{align*}
\text{x} &= 1,304,834 \quad \text{or} \quad -4,904,834 \\
\therefore \quad \text{The number of shares originally bought is 1,305 since number of shares cannot be negative}
\end{align*} \]

b(i). \[ S = 1,500 \left( 50 - pe^{0.001A} \right) \]

\[ S = 1,500(50) - 1,500pe^{0.001A} \]

\[ 1,500pe^{0.001A} = 1,500(50) - S \]

\[ 1,500pe^{0.001A} = 75,000 - S \]

\[ \therefore \quad e^{0.001A} = \frac{75,000 - S}{1,500p} \]

Take the log of both sides to base (e) gives

\[ 0.001A = \log_e \left( \frac{75,000 - S}{1,500p} \right) \]

\[ 0.001A = \log_e \left( \frac{75,000 - S}{1,500p} \right) + \log_e \left( \frac{75,000 - S}{1,500p} \right) \]

\[ \therefore \quad A = \frac{1}{0.001} \log_e \left( \frac{75,000 - S}{1,500p} \right) \]

\[ = 1,000 \log_e \left( \frac{75,000 - S}{1,500p} \right) \]

b(ii) When \( S = N15,000, p = N30 \)

\[ \therefore \quad A = \frac{1}{0.001} \log_e \left( \frac{75,000 - 15,000}{1,500(30)} \right) \]

\[ = \frac{1}{0.001} \log_e (1.33) \]

\[ = \frac{\log_e 1.33}{0.001} = 285.179 \]

\[ \therefore \quad N285.18 \quad \text{should be spent on advertising} \]
EXAMINER’S COMMENT
This question is on basic mathematics where candidates’ knowledge in worked problem is tested. About 10% of all the candidates attempted the question with about 20% scoring 7 marks out of 12½ in the average. Candidates could not interpret the worked problem correctly.

SOLUTION 5

a. let \( x_1 \) be the decision variable representing the number of fitted suit produced and \( x_2 \) be the decision variable representing the number of padded suits produced

\[
\text{maximum: } Z = 6500x_1 + 5800x_2
\]

subject to:

\[
\begin{align*}
3x_1 + 2x_2 & \leq 450 & \text{(cutting constraints)} \\
5x_1 + 4x_2 & \leq 800 & \text{(sewing constraints)} \\
2x_1 + 2.5x_2 & \leq 500 & \text{(package constraints)} \\
x_1, x_2 & \geq 0 & \text{(non-negativity constraints)}
\end{align*}
\]

b. for constraint \( 3x_1 + 2x_2 \leq 450 \)

\[
3x_1 + 2x_2 = 450
\]

When \( x_1 = 0; \ x_2 = 225 \) \( \Rightarrow (0, 225) \)

\( x_2 = 0; \ x_1 = 150 \) \( \Rightarrow (150, 0) \)

For constraint \( 5x_1 + 4x_2 \leq 800 \)

\[
3x_1 + 2x_2 = 450
\]

When \( x_1 = 0; \ x_2 = 200 \) \( \Rightarrow (0, 200) \)

\( x_2 = 0; \ x_1 = 160 \) \( \Rightarrow (160, 0) \)

For constraint \( 2x_1 + 2.5x_2 \leq 500 \)

\[
2x_1 + 2.5x_2 = 500
\]

When \( x_1 = 0; \ x_2 = 200 \) \( \Rightarrow (0, 200) \)

\( x_2 = 0; \ x_1 = 250 \) \( \Rightarrow (250, 0) \)
From the graph:
A (0, 0) = 6500 (0) + 5800 (0) = 0
B (0, 200) = 6500 (0) + 5800 (200) = ₦1,160,000
C (95, 80) = 6500 (95) + 5800 (80) = ₦1,081,500
D (150, 0) = 6500 (150) + 5800 (0) = ₦75,000

The optimal production level is obtained as
No of fitted suits = 0
No of padded suits = 200

EXAMINER’S COMMENT
This is a question on Linear Programming where candidates are expected to turn those worked problems into linear programming models with clear identification of the objective function to be optimized and the associated constraints. About 95% of the candidates attempted the question with about 70% of them scoring above 6½ marks out of 12½. The major pitfall identified is their inability to attach correct inequality signs.

SOLUTION 6

a. Required quantity (Q) = \[ \sqrt{\frac{2cd}{h}} \]
   d = annual demand = 5000 x 12 = 60,000
   c = 40; d = 60,000; h = 0.8
   \[ Q = \sqrt{\frac{2(40)(60,000)}{0.8}} = 2,449,489 \]
   \[ \approx 2,450 \text{ units} \]

b. If no discount is allowed:
   Cost of purchase = 60,000 x 15 = ₦900,000
   Holding Cost = \[ \frac{2450}{2} \times 0.8 \] = ₦980
   Ordering Cost = 25 x 40 = ₦1,000
   .\.
   Total Cost (if no discount is allowed) = ₦901,980

c. If 2% discount is allowed then,
   2% (30,000 items)
   Cost of purchase = (60,000)(15)(0.98) = ₦882,000
   Holding Cost = \[ \left( \frac{30,000}{2} \right) (0.8) \] = ₦12,000
Ordinary Cost  = \left( \frac{60,000}{30,000} \right)(4.0) = \text{₦} 80,000

\therefore \text{Total Cost (if 2% discount is allowed)} = \text{₦974,000}

EXAMINER’S COMMENT
This question tests candidates’ knowledge of Inventory Control. About 60% of the candidates attempted the question with about 20% of them scoring between 3 and 6 marks out of 12½ marks. The identified pitfall is the inability of the candidates to write down the correct formulae.
AT/151/PII.8

ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME
PART II EXAMINATION – MARCH 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, E) that corresponds to the correct option in each of the following questions

1. The unit of measurement of a Computer Storage is
   A. Bite
   B. Byte
   C. Buyte
   D. Digits
   E. Records

2. A configuration of electronic components that perform input, processing, output, storage and control functions is called
   A. Processing System
   B. Computer System
   C. Information System
   D. Network System
   E. Application System

3. Computer Peripheral include
   A. Control and Logic devices
   B. Input and Control devices
   C. Input and Output devices
   D. Output and Logic devices
   E. Output and Control devices

4. Which of the following is NOT a software?
   A. Computer program utilities
   B. User program
   C. Diskette
   D. MS-DOS
E. Desktop packages

5. The Spreadsheet program is best suited for
   A. Drawings
   B. Creating letters
   C. Numerical work
   D. Presentation and Talks
   E. Software Development

6. MODEM is an acronym for
   A. Modulotion – Demulotion
   B. Modular – Demodular
   C. Modulotar – Demodulator
   D. Modulator – Demodulator
   E. Modulotor – Demodulotor

7. Which of the following does NOT involve System Implementation?
   A. Programming and System testing
   B. Documentation and training
   C. Changeover and Master file conversion
   D. Hardware Acquisition, Installation and Site preparation
   E. Analysis and Systems Evaluation

8. The aspect of Information Technology that stresses the healthy design of work places, workstations and even software packages is referred to as
   A. Bispoke
   B. Human Machine Interface
   C. Ergonomics
   D. Prototyping
   E. Biometrics

9. Which of the following is NOT a Computer crime?
   A. Trojan horse method
   B. Data Diddling
   C. Data Security
   D. Impersonation
   E. Data Leakage

10. Which of the following is NOT a Multimedia?
    A. Text and video
    B. Sound and Images
    C. Video and Sound
    D. Compiler and Mouse
    E. Video and Images
11. The number $836_{10}$ in Binary Coded Decimal (BCD) is
   A. $100001110000$
   B. $10000110110$
   C. $100100100010$
   D. $001000101$
   E. $1101000100$

12. When a computer is first turned on, the program that is read from the ROM is called
   A. Load Program
   B. The prompt
   C. Protocol
   D. Bootstrap Program
   E. The Utility Programs

13. The contents of a Compact Disk of 1.2 GB Size is to be transferred into 1.44MB 3½ inches diskettes. Calculate the number of such diskettes that will be needed.
   A. 801
   B. 833
   C. 834
   D. 850
   E. 1,728

14. Programs are integrated to unify the user interface. The term “user interface” entails allowing
   A. Programs to work together
   B. Data to be transferred from one system to another
   C. Communication between the computer and the user
   D. Data to be stored in a clipboard
   E. The use of wild card commands to instruct the computer

15. What is a debugger ?
   A. A program that monitors another program while it is running
   B. A program that corrects the syntax errors of another program
   C. A program that collects all the names of data items in another program
   D. A program that generates source code for a problem
   E. A prototype that produces predefined reports and modules for a problem

16. In the ISO Reference Model for Open System Interconnection, the layer that establishes, maintains and terminates logical connection for data transfer is
   A. Physical layer
   B. Network layer
   C. Transport layer
17. Which of the following is NOT a purpose of System Specification?
   A. Serving as a contract document between the Project team and Management
   B. Acting as a reference document for later Evaluation and Modification of the system
   C. Specifying the work load for the Operating staff
   D. Serving as Operating manual for users
   E. Used by Programmers to enable them write programs

18. The functions of a Web Browser is to
   A. Access the internet, search for and view data
   B. Allow the URL to read web addresses
   C. Download files
   D. Allow for point-to-point connection
   E. Serve as users interface

19. The term “downsizing” means
   A. Reducing the size of computer installation
   B. Changing computer department to information centre
   C. Reducing computing costs by transferring computer facilities from mainframe to mini or from mini to micros.
   D. Re-engineering the company’s processing activities
   E. Centralising computer operations within the organization

20. The use of Firewalls is now common to protect Computer Resources. This means
   A. Building a fence round the computer environment to check unauthorized access
   B. Installing computers within the four walls of a room
   C. Providing security guards to man the entry and exit of a computer installation
   D. To scramble data and information that are sent through mail
   E. To provide computers with software that serve as “gatekeepers” in filtering information that come into the company’s computer systems

21. Which of the following is NOT a good quality of information?
   A. Reliable and Accurate
   B. Low level of Details
   C. Complete and Precise
   D. Timely
   E. Relevant
22. The computer generation which uses Transistor and Magnetic Core is
   A. First Generation
   B. Second Generation
   C. Third Generation
   D. Fourth Generation
   E. Fifth Generation

23. Which of the following is **NOT** an impact printer?
   A. Dot Matrix
   B. Plotter
   C. Daisywheel
   D. Laser Jet
   E. Character Printer

24. The system software that consists of programs for routine, repetitive tasks which can be shared by many users is known as
   A. Operating System
   B. Utility program
   C. Editor
   D. Application Package
   E. Spreadsheet

25. Which of the following is **NOT** an algorithm?
   A. Program Flowchart
   B. Structured Pseudocode
   C. Data Structure
   D. Decision Table
   E. Decision Tree

26. The structure or configuration of a network is known as
   A. MODEM
   B. Local Area Network (LAN)
   C. Wide Area Network (WAN)
   D. Metropolitan Area Network (WAN)
   E. Topology

27. Which of the following is **NOT** a stage in traditional Systems Development Life Cycle?
   A. Prototyping
B. Feasibility Study  
C. Systems investigations  
D. System Analysis  
E. System Design

28. A special facility within an organization that provides training and support for end-user computing is known as

A. Outsourcing unit  
B. End-user Help unit  
C. Information centre  
D. System Building centre  
E. Structure development unit

29. Establishing an application of safeguards to protect data, software and computer hardware from accidental or malicious modification, destruction or disclosure is known as

A. Anti-intruder  
B. Protective system  
C. Control system  
D. Anti-Computer virus  
E. Security

30. An international network of computers and people from all over the world is called

A. Electronic mail  
B. Facsimile  
C. Telex  
D. Internet  
E. Intranet

**PART II SHORT-ANSWER QUESTIONS (20 Marks)**

**ATTEMPT ALL QUESTIONS**

**Write the answers that best complete each of the following questions/statements**

1. Processing in which records are collected together and later processed together is called  
   ..........................

2. The Interpreter, after translating an application program does not produce  
   ..........................

3. Repetitive function that provides for more efficient programming is called  
   ..........................
4. The input device which emphasizes the use of special magnetisable ink for coding is known as …………………

5. The use of system programs became available during the ………………… generation of computers

6. One way of ensuring that transmitted data preserves its confidentiality is to use a technique known as …………………

7. The name given to microelectronic storage circuits on silicon chips is …………………

8. A debit card that has a microprocessor and memory embedded in it is called …………………

9. The program that performs housekeeping functions for a computer system is called …………………

10. A concept where memory capability provided is much more than the actual memory capacity is …………………

11. A communication network that is designed to cover an office, a building or work site is called …………………

12. An act of obtaining illegal access to data and information on computer system is known as …………………

13. The commission of illegal acts through the use of a computer or against a computer system is known as …………………

14. Forum in which people share information and ideas on a defined topic through large electronic bulletin boards where anyone can post messages on the topic for others to see and respond to is called …………………

15. A network tool that allows someone to log onto one computer system while doing work on another is called …………………

16. Early microcomputer operating systems were command driven, but ………………… makes extensive use of icons, buttons, bars and boxes to perform the same task.

17. A program is a collection of ………………… written in a particular computer language

18. The most important object used in a database is called …………………

19. The technique of performing office business outside one’s workplace is referred to as …………………

20. Database ………………… is used to view, change and analyze data in different ways

SECTION B - Attempt Any FOUR Questions (50 Marks)
QUESTION 1

a. Explain the terms “Distributed System” and “Computer Network” (1 Mark)

b. What is a “Stand-Alone System”. (1 Mark)

c. Mention FIVE advantages of using networks. (2½ Marks)

d. What does the acronym OSI Stand for? (1 Mark)

e. List the SEVEN layers of OSI. (7 Marks) (Total 12½ Marks)

QUESTION 2

a. List FIVE Validation Checks used in Data Processing. (2½ Marks)

b. Outline TWO functions of each of the following key computer personnel
   i. Programmer
   ii. System Analyst
   iii. Data Processing Manager
   iv. Computer Operator
   v. Computer engineer (10 Marks) (Total 12½ Marks)

QUESTION 3

There are different types of data processing methods depending on needs, size and nature of the business.

You are required to:

Describe briefly each of the following types of information processing techniques

a. Batch processing (2½ Marks)
b. On-line Realtime processing (2½ Marks)
c. Distributed processing (2½ Marks)
d. Centralized processing (2½ Marks)
e. Decentralized processing (2½ Marks) (TOTAL 12½ Marks)

QUESTION 4

a. i. An e-mail typically consists of a header and text.
   Give an example of a standard format of an e-mail. (2½ Marks)

ii. Give an example each of an e-mail address, a website address and an IP address. (3 Marks)
b. i. Define the following terms:
   • E-Business (1 Mark)
   • Expert system (1 Mark)
   • Firewall (1 Mark)
   • Hacking (1 Mark)

ii. Explain briefly the relationship of internet worked e-business enterprise with internet, intranet and extranet (3 Marks)
(Total 12½ Marks)

QUESTION 5

A major challenge to computerisation arises from virus attacks leading to high maintenance costs and heightened risk of data loss

You are required to:

a. Define Computer Virus? (1½ Marks)

b. i. List two effects of Computer Virus (3 Marks)
   ii. Mention one way of recovering from Virus attack (3 Marks)

c. Give FOUR ways through which a computer may be infected by virus. (4 Marks)

d. Mention FOUR ways by which virus infection may be prevented. (4 Marks)
(Total 12½ Marks)

QUESTION 6

Office automation enhances efficiency and improves the hygiene of the work place

You are required to:

a. Define office automation? (1½ Marks)

b. Give FOUR examples of programs that make it possible to meet office needs and give ONE example of the use of each. (8 Marks)

c. Give THREE impacts of office automation on employees. (3 Marks)
(Total 12½ Marks)
INFORMATION TECHNOLOGY SOLUTIONS
SECTION A
PART I   MULTIPLE-CHOICE QUESTIONS
1.  B
2.  B
3.  C
4.  C
5.  C
6.  D
7.  E
8.  C
9.  C
10. D
11. B
12. D
13. C
14. C
15. B
16. E
17. D
18. A
19. C
20. E
21. B
EXAMINER'S COMMENT

This section contains 30 compulsory multiple choice questions. The questions cover the greater part of the syllabus. The performance of the candidate in this section was good as 70% of the candidates scored over 50% of the allocated marks.

PART II: SHORT-ANSWER QUESTIONS

1. Batch processing
2. Object code
3. Looping/Iteration
4. Magnetic Ink Character Recognition/Reader (MICR)
5. Second
6. Encryption
7. Read Only Memory (RAM)/Memory chip
8. Smart card
9. Utility program
10. Virtual memory
EXAMINER'S COMMENT

This section contains 20 compulsory short answer questions. The questions cover a wide area of the syllabus.

The performance of the candidates in this section was fair as 50% of the candidates scored below 50% of the allocated marks.

The major pitfall was that many candidates could not give satisfactory answers to the questions.

Candidates are advised to pay more attention to basic concepts and definitions.

SOLUTION 1

1a. Distributed system is a term used to describe computer systems that have several interconnected processors placed in separate locations. Each processor tends to have its own “local” peripherals (disks, printers, terminal) in addition to any peripheral attached to central processor.

Computer network is a system of computers and workstations connected together.

b. A “stand-alone system” is a computer system that is not connected to other computer systems.

c. Advantages of using networks include:

i. The sharing of resources (e.g. computer and staff) and information
ii. The provision of local facilities without the loss of central control

iii. The even distribution of work, processing loads

iv. Shared risk and mutual support

v. Improved and more economic communication facilities in general e.g. including voice communication

vi. Fast means of communication wherever the user may be

vii. Access to large databases and other main frame facilities

d. OSI stands for Open System Interconnection

e. The seven layers of open system interconnection are:

i. The physical layer

ii. The data link layer

iii. The network layer

iv. The transport layer

v. The session layer

vi. The presentation layer

vii. The application layer

EXAMINER’S COMMENTS

This question tests candidate’s knowledge on a mixture of topics including computer networking and transmission layers.

It demands for the definitions of distributed systems and computer network, including the advantages of using the networks.

Over 90% of the candidates answered this question and the performance was highly impressive as over 70% of them scored above 60% of the allocated mark.

Candidates are advised to keep up this high standard.

SOLUTION 2

a. The validation checks include:
i. Field check: checks that all fields are present and have correct number of characters

ii. Range check: checks that value falls within appropriate range

iii. Character check: checks fields and make sure that they contain only characters

iv. Format check: checks fields for correct format

v. Reasonableness: checks that quantities are not abnormally low or high

vi. Check digit or hash total: used to check correctness of numbers or field values

vii. Limit check

viii. Sequence check

b. i. **Programmer**

✓ Designs and test program logic
✓ Codes programs and prepares them for computer operations
✓ Prepares flow-charts and codes routines required to process data
✓ Thoroughly test the operation of completed program and linkage to other programs

ii. **System Analyst**

✓ Gathers and analyse information for developing and modifying date processing systems
✓ Designs and specifies systems and methods of installing them and supervises their installation
✓ Evaluates operational systems and recommends improvements
✓ Documents fact-finding and system study results
✓ Makes formal presentations of findings recommendations and specifications informal reports and in oral presentations

iii. **Data Processing Manager**

✓ Plans and directs all data processing activities of the corporation
✓ Plans for improvements to the corporations activities through new or improved systems
✓ Organises data processing resources to provides efficient and effective services to users

iv. **Computer Operator**

✓ Operates the computer and monitors systems performance on the console
INSIGHT

✓ Ensure that input data and files are entered as required in order to maintain production schedules
✓ Monitors console messages and reacts according to directions from systems software or application programs
✓ Performs procedures required for system back-ups including copying systems files, check point message logs etc.
✓ Observes system operations and analyses when programs appear to be operating correctly
✓ Analyses potential problems and takes corrective action where called for
✓ Maintains records to supplement console log, including problem, documentation and action taken.

v. Computer Engineer

✓ Maintains the computer and peripherals in good working order
✓ Monitors the computer room environment and specifies ideal conditions
✓ Periodically cleans the computer and sensitive parts
✓ Repairs or replaces defective components in the computer
✓ Installs new computers or additional peripherals

EXAMINER’S COMMENTS

This question tests candidates’ understanding on processing validation checks and principal functions of certain computer personnel.

Only about 45% of the candidates attempted this question and the performance was poor, as about 30% of the candidates scored above 40% of the allocated mark.

The major pitfall was that many candidates could not list the validation checks. Also, the functions of the computer personnel could not be outlined properly.

Candidates are advised to pay more attentions to the validation checks and read standard texts for future examinations.

SOLUTION 3

i. Batch processing is the processing as a group of a number of transactions of a similar kind which have been entered over a period of time to a computer system.

Batch processing allows better control over the input data, because data can be grouped into numbered batches.

Bulk volume processing in batch mode allows the processing to be divided into separate stages, where each stage of processing is performed by a separate computer program.
ii. On-line real time processing is a method whereby the computer processes that input data as it is entered and alters or updates the required file immediately.

Terminals are utilized to enter data for on-line operations, since they provide immediate and direct input to the data processing flow, eliminating the need for manual transmittal.

The speed of data collection and input is usually increased.

iii. Distributed processing is a method of processing whereby there exists several interconnected processors in separate locations, each processor has its own local peripheral, including disk storage, printers and terminals.

Each processor may on occasions act autonomously and at other times cooperate the main purpose of the distributed processing is to give end-users control over and responsibility for their own data.

iv. Centralised processing system handles all processing at a single computer site; it maintains a single central base, has centralized development of applications has central provision for technical services. The advantages of this type of system are in economics of scale.

One major disadvantage of this type of system is that failure in the system may paralyze the whole organization.

v. Decentralised processing is one that does not have a central control of system development, no communication links among autonomous computing units and databases in various sites. Each unit funds its own information processing activities and is totally responsible for all developments and operations.

EXAMINER'S COMMENTS

This question tests candidates’ understanding on computer processing techniques.

60% of the candidates attempted this question and the performance was fair as over 60% of the candidates scored above 50% of the allocated marks.

Candidates are advised to keep up this high performance.

SOLUTION 4

a. i. A standard format of an e-mail message:

To: <receiver name @ receiver address>

From: <sender name @ sender address>

Date: 1st January 2004
ii. Examples:

- E-business: The use of internet technology to internetwork and empower business process, e-commerce and enterprise communications and collaboration that take place within a company and its customers, suppliers and other business stakeholders.

- Expert system: This is an artificial intelligence. An expert system is a computer system that emulates the decision making ability of a human expert. It is designed to solve complex problems by reasoning i.e. it is knowledge-based. It is involved in many activities such as medical diagnosis, robot control, meteorological survey and missile equipment.

- Fire wall: are software and communication processors that protect computer network from intrusion by screening all network traffic and serving as a safe transfer point for access to and from other networks.

- Hacking: The unauthorized access and use of the computer system. It also includes sometimes the obsessive use of the computer system.

ii. The relationship of internet worked E-business enterprise with internet

The internet is a global system of interconnected computer network that allows a business enterprise to contact any other business enterprises in the world. Simply put that internet enables and facilitates business processes throughout the world.
The relationship of internet worked E-mail enterprise with intranet

The intranet is a private network that is contained within an enterprise. A business enterprise cannot access the intranet since it is only possible for members of the enterprise to access the network.

The relationship of internet worked E-business enterprise with extranet

An intranet is an internal corporate network that uses the infrastructure and standards of the internet and the World Wide Web. An intranet can connect all types of computers.

An extranet is a type of intranet that is accessible to outsiders, but limited to only those with valid user identification numbers.

EXAMINER’S COMMENT

This question tests candidates’ understanding on a mixture of topics including features of the e-mail and features of certain information systems. It also demands for the standard format of an e-mail.

60% of the candidates attempted this question, but the performance was poor as about 40% of the candidates scored below 50% of the allocated marks.

The major pitfall was that many candidates could not answer 4(b) (ii). Candidates are advised to read more on e-commerce using standard textbooks.

SOLUTION 5

a. A virus is a self-replicating program segment that automatically spreads in a computer system and corrupts or destroys all or selected files and folders.

b. Effects of virus include:

- Encountering strange messages
- Unpredictable behavior of the system
- Deletion of file data and information
- It makes computer operation to be slow

One may recover from virus attack by:

- Restoring data from virus update backup

If however, backup has not been maintained or backup files short of restore, one would need to use
c. A computer can be corrupted by virus through:
   i. E-mail with or without attachment
   ii. Downloading files from internet
   iii. Connecting a storage device that is virus infested
   iv. Non installation of antivirus software
   v. Connection to a network

d. Virus infection can be prevented by:
   i. Using updated antivirus software
   ii. Performing virus scan at least once a week
   iii. Scanning all e-mail before sending or receiving
   iv. Scanning storage media before connecting to computer system
   v. Keep web browsers and operating system up-to-date

EXAMINER’S COMMENT

This question tests candidates’ knowledge on computer virus. Over 90% of the candidates attempted this question and the performance was good, as over 60% of the candidates scored above 50% of the allocated marks.

Candidates are advised to keep up this high standard.

SOLUTION 6

a. Office automation refers to all tools and methods that are applied to office activities which make it possible to process written, visual and sound data in a computer-aided manner.

   Office automation is intended to provide elements which make it possible to simplify, improve and automate the organization of the activities of the company or group of people (management of administrative data, synchronization of meetings etc).

b. Examples of programs that enhance office automation include:
i. Word processing package, MS-word

ii. Desktop publishing packages, Corel draw

iii. Multimedia programs, skype

iv. Spreadsheet package, MS-Excel, Accounting packages

v. Database software

vi. Presentation tool software

Their uses include the following:

**Word processing**

i. Text manipulation. The user is given the ability to insert, delete, move, edit, retrieve text etc.

ii. Production of standard letters. A standard letter can be typed and stored and then be used over a period of time.

iii. Mail merging. This gives the facility for standard letters to be personalized by the use of details stored on a mailing list.

**Desktop publishing packages:**

i. **Mix of text with graphics:** The package allows user to manage and manage text with graphics.

ii. **Varied type and layout styles:** The package provides a variety of fonts or typestyles and one can create different rules, borders, columns and page numbering.

**Multimedia programs:**

i. This enable video conferencing, telecommuting

ii. Electronic email

**Spreadsheet package:**

i. This enables arithmetic calculation and other logic formula. Accounting packages are in this category.

**Impacts of Office Automation include:**
i. Office automation allows direct replacement of some task

ii. It brings about enhancement of activities and hence leads to increase in productivity

iii. With the emergence of internet, office can communicate with their client and perform new functions.

iv. It will enable employees to work from home at any time of the day

v. It reduces paper activities and save cost, time and stress to employees

EXAMINER’S COMMENT

This question tests candidates’ knowledge on the concept of office automation.

40% of the candidates attempted this question and the performance was good as 60% of the candidates scored above 50% of the allocated marks.

Candidates are advised to keep up this high standard.