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.
FOREWORD

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

(i) Candidates preparing to write future examinations of the Institute of Chartered Accountants of Nigeria (ICAN) at an equivalent level;

(ii) Unsuccessful candidates in the identification of those areas in which they lost marks and need to improve their knowledge and presentation;

(iii) Lecturers and students interested in acquisition of knowledge in the relevant subject contained therein; and

(iv) The profession in improving pre-examination and screening processes, and so the professional performance.

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

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

NOTE

Although these suggested solutions have been published under the Institute’s name, they do not represent the views of the Council of the Institute. They are entirely the responsibility of their authors and the Institute will not enter into any correspondence about them.
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRINCIPLES AND PRACTICE OF FINANCIAL ACCOUNTING</td>
<td>4-28</td>
</tr>
<tr>
<td>PUBLIC SECTOR ACCOUNTING</td>
<td>29-47</td>
</tr>
<tr>
<td>QUANTITATIVE ANALYSIS</td>
<td>48-74</td>
</tr>
<tr>
<td>INFORMATION TECHNOLOGY</td>
<td>75-93</td>
</tr>
</tbody>
</table>
AT/151/PII.5
ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME
PART II EXAMINATION - SEPTEMBER 2015
PRINCIPLES & PRACTICE OF FINANCIAL ACCOUNTING
Time Allowed: 3 Hours

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

ATTEMPT ALL QUESTIONS

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

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:

\[\text{Purchases} = \text{270,000}\]
Sales: 360,000
Closing inventory: 45,000

Gross profit is 25% on cost of goods sold.

3. Calculate the opening inventory
   A. ₦45,000
   B. ₦48,000
   C. ₦63,000
   D. ₦65,000
   E. ₦72,000

4. Calculate the gross profit
   A. ₦65,000
   B. ₦68,000
   C. ₦69,500
   D. ₦70,000
   E. ₦72,000

5. The journal entries required to correct subscriptions received but wrongly recorded as donation is
   A. Dr. Donation Account, Cr. Subscriptions Account
   B. Dr. Receipts and Payments Accounts, Cr. Donation Account
   C. Dr. Subscriptions Account, Cr. Donation Account
   D. Dr. Donation Account, Cr. Receipts and Payments Account
   E. Dr. Receipts and Payments Accounts, Cr. Subscriptions Account

6. When the Statement of profit or loss and other Comprehensive Income is prepared using nature of expenses method, the following information are disclosed **EXCEPT**
   A. Distribution cost
   B. Changes in inventories of finished goods
   C. Employee benefit expenses
   D. Depreciation and amortization expenses
   E. Raw materials consumables used

7. The following information should be disclosed in the Statement of Changes in Equity **EXCEPT**
   A. Dividend paid
   B. Increase in share capital
   C. Transfer to retained earnings
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
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 N50 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>N’m</td>
<td>N’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
   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 accounting?
   A. Containers suspense account
   B. Containers profit and loss account
   C. Containers sent to customers account
   D. Containers trading account
   E. Containers realizable inventory account

Use the following information to answer questions 23 and 24

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

23. Calculate the profit due to Saleh from the joint venture.
   A. L$8,125
   B. L$8,725
   C. L$9,375
   D. L$9,525
   E. L$11,250

24. Calculate the profit due to Johnson from the Joint Venture.
   A. L$2,250
   B. L$3,975
   C. L$4,875
   D. L$5,625
   E. L$6,750

25. Which of the following is NOT a type of inventory?
   A. Finished goods
   B. Raw materials
   C. Work-in-progress
   D. Periodic stock
   E. Livestock and agricultural produce awaiting sale
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 vatable goods worth ₦350,000. What is the AKSON Enterprises VAT liability? if VAT rate is 5%?

2. What is the gross profit on sales worth ₦1,500,000, if the gross profit is 20% on cost of goods sold?

3. State two methods of depreciation which is based on decreasing charge to the final accounts?

4. State the necessary journal entries to record subscriptions received but omitted from the books of accounts.

5. The accounting concept followed when a business records the cost of a non-current asset in its books even though it does not legally own the asset, is called .................

6. A non-current asset was purchased at the beginning of year 2011 for ₦4,800,000 and depreciated by 20% p.a. using reducing balance method. If the asset was sold for ₦2,400,000 at beginning of year 2014. What is the profit or loss on disposal?

7. An item of inventory which had cost ₦500 was sold for ₦700. It cost the company ₦600 to replace the item. At the time of sale, the ₦600 was the inventory’s..........................

8. The application of the principal qualitative characteristic and the appropriate accounting standard normally results in financial statements that provide ............... presentation

9. Which of the items recorded in the partners current accounts is not transferred from the statement of distribution of income but is debited directly?

10. When a partnership maintains fixed capital accounting system, the balance may change only in a few instances. State ONE of the instances.

11. Which change in partnership structure would NOT require the statement of financial position?

12. When a new member of a not-for-profit organizations pays registration fees, what effect will it have on the income and expenditure account?

13. A written acknowledgment of a debt owed by a company normally containing provision or clauses on payment of interest and repayment of capital is called ......................................

14. The ratio that indicates the amount of net assets attributable to each ordinary share in issue is known as .........................
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

\[ \text{N'}000 \]

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

Additional information:

i. Inventory at December 31, 2014 was N'89,800
ii. Provision for depreciation: Motor vehicle @ 10% on cost
iii. Motor expenses of N'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

QUESTION 2

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

\[
\begin{align*}
\text{N'000} & \\
\text{Revenue} & 21,560 \\
\text{Less: cost of sales} & 17,248 \\
\text{Gross profit} & 4,312 \\
\text{Add: Other Income} & 208 \\
\text{Administrative expenses} & (3,656) \\
\text{Profit for the year} & 864 \\
\text{Other comprehensive Income:} & \\
\text{Revaluation of non-current assets} & 3,136 \\
\text{Total comprehensive Income for the year} & 4,000 \\
\end{align*}
\]

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 ₦1 preference shares of ₦1 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 ₦960,000.

iii. The management of Jokotade Limited recommended a transfer to general reserve an amount of ₦128,000.

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

<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 ₦11,744,000.

vi. You are to assume that preference shares are equity

**Required:**

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

(Total 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>Non-Current Assets:</th>
<th>GH¢’000</th>
<th>GH¢’000</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Assets:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<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></td>
</tr>
<tr>
<td></td>
<td>1,005</td>
<td></td>
</tr>
<tr>
<td>Less Accounts payable</td>
<td>375</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td>2,560</td>
<td></td>
</tr>
</tbody>
</table>

**Capital Account:**

- **Kofi**                           | 1,160   |
- **Anan**                           | 715     |
- **Nkwrumah**                       | 520     |

**Current Accounts:**

- **Kofi**                           | 210     |
- **Anan**                           | 79      |
- **Nkwrumah**                       | (124)   |

2,560

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>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary share capital</td>
<td>N</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>882</td>
<td></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>18,360</td>
<td></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>25,200</td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>Receivables and payables</td>
<td>25,995</td>
<td>34,506</td>
</tr>
<tr>
<td>Bank</td>
<td>5,118</td>
<td></td>
</tr>
<tr>
<td>Buildings at cost</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>Aggregate depreciation on building at January, 1, 2014</td>
<td>9,000</td>
<td></td>
</tr>
</tbody>
</table>
### Debit Credit

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained earnings at January 1, 2014</td>
<td>157,200</td>
</tr>
<tr>
<td></td>
<td>947,781</td>
</tr>
</tbody>
</table>

You are given the following additional information:

i. Inventory as at December 31, 2014 was N\textcurrency\textsubscript{38,520}.

ii. Rent prepaid was N\textcurrency\textsubscript{1,500} and light and cooling expenses owed was N\textcurrency\textsubscript{690} as at December 31, 2014.

iii. Land is to be revalued to N\textcurrency\textsubscript{375,000} as at December 31, 2013.

iv. Following a final review of the receivables as at December 31, 2014, Danladi Bako decides to write off another debt of N\textcurrency\textsubscript{195}. The company also wishes to maintain the allowance for doubtful receivables at 3% of the year end balance.

v. Depreciation is to be provided on a straight line basis as follows:
   - Building at 2%
   - Fixtures and fittings, assuming a useful economic life of five years with no residual value
   - Motor vehicles at 25%

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

---

You are required to:

Prepare a Statement of Profit or Loss and other Comprehensive Income for the year ended December 31, 2014 (12\textfrac{1}{2} Marks)

---

### QUESTION 5

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods sent to branch by head office at cost</td>
<td>360,000</td>
</tr>
<tr>
<td>Returns from branch to head office at cost</td>
<td>16,000</td>
</tr>
<tr>
<td>Branch credit sales</td>
<td>300,000</td>
</tr>
</tbody>
</table>
Cash sales sent to head office 84,000
Cash sales stolen 1,200
Goods stolen 400
Branch expenses paid by head office 12,800
Closing inventory at branch at cost 100,000
Cash received from debtors 232,000
Discounts allowed to branch receivables 12,000

Head office
Opening inventory October 1, 2013 480,000
Purchases 2,800,000
Sales 3,600,000
Closing inventory September 30, 2014 280,000
Expenses 160,000

You are required to:

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

(Total 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:

\[
\begin{array}{ll}
\text{N’000} & \text{N’000} \\
\hline
\text{Non-current Assets:} & \\
\text{Plant and equipment} & 75,000 \\
\text{Motor vehicles} & 15,000 \\
& 90,000 \\
\text{Current Assets:} & \\
\text{Inventories} & 120,000 \\
\text{Accounts receivable} & 36,000 \\
\text{Bank balance} & 12,000 \\
& 168,000 \\
& 258,000 \\
\text{Capital} & \\
\text{Babu} & 120,000 \\
\text{Lukudi} & 30,000 \\
& 150,000 \\
\text{Accounts payable} & 108,000 \\
& 258,000 \\
\end{array}
\]

Notes:
i. The plant and equipment were sold at N’79m
ii. Babu took over one of the vehicles with a book value of N1.5m for N800,000. The remaining vehicles were sold for N12m.

iii. Inventories were sold for N92m while account receivable realised N34.3m

iv. The account payable gave a discount of N0.10 on every N1 owed.

v. The realisation expenses were settled for N4.5m

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
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 N350,000 = N17,500

2. 20% on cost of goods sold = 16.7%
   16.7% x N1,500,000 = N250,500

6. Cost
   Year 2009
   Year 2010 (N4,800,000 - 960,000) x 20% = (N768,000)
   Year 2011 (N3,840,000 - 768,000) x 20% = (N614,400)
   Carrying value
   Cost N4,800,000
   Year 2009
   (N960,000)
   Loss = (N2,400,000 - N2,457,600) = (N57,600)

EXAMINER’S COMMENT

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

SOLUTION 1

SEALION ENTERPRISES
EXTENDED TRIAL BALANCE AS AT 31 December, 2013

<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, Cr</td>
<td>Dr, Cr</td>
<td>Dr, Cr</td>
</tr>
<tr>
<td></td>
<td>N000</td>
<td>N000</td>
<td>N000</td>
</tr>
<tr>
<td>Inventory</td>
<td>20</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Motor vehicle (cost)</td>
<td>450</td>
<td></td>
<td>450</td>
</tr>
<tr>
<td>Capital</td>
<td>292</td>
<td>292</td>
<td>292</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>95</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>147</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>370</td>
<td></td>
<td>370</td>
</tr>
<tr>
<td>Motor vehicle expenses</td>
<td>15</td>
<td>2.2</td>
<td>20.7</td>
</tr>
<tr>
<td>Sales</td>
<td>1,800</td>
<td></td>
<td>1,800</td>
</tr>
<tr>
<td>Purchases</td>
<td>1,300</td>
<td></td>
<td>1,300</td>
</tr>
<tr>
<td>Inventory 31 December</td>
<td>89.8</td>
<td></td>
<td>89.8</td>
</tr>
<tr>
<td>Income statement</td>
<td></td>
<td>89.8</td>
<td>89.8</td>
</tr>
</tbody>
</table>

Income statement:
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>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>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>
</tr>
<tr>
<td>Issues of shares</td>
<td>(W2) 400 (W2) 560</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(W3) (120)</td>
</tr>
<tr>
<td>Dividend paid</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(W3) (120)</td>
</tr>
<tr>
<td>Transfer to general revenue</td>
<td>-</td>
<td>-</td>
<td>128</td>
<td>-</td>
<td>(128)</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>
</tr>
</tbody>
</table>

WORKINGS

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

ATSWA PART II SEPTEMBER 2015
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>Non-current assets</th>
<th>£’000</th>
<th>£’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premises</td>
<td>1,200.00</td>
<td></td>
</tr>
<tr>
<td>Motor van</td>
<td>700.00</td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>30.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,930.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current assets:</th>
<th></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><strong>Total</strong></td>
<td><strong>1,005.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Less creditors</th>
<th>£’000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>630.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital accounts:</th>
<th></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><strong>Total</strong></td>
<td><strong>1,796.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current accounts:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kofi</td>
<td>210.00</td>
</tr>
<tr>
<td>Anan</td>
<td>79.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>289.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Loan: Nkurumah</th>
<th>£’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>475.00</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,560.00</strong></td>
</tr>
</tbody>
</table>

Workings

i. Nkurumah’s account

<table>
<thead>
<tr>
<th>£’000</th>
<th>£’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening capital account balance</td>
<td>520</td>
</tr>
<tr>
<td>Add: Share of increase in value of assets:</td>
<td></td>
</tr>
<tr>
<td>Goodwill</td>
<td>400</td>
</tr>
<tr>
<td>Premises</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>600</td>
</tr>
<tr>
<td>Less: Decrease in motor van</td>
<td>100</td>
</tr>
<tr>
<td>Stock</td>
<td>16</td>
</tr>
<tr>
<td>Prov. of doubtful debts</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>126</strong></td>
</tr>
<tr>
<td>474 x 1/6</td>
<td>79.00</td>
</tr>
</tbody>
</table>
ii. Kofi’s capital account:
Opening balance 1,160.00
Less: Share of Nkurumah’s capital account – \(\frac{3}{5} \times 79\) 47.40
Closing balance 1,112.60

iii. Anan’s capital account:
Opening balance 715.00
Less: Share of Nkurumah’s capital account – \(\frac{2}{5} \times 79\) 31.60
Closing balance 683.40

**ALTERNATIVE WORKING**

<table>
<thead>
<tr>
<th></th>
<th>Kofi '000</th>
<th>Anan '000</th>
<th>Nkwurumah '000</th>
<th>Kofi '000</th>
<th>Anan '000</th>
<th>Nkwurumah '000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodwill</td>
<td>240.00</td>
<td>160.00</td>
<td>0</td>
<td>1,160.00</td>
<td>715.00</td>
<td>520.00</td>
</tr>
<tr>
<td>Current a/cs</td>
<td></td>
<td></td>
<td>124.00</td>
<td>200.00</td>
<td>133.00</td>
<td>67.00</td>
</tr>
<tr>
<td>Bal. c/d</td>
<td>1,157.00</td>
<td>713.00</td>
<td>37.00</td>
<td>1,157.00</td>
<td>713.00</td>
<td></td>
</tr>
<tr>
<td>Loan a/cs</td>
<td>1,397.00</td>
<td>873.00</td>
<td>475.00</td>
<td>1,397.00</td>
<td>873.00</td>
<td>599.00</td>
</tr>
<tr>
<td>Assets a/c</td>
<td>44.00</td>
<td>30.00</td>
<td></td>
<td>1,157.00</td>
<td>713.00</td>
<td></td>
</tr>
<tr>
<td>Bal c/f</td>
<td>1,113.00</td>
<td>683.00</td>
<td>Bal b/d</td>
<td>1,157.00</td>
<td>713.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,157.00</td>
<td>713.00</td>
<td></td>
<td>1,157.00</td>
<td>713.00</td>
<td></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</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 (\frac{3}{6} \times 74)</td>
<td>33.00</td>
<td></td>
</tr>
<tr>
<td>Anan (\frac{2}{6} \times 74)</td>
<td>25.00</td>
<td></td>
</tr>
<tr>
<td>Nkurumah (\frac{1}{6} \times 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**

Danlad Bako Limited

**Statement of profit or Loss and other Comprehensive Income**

for the year ended 31 December 2013

<table>
<thead>
<tr>
<th>Description</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>
<tr>
<td>Rent (19,500 – 1,500)</td>
<td>18,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor expenses</td>
<td>5,580</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>1,140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrecoverable debts (180 + 690)</td>
<td>375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>69,240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discount allowed</td>
<td>1,296</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light and cooling expenses (4,611 + 690)</td>
<td>5,301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank overdraft interest</td>
<td>111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building (2% *150,000)</td>
<td>3,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixture &amp; fittings (42,000/5)</td>
<td>8,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicles (25% *36,000)</td>
<td>9,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total opening expenses</td>
<td>121,443</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit before tax</td>
<td>32,808</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other comprehensive income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gains on revaluation of land</td>
<td>225,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total comprehensive income</td>
<td>257,808</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Workings**

**Allowances for doubtful receivables**
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

$\begin{align*}
\text{Goods sent to Branch} & \quad 360,000 \\
\text{Gross profit} & \quad 141,600 \\
\text{Gross profit} & \quad 16,000 \\
\text{H/O current a/c (cash sales)} & \quad 84,000 \\
\text{Cash sales stolen} & \quad 1,200 \\
\text{Goods stolen} & \quad 400 \\
\hline
\text{Balance c/d} & \quad 100,000 \\
\text{Total} & \quad 501,600
\end{align*}$

Balance b/d 100,000

Goods sent to Branch Account

$\begin{align*}
\text{Branch inventory (returns)} & \quad 16,000 \\
\text{Purchases} & \quad 344,000 \\
\text{Bank inventory} & \quad 360,000
\end{align*}$

Branch receivables account

$\begin{align*}
\text{Branch inventory (Credit sales)} & \quad 300,000 \\
\text{Cash} & \quad 232,000 \\
\text{Discount allowed} & \quad 12,000
\end{align*}$
## EXAMINER’S REPORT

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

### SOLUTION 6

#### Babu and Lukudi

#### Realisation account

<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</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>15,000.00</td>
<td>Plant and equipment</td>
</tr>
<tr>
<td>Inventories</td>
<td>120,000.00</td>
<td>Remaining motor vehicles</td>
</tr>
</tbody>
</table>
### INSIGHT

<table>
<thead>
<tr>
<th>Account receivables</th>
<th>36,000.00</th>
<th>Inventories</th>
<th>34,300.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realisation expenses</td>
<td>4,500.00</td>
<td>Account receivables</td>
<td>10,800.00</td>
</tr>
<tr>
<td>Discount from trade payables</td>
<td></td>
<td>Capital account - Babu</td>
<td>50,000</td>
</tr>
<tr>
<td>M/V taken over</td>
<td></td>
<td>M/V taken over</td>
<td>800.00</td>
</tr>
<tr>
<td>Share of loss:</td>
<td></td>
<td>Babu</td>
<td>14,400.00</td>
</tr>
<tr>
<td>Lukudi</td>
<td></td>
<td>Lukudi</td>
<td>7,200.00</td>
</tr>
</tbody>
</table>

250,000.00  

**Partners capital account**

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

**Bank account**

<table>
<thead>
<tr>
<th>N’000</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></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>229,300</td>
<td></td>
</tr>
</tbody>
</table>

### Workings

**Trade payables account**

<table>
<thead>
<tr>
<th>N’000</th>
<th>N’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>97,200</td>
</tr>
<tr>
<td>Realisation:</td>
<td>10,800</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, WEST AFRICA
PART II EXAMINATIONS- SEPTEMBER 2015
PUBLIC SECTOR ACCOUNTING
(NGERIA VERSION)

Time Allowed: 3 hours

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

ATTEMPT ALL QUESTIONS

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

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

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

3. Specific areas of the Constitution of the Federal Republic of Nigeria, 1999, which deal particularly with Public Sector Accounting, include the following EXCEPT
   A. The creation of the Contingency Fund
   B. The declaration of assets and liabilities by Ministers
   C. The audit of public accounts
   D. The power of the National Assembly to conduct investigations and procure all evidence needed
4. Which of the following is NOT a function of the Minister of Finance?
   A. He is responsible for revenue estimation and publication in the budget book
   B. He is required to formulate all policies related to fiscal and monetary matters
   C. He is responsible for the preparation of annual estimates of revenue and expenditure of the Federal Government
   D. He is to ensure a favourable balance of payments position required to maintain adequate foreign exchange services
   E. He is responsible for establishing the value of the Nigerian currency both internally and externally

5. The Auditor-General for the Federation is appointed by the President on the recommendation of the Federal Civil Service Commission subject to confirmation by the
   A. Head of Service
   B. House of Assembly
   C. Senate
   D. House of Senate
   E. House of Representatives

6. The Officer responsible for the administration of Inter-Governmental Financial transactions is called
   A. Accountant-General of the Federation
   B. Federal Pay Officer
   C. Auditor-General for the Federation
   D. Revenue Collector
   E. Minister of Finance

7. The authority for issuing imprest warrants rests with the
   A. Accounting officer
   B. Sub Accounting officer
   C. Auditor-General
   D. Accountant-General
   E. Minister of Finance

8. Last pay Certificate together with a certified true copy of Personal Emolument Card is issued to....... officer
   A. Newly recruited
   B. Inter governmental transfer
   C. Dismissed or terminated
   D. A newly promoted
9. The Adjustment Voucher (TF 23) is designed to adjust.................transaction
   A. Basic payment
   B. Correction of error
   C. Inter Ministerial
   D. Additional payment
   E. Complete unclassified

10. Which of the following is NOT an objective of the Federal Government for setting up public enterprises?
    A. To create employment
    B. To ensure survival of the industries
    C. To bring the means of production into public ownership
    D. To avoid duplication of facilities
    E. To avoid high prices charged by private sector

11. Which of the following is NOT an objective of the Fiscal Responsibility Act?
    A. Promoting transparency in budget preparation and execution
    B. Minimising risks and fluctuations in Government’s fiscal operation
    C. Ensuring high standard of financial disclosure
    D. Ensuring prudent management of the nation’s resources
    E. Employing staff for Government to work on the Act

12. Which of the following is NOT a task of Public Sector Accounting?
    A. Analysing
    B. Recording
    C. Reporting
    D. Summarising
    E. Writing

13. Which of the following is the Independent organ of Government that reviews all contracts awarded, which are of significant value?
    A. Board of Enquiry
    B. Bureau of Public Procurement
    C. The Budget Monitoring and Price Intelligence Unit
    D. The Federal Executive Council
    E. The Board of Survey

14. The Legislative body that performs a post mortem function on financial matters is the
    A. Board of Survey
15. Which of the following is responsible for carrying out “Prepayment Audit” in the Ministry?
   A. The Accounting Officer
   B. The Vote Controller
   C. The Federal Pay Officer
   D. The Auditor-General for the Federation
   E. The Internal Auditor

16. Under IPSAS, Balance Sheet is replaced with
   A. Valued Added Statement
   B. Ruled Sheet
   C. Current Cost Accounting
   D. Statement of Financial Position
   E. Statement of Financial Instrument

17. Which of the following is NOT a characteristic of limited Self Accounting Unit?
   A. It does not operate central Pay Office
   B. It maintains an accounting Code
   C. It establishes an internal audit department
   D. It forwards vouchers in support of transcripts
   E. It is not allocated a clearance account

18. Which of the following is used to effect inter-departmental or inter-ministerial payments?
   A. Cheque
   B. Monthly variable
   C. Adjustment vouchers
   D. General warrant
   E. Treasury receipt

19. Which of the following is NOT a source of supplies to Government stores?
   A. Local purchase
   B. Returned stores
   F. Conversion and manufacture
   G. Prisoners’ materials
   H. Transfer from other stores

20. For Accounting purposes stores are classified into two, namely
A. Revenue and payment
B. Allocated and unallocated
C. Local and imported goods
D. Finished and uncompleted goods
E. Imported and exported goods

21. Store items purchased for general use which actual usage at the time of purchase, cannot be determined are
A. Allocated stores
B. Last in First out
C. Unallocated stores
D. Local purchase order
E. Budgeted stores

22. Which of the following is NOT a function of the Board of Survey and Enquiry?
A. Survey on cash and bank balances and stamps of all Federal Ministries and Extra Ministerial Departments
B. Survey of unserviceable items
C. Board’s concern with Annual and Quarterly Surveys
D. Investigate allegation of misappropriation
E. Survey on the security personnel of the Finance Department

23. The International Public Sector Accounting Standard (IPSAS), which set out the preparation and presentation of financial statements is
A. IPSAS 1
B. IPSAS 2
C. IPSAS 3
D. IPSAS 4
E. IPSAS 5

24. Which of the following is NOT classified under Operating Activities in International Public Sector Accounting Standards (IPSAS 2 – Statement of Cash Flow)?
A. Value added tax
B. Personnel emolument
C. Overhead cost
D. Dividends received
E. Pension and gratuities

25. Which of the following is covered by the International Public Sector Accounting Standard 5 (IPSAS 5)?
A. Inventories
B. The effect of changes in foreign exchange rate
C. Borrowing cost
D. Construction contract
E. Cash flow statement

26. Pension Fund Custodians are licensed by the National Pension Commission to receive the
   A. Asset of Pension Fund Administrators
   B. Asset of Pension Commission
   C. Asset of Pension Contributor
   D. Total contribution remitted by the employers
   E. Total subvention given to the Pension Commission

27. Which of the following is the main function of National Pension Commission?
   A. Regulate, supervise and ensure effective administration of pensions
   B. Collect, distribute and account for all pension of public officers
   C. Receive, disburse and recall Pension Administrators
   D. Manage and realize pension assets
   E. Collect interest and commission from Pension Fund Administrators

28. The Director-General and Commissioners of the National Pension Commission hold office in the first instance for
   A. 8 years
   B. 7 years
   C. 5 years
   D. 6 years
   E. 4 years

29. A youth appointed as a member of the Independent Corrupt Practices and Other Related Offences Commission shall not be less than .............. old.
   A. 15 years
   B. 18 years
   C. 17 years
   D. 20 years
   E. 21 years

30. The Act of Parliament No. 5 of December, 2002 which established the body that has the power to enforce the relevant provisions of the Bank
and Other Financial Institutions Act 1991 is known as…………………………
A.       The Fiscal Responsibility Commission
B.       The National Council on Public Procurement
C.       The Code of Conduct Bureau
D.       The Economic and Financial Crimes Commission (EFCC)
E.       The Independent Corrupt practices and other Related Offences Commission (ICPC)

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

ATTEMPT ALL QUESTIONS

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

i.   Section 85 of Chapter 5 part 1 of the 1999 Constitution of the Federal Republic of Nigeria provides that public accounts should be audited by.........................

ii.  The second schedule of the Finance (Control and Management) Act 1958 stipulates that the monies to be used to finance general capital expenditure of the Federal Government should come from an account known as.....................

iii. The use of taxation and government expenditure to regulate economic activities is known as..............................

4.   According to the Pension Reform Act 2004, the Pension Fund is managed by .................

5.   Under the Financial Regulations No. 109, (2009) an accounting unit that has control over its record is called..............................

6.   A record maintained by the Accounting Officer of a Ministry or Department to monitor expenditure with reference to the amount approved in the annual estimates is called .........................

7.   Issuance of budgetary guidelines is one of the ways by which the .............arm of Government controls expenditure.

8.   A division that ensures that the Ministries’ and Departments’ accounting system and maintenance of various books of accounts

ATSWA PART II SEPTEMBER 2015
36
conform to the approved regulations and procedures is called…………………

9. Where adjustments affect an expenditure sub head in a current financial year account, the amount whether debit or credit, must be entered in..........................

10. Every issue of a receipt book or security book shall be accompanied by a ..........note

11. A budgetary technique which considers the past budget and adds arbitrary percentages to the past budget is referred to as..........................

12. The use of deception to obtain an advantage is considered ............... 

13. Plant and machinery, motor vehicles and furnitures are examples of..............

14. The documents used to transfer stock from one store to another is called.........

15. -------- appoints members to the permanent Boards of Survey and Enquiry?

16. The remuneration of the Auditor-General for the Federation shall be drawn from the .................Fund of the Federation.

17. The Auditor-General for the Federation determines whether accounts have been satisfactorily and faithfully kept in accordance with the law. This is known as ..........................Audit.

18. Every Pension Fund Administrator shall maintain a Statutory Reserve Fund which shall be credited annually with..........% of the net profit after tax.

19. Administrative expenses of Pension Fund Administrators are deducted from .......

20. Under the EFCC Act No.5 of December 2002, the penalty for offences which relate to financial malpractices is.................

SECTION B: ATTEMPT ANY FOUR QUESTIONS (50MARKS)

QUESTION 1

All Local Governments in Gbandi are saddled with the responsibilities of promoting co-existence and developments among various communities and grass roots.
The underlisted are some of the major sources of financing yearly expenditure among the three tiers of government in Gbandi as submitted by the Federal Ministry of Finance for the year 2014.

<table>
<thead>
<tr>
<th>Source</th>
<th>₦’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from Federal Government investment</td>
<td>10,000</td>
</tr>
<tr>
<td>Companies Income Tax</td>
<td>65,000</td>
</tr>
<tr>
<td>PAYE of Police personnel</td>
<td>5,000</td>
</tr>
<tr>
<td>Petroleum Profit Tax</td>
<td>100,000</td>
</tr>
<tr>
<td>Import duties</td>
<td>90,000</td>
</tr>
<tr>
<td>Export duties</td>
<td>60,000</td>
</tr>
<tr>
<td>Tariffs duties</td>
<td>80,000</td>
</tr>
<tr>
<td>Excise duties</td>
<td>90,000</td>
</tr>
<tr>
<td>Others from third tier of government in Gbandi</td>
<td>20,000</td>
</tr>
<tr>
<td>Income from registration of births, marriage and death</td>
<td>20,000</td>
</tr>
<tr>
<td>Rents from shops and Local government properties</td>
<td>5,000</td>
</tr>
</tbody>
</table>

**Required:**

a. Prepare the Federation Account for year 2014. (7½ Marks)

b. Calculate the total income from various sources for the Federal Government. (2½ Marks)

c. Calculate total income the Local Government derive from various sources. (2½ Marks)

**Note:** Allocation for Federal Government 48.5%
State Government 24%
Local Government 20%
Special Fund 7.5%

(Total 12½ Marks)

**QUESTION 2**

a. In the award and execution of Federal Government contracts in Nigeria, due processes must be complied with. What is “Due process”? (2½ Marks)
b. Enumerate any **FIVE** benefits of “Due process”.  
(5 Marks)

c. Outline **THREE** advantages and **TWO** disadvantages of complying with the Financial Regulations of the Federal Government.  
(5 Marks)

(Total 12½ Marks)

**QUESTION 3**

a. State any **FOUR** conditions for opening new Personnel Emoluments Cards.  
(4 Marks)

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing allowance</td>
<td>20,000</td>
</tr>
<tr>
<td>Union dues</td>
<td>1,500</td>
</tr>
<tr>
<td>Meal allowance</td>
<td>7,500</td>
</tr>
<tr>
<td>Car refurbishing loan repayment</td>
<td>3,500</td>
</tr>
<tr>
<td>Basic salary</td>
<td>50,000</td>
</tr>
<tr>
<td>Transport allowance</td>
<td>10,000</td>
</tr>
<tr>
<td>Housing loan repayment</td>
<td>15,000</td>
</tr>
</tbody>
</table>

Payee tax rate is computed at 10% of basic salary

**Required:**

Compute:

i. Gross salary  
(3 Marks)

ii. Net salary  
(3 Marks)

c. Briefly describe salary variation advice.  
(2½ Marks)

(Total 12½ Marks)

**QUESTION 4**
Oloto Grammar School is a mixed boarding school in Opuro Local Government. The school provided you with the following information for the year ended 31 December, 2014:

**(i)**

<table>
<thead>
<tr>
<th></th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>720</td>
<td>820</td>
<td>1540</td>
</tr>
</tbody>
</table>

(ii) School fees - N60.00 per Student per term
(iii) Subvention from Government - N80.00 per student per term.
(iv) Science Foundation Fund grant - N600,000 per year
(v) Special Trust Fund grant by government - N3,000,000
(vi) Capital grant by the government - N7,000,000

The school incurred the following expenses during the year

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative expenses</td>
<td>370,000</td>
</tr>
<tr>
<td>Teachers’ salary</td>
<td>700,000</td>
</tr>
<tr>
<td>Science education project</td>
<td>240,000</td>
</tr>
<tr>
<td>Vocational education</td>
<td>180,000</td>
</tr>
<tr>
<td>Games and sports</td>
<td>190,000</td>
</tr>
<tr>
<td>Medical</td>
<td>120,000</td>
</tr>
<tr>
<td>Cash balance as at 1/1/14</td>
<td>348,000</td>
</tr>
</tbody>
</table>

You are required to prepare the:

a. Domestic Account for the year ended 31 December 2014. (8 Marks)

b. Cash book for the year ended 31 December, 2014. (4 ½ Marks)

(8 Marks)

(Total 12½ Marks)

**QUESTION 5**

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average usage</td>
<td>50 units per day</td>
</tr>
<tr>
<td>Minimum usage</td>
<td>30 units per day</td>
</tr>
<tr>
<td>Lead-Time</td>
<td>72-78 days</td>
</tr>
<tr>
<td>Ordering cost per order</td>
<td>N400</td>
</tr>
<tr>
<td>Demand per annum</td>
<td>20,000 units</td>
</tr>
<tr>
<td>Carrying cost per unit per annum</td>
<td>N4.00</td>
</tr>
</tbody>
</table>
Required:
Calculate:

i. Economics Ordering Quantity (EOQ). (2 Marks)

ii. Re-order level. (2 Marks)

iii. Minimum Inventory level. (2 Marks)

iv. Maximum Inventory level. (2 Marks)

b. State any THREE vouchers used in Government stores management. (4 ½ Marks)

(Total 12½ Marks)

QUESTION 6

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

Required:

i. State any FIVE conditions when a Board of Enquiry is necessary. (7½ Marks)

ii. List any THREE conditions when a Board of Enquiry may not be necessary. (3 Marks)

b. Loss or shortage of fund is depletion of government Funds at a given time (FR 2501).

Required:

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

(Total 12½ Marks)

SECTION A: MULTIPLE CHOICE QUESTIONS

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

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

SECTION B – SHORT ANSWER QUESTIONS

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

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

SOLUTION TO QUESTION 1

(a)  
**FEDERATION ACCOUNT FOR THE YEAR ENDED 31 DECEMBER, 2014**

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

(b)  
**FEDERAL GOVERNMENT CONSOLIDATED REVENUE FUND**

<table>
<thead>
<tr>
<th></th>
<th>₦’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share from Federation Account</td>
<td>235,225</td>
</tr>
<tr>
<td>Income from Federal Government Investment</td>
<td>10,000</td>
</tr>
<tr>
<td>PAYE of Police Personnel</td>
<td>5,000</td>
</tr>
</tbody>
</table>
Examiner’s comment

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

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

SOLUTION TO QUESTION 2

(a) Due Process

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

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

(b) Benefits of Due Process

i) Safeguard of public money and assets

ii) Improvement in the system of planning and diligent project analysis, leading to the accuracy of costing and prioritising of investments

iii) Improvement in fiscal management through more efficient and effective expenditure

iv) Improvement in technical efficiency through un-impaired and enhanced information flow

v) Enhancement of transparency and accountability in governance

vi) Rebuilding of public confidence in government financial activities

vii) Ensuring that government received value for money spent

viii) It applies the principle of competition and right costs, thereby saving money for government which will be better used in other sectors
ix) It moderates and brings succor to the foreign investors who, hitherto, believed that the country is corrupt and that no genuine business can survive.

(c) Advantages of complying with the Financial Regulation of the Federal Government are as follows:

i) It ensures consistency in policies amongst various departments of government

ii) It ensures uniformity of practices

iii) It helps to train staffers of the government on the controls that have been put in place

iv) It serves as a guide on compliance or framework

The disadvantages are as follows:

i) It is very rigid

ii) It does not encourage initiative

iii) The job becomes monotonous

iv) There is low morale amongst workers due to inability to effect changes that will facilitate job performance

SOLUTION TO QUESTION 3

(a) i) New employees

ii) Transfer of service

iii) Posting

iv) Secondment from one service to another

(b) Computation of Gross Salary

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (₦)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Salary</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Add: Housing Allowance</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Transport Allowance</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Meal Allowance</td>
<td>7,500.00</td>
</tr>
<tr>
<td>Gross salary</td>
<td>87,500.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (₦)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: Deduction:</td>
<td></td>
</tr>
<tr>
<td>Union Dues</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Car Refurbishing Loan Repayment</td>
<td>3,500.00</td>
</tr>
<tr>
<td>Housing Loan Repayment</td>
<td>15,000.00</td>
</tr>
</tbody>
</table>
(c) **SALARY VARIATION ADVICE**

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

**Examiner's comment**

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

**SOLUTION TO QUESTION 4**

**OLOTÓ GRAMMAR SCHOOL, OPURO LOCAL GOVERNMENT**

**DOMESTIC ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER 2014**

<table>
<thead>
<tr>
<th>Expense</th>
<th>School fees:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax (10% of 50,000)</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Net salary</td>
<td>25,000.00</td>
</tr>
<tr>
<td></td>
<td>62,500.00</td>
</tr>
</tbody>
</table>

| Administrative            | 370,000 1st term 92,400 |
| Teachers salaries         | 700,000 2nd term 92,400 |
| Science education         | 240,000 3rd term 92,400 |
| Games and sports          | 190,000                                          |
| Medical                   | 120,000 Government subvention |
| Vocational education      | 180,000 1st term 123,200 |
| Excess income             | 2,446,800 2nd term 123,200 |
|                           | 3rd term 123,200                                  |
|                           | Science foundation 600,000                        |
|                           | Special trust 3,000,000                            |

ATSWA PART II SEPTEMBER 2015
OLOTO GRAMMAR SCHOOL, OPUTO LOCAL GOVERNMENT
CASH BOOK

<table>
<thead>
<tr>
<th>N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance</td>
<td>348,000</td>
</tr>
<tr>
<td>School fees</td>
<td></td>
</tr>
<tr>
<td>1st term</td>
<td>92,400</td>
</tr>
<tr>
<td>2nd term</td>
<td>92,400</td>
</tr>
<tr>
<td>3rd term</td>
<td>92,400</td>
</tr>
<tr>
<td>vocational education</td>
<td>180,000</td>
</tr>
<tr>
<td>Government subvention</td>
<td></td>
</tr>
<tr>
<td>Science foundation</td>
<td>600,000</td>
</tr>
<tr>
<td>Special trust fund</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Capital prov.</td>
<td>7,000,000</td>
</tr>
<tr>
<td>11,594,800</td>
<td>11,594,800</td>
</tr>
</tbody>
</table>

Examiner's Comment

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

SOLUTION TO QUESTION 5

(a)

i) Economic Order Quantity (EOQ)

\[ \frac{\sqrt{2DC}}{CC} = \sqrt{\frac{2 \times 20,000 \times N400}{N400}} = 2000 \text{ units} \]

ii) Re-Order Level

Maximum Consumption x Maximum Re-order Period

70 x 78 = 5460 units

iii) Minimum stock level

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

\[
5460 - (50 \times 75) = 5460 - 3750 = 1710\text{units}
\]

iv) Maximum Stock level

\[
\text{Re-order level + Re-order Quantity} - (\text{Minimum Consumption} \times \text{Minimum Re-order period})
\]

\[
= 5460 + 2000 - (30 \times 72)
\]

\[
= 7460 - 2160 = 5300
\]

(b) (i) Tally Card

(ii) Store Issue Voucher (SIV)

(iii) Store Receipt Voucher (SRV)

(iv) Store Register Book (for petro)

(v) Store Survey Sheet (SSS)

Examiner’s comment

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

SOLUTION TO QUESTION 6

(a)

(i) When a Board of Enquiry is Necessary

i) If fraud is probable

ii) If the loss is substantial

iii) If several Officers are involved.

iv) If the responsibility of Officers is not clearly defined

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

vi) If collusion is suspected

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

i) If the loss is a small one

ii) If it is an isolated case and
iii) If the identity of the Officer responsible is indisputable.

(b) Ways which Loss of Funds can arise.
   i) Burglary or Theft
   ii) Fraud/misappropriation
   iii) Unpaid advances
   iv) Unremitted Revenue
   v) Revenue Abandoned
   vi) Over-payment to Contractors/ Suppliers

Examiner’s Comment
This question tested on how loss of funds is treated and when Board of Enquiry should be constituted or otherwise. Part ‘b’ is on Loss or shortage of Funds, stating ways it could arise. About 75% of the candidates attempted the question. Less than 45% of them scored about 50% of marks allocated.
AT/142/PII.7
ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATION – SEPTEMBER 2015
QUANTITATIVE ANALYSIS

Time Allowed: 3 Hours

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

ATTEMPT ALL QUESTIONS

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

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

2. The demand for an item is 1,600 units per annum, the cost of an order is N36 and holding cost per unit of an item is N5 per annum. The number of orders per year is
   A. 152
   B. 76
   C. 73
   D. 31
   E. 11

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

E. \[ t = \frac{d}{80} \]

4. The standard deviation of the following set of numbers: 1, 2, 3, 4 and 5 is
   A. 1.40
   B. 1.41
   C. 1.42
   D. 1.43
   E. 1.44

5. A linear programming problem is infeasible if there is/are ......................... value(s) of the decision variables which satisfy all the constraints
   A. No
   B. Single
   C. Two
   D. Three
   E. Four

6. The point of intersection of the supply and demand curves on the same graph is the
   A. Equilibrium
   B. Fixed point
   C. Variable point
   D. Revenue point
   E. Break-even point

7. Which of the following is NOT an example of time series data?
   A. Monthly salaries of workers in a company
   B. Enrolment of students in school
   C. Daily production of bottled water in a company
   D. Registered candidates for an examination over a number of years
   E. Daily sales of a supermarket

8. The following table gives the unadjusted and adjusted seasonal indices for four quarters using the method simple average percentage
Find X and Y respectively

A. 98.7 and 100.5  
B. 100.7 and 101.5  
C. 101.7 and 102.9  
D. 101.8 and 103.0  
E. 102.3 and 103.3

9. An exponential function is given by $y = a^x$, where $a$ is the base and $x$ is the exponent. If the base is greater than 1, then $y$ becomes

A. An exponentially growing function  
B. An exponentially decaying function  
C. An implicit function  
D. A logarithmic function  
E. A quadratic function

10. A statistic of a distribution is a quantity computed from

A. A population  
B. The normal distribution  
C. A sample  
D. The Poisson distribution  
E. Average of data from both sample and population

11. In a marketing survey for the introduction of a new product in a town, a sample of 400 persons was drawn. When they were approached for sale of the product, 80 of them purchased the product. Compute the 95% confidence interval for the percentage of persons who would buy the product in the town.

A. 16% to 24%  
B. 17% to 24%  
C. 18% to 24%  
D. 19% to 24%
12. A demand curve is elastic if elasticity is
A. Less than one
B. Equal to one
C. Greater than one
D. Equal to zero
E. Not equal to one

13. The demand function for a certain item is \( p = 182,000 - 2q^2 \), where \( p \) is the price and \( q \) is the quantity produced and sold. Determine the marginal revenue when \( q = 100 \).

   A. 122,000
   B. 124,000
   C. 142,000
   D. 152,000
   E. 162,000

14. If DEMISAT has estimated its marginal profit function to be \( 10e^{0.15q} \), find the total profit when \( q = 40 \)?

   A. 26,828
   B. 26,829
   C. 26,892
   D. 26,895
   E. 26,896

15. The Vogel’s Approximation method makes use of
A. Difference between transportation costs
B. The highest transportation cost
C. The least transportation cost
D. The highest penalty
E. The lowest penalty

16. The error committed based on the method of selecting a sample from a population being studied is known as
A. Editing error
B. Coding error
C. Sampling error
D. Tabulating error
E. Enumerator’s error
17. The type of model most frequently used in Operations Research is a .......... model.
   A. Stochastic  
   B. Probabilistic  
   C. Mathematical  
   D. Symbolic  
   E. Linear

18. Which of the following points is NOT a major reason for holding stock?
   A. To ensure that sufficient goods are available to meet anticipated demand  
   B. To take advantage of bulk purchase discounts  
   C. To prevent production processes from flowing smoothly and efficiently  
   D. To absorb variations in demand and production  
   E. To meet possible shortages in future

19. Which of the following is NOT included in a carrying cost?
   A. Handling costs  
   B. Insurance and security  
   C. Transport costs  
   D. Storage charges  
   E. Stores staffing and running costs

20. In regression analysis, the two equations usually stated as
   \[ \sum y = an + b \sum x \] and \[ \sum xy = a \sum x + b \sum x^2 \] are known as
   A. Regression equations  
   B. Normal equations  
   C. Algebraic equations  
   D. Simultaneous equations  
   E. Straight-line equations

21. The region, where all the constraints are simultaneously satisfied, is known as the
   A. Maximum profit region  
   B. Equilibrium region  
   C. Break-even region  
   D. Feasible region  
   E. Minimum profit region
22. The activities required to complete a project are as shown in the network below.

```
0 0 1 1 3 4 4 7 5 e 9
```

Find the values of d and e

A. 3 and 5 respectively
B. 5 and 7 respectively
C. 7 and 9 respectively
D. 9 and 9 respectively
E. 9 and 10 respectively

23. The amount by which the objective function increases as a result of availability of one unit less or more of the scarce resource is the ......... of binding constraints

A. Optimal cost
B. Shadow cost
C. Least cost
D. Binding cost
E. Basic cost

24. Which of the following is NOT a disadvantage of telephone method of collecting data?

A. There is no clustering in the sample
B. The interviewer cannot control the order of questions
C. The interviewer cannot secure spontaneous reaction
D. Rate of impersonation is very high
E. The interviewer is not in a position to observe certain attributes of the respondents

25. A Committee of 5 members is to be formed from 7 Accountants and 3 Economists, what is the probability that the Committee consists of at least 3 Accountants?
A. \[ \frac{10}{21} \]
B. \[ \frac{13}{21} \]
C. \[ \frac{15}{21} \]
D. \[ \frac{16}{21} \]
E. \[ \frac{18}{21} \]

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

<table>
<thead>
<tr>
<th>Score</th>
<th>30 - 39</th>
<th>40 - 49</th>
<th>50 - 59</th>
<th>60 - 69</th>
<th>70 - 79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>1</td>
<td>3</td>
<td>20</td>
<td>15</td>
<td>21</td>
</tr>
</tbody>
</table>

The 60\(^{th}\) percentile (P\(_{60}\)) is

A. 57.5
B. 67.5
C. 77.5
D. 87.5
E. 97.5

27. An investment is estimated to grow at the rate of 15% per annum. If the worth of the investment now is GHS\(\text{750,000}\), in what year will the investment be worth GHS\(\text{3.28m}\)?

A. 11.56 years
B. 10.71 years
C. 10.66 years
D. 10.61 years
E. 10.51 years

28. A firm rents its premises and the rental agreement provides for a regular annual increase of N\(\text{100,000}\). If the rent in the first year is N\(\text{400,000}\), what will be the rent in the tenth year?
29. The activities to be carried out by the ALYAP Manufacturing Company on a project are as shown in the network below. The durations are marked in days.

Identify the path with the least duration.

A. A - B - D - H - M
B. A - B - E - I - M
C. A - C - F - J - L
D. A - C - G - K - L
E. A - B - F - J - L

30. The price index that tends to overestimate price changes is known as

A. Simple aggregate price index
B. Paasche’s price index
C. Marshal Edgeworth price index
D. Laspeyres’ price index
E. Fisher’s price index

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

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

1. The typical method for calculating price index uses ......................... weights.

2. If C is a constant and X is a random variable, the mathematical expectation of E(CX) is .........................

3. If the primal problem of a linear programming is a minimizing one, the dual problem will be a .........................

4. A stock allowance made to cover errors in forecasting the lead time or demand during the lead time is called .........................

5. The elasticity of the function y = f(x) is the ......................... of the ......................... in y to the relative change in x.

6. The discount rate that occurs when the net present value is zero is known as .........................

7. The difference between the 8th and 52nd terms of the arithmetic progression, whose first three terms are 210, 205 and 200, is .........................

8. The use of graphical method in solving a linear programming problem requires only two .........................

9. The variation caused by unpredictable events such as flood, disasters, etc, is known as .........................

10. In transportation problem, the method that makes use of penalties in allocation of goods is known as ......................... method.

11. Chronological classification deals with classification with respect to .........................

12. Market equilibrium occurs at a point where the quantity of a commodity demanded is .........................to the quantity supplied.

13. The calculation of the ......................... is also known as Backward pass.

14. In building a model for a typical Operations Research problem, one must ensure that the model incorporates the .........................features of the problem being studied.

15. The harmonic mean of 3, 4 and 5 is .........................
16. If $3 - x \leq 1 \leq 5 - x$, the value of $x$ lies within .........................

17. The two common methods of measuring the association between two variables are ................................ and ..............................................

18. Replacement analysis is the process by which the various cost consequences involved are studied so that the .................. replacement decision is taken.

19. If a sample of 5 items having the weights (kg) of 6, 7, 8, 13 and 15 is randomly taken from a population, the standard error of the mean is .........................

20. A hypothesis that completely specifies the value of population parameter under study is known as ..................................hypothesis.
SECTION B: ATTEMPT ANY FOUR QUESTIONS OUT OF WHICH AT LEAST ONE MUST COME FROM EACH SUB-SECTION
(50 Marks)

SUB-SECTION 1

QUESTION 1

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

You are required to:

Test the hypothesis that the banking prime rate has actually fallen. (Use $\alpha = 5\%$ level of significance) (Total 12½ Marks)

QUESTION 2

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

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

You are required to:

a. Summarize the above data with the aid of frequency distribution table with classes 0 – 10, 10 – 20, etc. (5 Marks)

b. Construct the frequency histogram to examine the spread of the data. (4½ Marks)

c. From the frequency table, determine the
   i. number of days the branch made returns to the head office.
   ii. number of days the branch made a return of more than ₦70,000.
iii. percentage of the days during which the branch made returns of at most ₦49,000.

(Total 12½ Marks)

SUB-SECTION II

QUESTION 3

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

You are required to:

a. Use the graphical approach to identify the Break-Even Point (BEP) for the bookshop (7 Marks)

b. Use your graph to determine the Break-Even Revenue (BER) and Break-Even Quantity (BEQ) (2 Marks)

c. Interpret your answers in (b) (1½ Marks)

d. Identify clearly, the profit and loss areas on your graph (2 Marks)

(Total 12½ Marks)

QUESTION 4

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

You are required to:

a. Calculate what he will deposit into this account on the first of November 2012. (3½ Marks)

b. Determine how much he would have in the account on the first of November 2012 (2½ Marks)
c. If the bank will be paying an interest of 18 percent per annum compounded monthly, determine how much more or less the Executive will have (or borrow) to purchase a house which price will be N5 million at the end of November 2012?

(Total 12½ Marks)

---

**SUB-SECTION III**

**QUESTION 5**

A company’s 3-wheeler vehicle costs N120,000. It is the company’s policy to replace vehicles as they wear out gradually due to increasing cost of maintenance to put them in good condition. The following data have been estimated on annual maintenance cost and resale value:

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resale value at year end (₦)</td>
<td>96,000</td>
<td>76,000</td>
<td>57,800</td>
<td>42,000</td>
<td>28,500</td>
<td>17,500</td>
</tr>
<tr>
<td>Annual maintenance cost (₦)</td>
<td>6,400</td>
<td>9,000</td>
<td>13,500</td>
<td>16,500</td>
<td>18,750</td>
<td>20,500</td>
</tr>
</tbody>
</table>

You are required to:

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

(Total 12½ Marks)

**QUESTION 6**

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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Preceding Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>-</td>
</tr>
<tr>
<td>C</td>
<td>A</td>
</tr>
<tr>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>E</td>
<td>A</td>
</tr>
<tr>
<td>F</td>
<td>C</td>
</tr>
</tbody>
</table>
You are required to:

a. Draw the Activity-On –Arrow diagram for this project (6½ Marks)

b. List all the possible paths in the network (4 Marks)

c. State the necessity for introduction of dummy in the network (2 Marks)

(Total 12½ Marks)

<table>
<thead>
<tr>
<th>G</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>C</td>
</tr>
<tr>
<td>J</td>
<td>B, D</td>
</tr>
<tr>
<td>K</td>
<td>F, J</td>
</tr>
<tr>
<td>L</td>
<td>E, H, G, K</td>
</tr>
<tr>
<td>M</td>
<td>E, H</td>
</tr>
<tr>
<td>N</td>
<td>L, M</td>
</tr>
<tr>
<td>MULTIPLE – CHOICE QUESTION</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>1. D</td>
<td></td>
</tr>
<tr>
<td>2. E</td>
<td></td>
</tr>
<tr>
<td>3. B</td>
<td></td>
</tr>
<tr>
<td>4. B</td>
<td></td>
</tr>
<tr>
<td>5. A</td>
<td></td>
</tr>
<tr>
<td>6. A</td>
<td></td>
</tr>
<tr>
<td>7. B</td>
<td></td>
</tr>
<tr>
<td>8. C</td>
<td></td>
</tr>
<tr>
<td>9. A</td>
<td></td>
</tr>
<tr>
<td>10. C</td>
<td></td>
</tr>
<tr>
<td>11. A</td>
<td></td>
</tr>
<tr>
<td>12. C</td>
<td></td>
</tr>
<tr>
<td>13. A</td>
<td></td>
</tr>
<tr>
<td>14. B</td>
<td></td>
</tr>
<tr>
<td>15. D</td>
<td></td>
</tr>
<tr>
<td>16. C</td>
<td></td>
</tr>
<tr>
<td>17. C</td>
<td></td>
</tr>
<tr>
<td>18. C</td>
<td></td>
</tr>
<tr>
<td>19. C</td>
<td></td>
</tr>
<tr>
<td>20. B</td>
<td></td>
</tr>
<tr>
<td>21. D</td>
<td></td>
</tr>
<tr>
<td>22. C</td>
<td></td>
</tr>
<tr>
<td>23. B</td>
<td></td>
</tr>
<tr>
<td>24. A</td>
<td></td>
</tr>
<tr>
<td>25. A</td>
<td></td>
</tr>
<tr>
<td>26. B</td>
<td></td>
</tr>
<tr>
<td>27. A</td>
<td></td>
</tr>
<tr>
<td>28. D</td>
<td></td>
</tr>
</tbody>
</table>
Examiners’ Comment
These questions are in three sections:

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

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

WORKINGS

2. \[ Q = \sqrt{\frac{2sd}{n}} = \sqrt{\frac{2 \times 36 \times 1600}{5}} = \sqrt{\frac{115200}{5}} = 151.79 \approx 152 \]

\[ \therefore \text{Number of orders per year is} \]

\[ \frac{\text{Demand}}{Q} = \frac{1600}{152} = 10.53 \approx 11 \text{ orders} \]

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

\[ x = \frac{102.5 \times 400}{403} = 101.7 \]

\[ y = \frac{103.7 \times 400}{403} = 102.9 \]

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

\[ \text{C.I.} = \overline{p} \pm 1.96 \sqrt{\frac{pq}{n}} = 0.2 \pm 1.96 \sqrt{\frac{(0.2)(0.8)}{400}} \]

\[ = 0.2 \pm 0.04 \Rightarrow 0.16 \leq p < 0.24 \]
13. \( (q) = 182000q - 2q^3 \)
\[
\frac{dR}{dq} = 182000 - 6q^2
\]
When \( q = 100 \)
\[
\frac{dR}{dq} = 182000 - 60000 = 122000
\]

14. \[
\int_{0}^{40} \left(10e^{0.15q}\right) dq = \frac{10e^{0.15q}}{0.15} \bigg|_{0}^{40}
\]
\[
= \frac{10e^{6}}{0.15} - \frac{10e^{0}}{0.15}
\]
\[
= 26,828.6 \approx 26,829
\]

22. \( d = 0 + 1 + 2 + 4 = 7 \)
\( e = d + 2 = 9 \)

25. The possibilities are
3 Accountants and 2 Economists or
4 Accountants and 1 Economist or
5 Accountants and 0 Economist
i.e. the required probability is
\[
= \left( \frac{3}{7} \right) \left( \frac{2}{3} \right) + \left( \frac{4}{7} \right) \left( \frac{1}{3} \right) + \left( \frac{5}{7} \right) \left( \frac{0}{3} \right)
\]
\[
= \frac{10}{21}
\]

26. \( p_{60} = L_1 + \frac{\left(60N - \sum f_i\right)}{f_{p_{60}}}, \)
\[
= 59.5 + \left( \frac{36 - 24}{15} \right) 10 \quad \text{N = 60}
\]
\[
= 59.5 + \frac{120}{15}
\]
\[
= 67.5 \quad \text{60 \times \frac{60}{100} = 36}
\]
\[
L_1 = 59.5; \quad c = 10 \quad \sum f_i = 24; \quad f_{p_{60}} = 15
\]
27. \( n^{th} \) term = N3.28m; \( a = 750,000; \quad r = 1.15 \)
\[
\therefore \quad 3,280,000 = 750,000 \cdot (1.15)^{n-1}
\]
Divide both sides by 750,000
\[
4.3733 = (1.15)^{n-1}
\]
\[
\log 4.3733 = (n - 1) \log (1.15)
\]
\[
n - 1 = \frac{\log 4.3733}{\log(1.15)} = 10.5573
\]
\[
\therefore \quad n = 10.5573 + 1 = 11.56
\]

28. Rent in 10\(^{th}\) year = \( a + (n - 1) \cdot d \)
Where \( a = 400,000; \quad n = 10; \quad d = 100,000 \)
\[
= 400,000 + (10 - 1) \cdot 100,000
\]
\[
= 400,000 + 900,000
\]
\[
= N1,300,000
\]

29.
\[
A - B - D - H - M = 1 + 17 + 3 + 9 + 10 = 40 \text{ days}
\]
\[
A - B - E - I - M = 1 + 17 + 14 + 8 + 10 = 50 \text{ days}
\]
\[
A - C - F - J - L = 1 + 3 + 6 + 11 + 13 = 34 \text{ days}
\]
\[
A - C - G - K - L = 1 + 3 + 7 + 12 + 13 = 36 \text{ days}
\]

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

**SECTION A PART II**

**SHORT ANSWER QUESTION**

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

Examiner's comment:
Generally, candidates did not perform well here as less then 30% of them doing fairly well. The syllabus is fairly covered.

WORKINGS

7. \(T_8 = a + 7d\)
   \[= 210 + 7(-5)\]
   \[= 175\]

\(T_{52} = a + 51d\)
   \[= 210 + 51(-5)\]
   \[= -45\]

\(\therefore T_8 - T_{52} = 175 - (-45)\)
   \[= 220\]

15. Harmonic mean (H) \(= \frac{N}{\sum \frac{1}{x}}\)
\[
\frac{3}{\frac{1}{3} + \frac{1}{4} + \frac{1}{5}} = \frac{3}{\frac{20 + 15 + 12}{60}} = \frac{180}{47} = 3.83
\]

19. \[
\bar{x} = \frac{49}{5} = 9.8
\]
\[
S^2 = \frac{14.44 + 7.84 + 3.24 + 10.24 + 27.04}{5} = \frac{62.8}{5} = 12.56
\]
\[
S = \sqrt{12.56} = 3.54
\]
Hence,
\[
S.E. = \frac{S}{\sqrt{n}} = \frac{3.54}{\sqrt{5}} = 3.54
\]

\[
S.E. = \frac{3.54}{2.24} = 1.58
\]

SECTION B

SOLUTION TO QUESTION 1

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

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

<table>
<thead>
<tr>
<th>X</th>
<th>((x - \bar{x})^2)</th>
<th>(x^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>0</td>
<td>324</td>
</tr>
<tr>
<td>23</td>
<td>25</td>
<td>529</td>
</tr>
<tr>
<td>14</td>
<td>16</td>
<td>196</td>
</tr>
<tr>
<td>22</td>
<td>16</td>
<td>484</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>361</td>
</tr>
<tr>
<td>16</td>
<td>4</td>
<td>256</td>
</tr>
<tr>
<td>15</td>
<td>9</td>
<td>225</td>
</tr>
<tr>
<td>13</td>
<td>25</td>
<td>169</td>
</tr>
<tr>
<td>12</td>
<td>36</td>
<td>144</td>
</tr>
<tr>
<td>18</td>
<td>0</td>
<td>324</td>
</tr>
<tr>
<td>24</td>
<td>36</td>
<td>576</td>
</tr>
<tr>
<td>22</td>
<td>16</td>
<td>484</td>
</tr>
</tbody>
</table>
\[
\bar{x} = \frac{\sum x}{n} = \frac{216}{12} = 18
\]
\[
S^2 = \frac{\sum (x - \bar{x})^2}{n-1} = \frac{184}{12-1} = 16.7272
\]
\[
\therefore S = \sqrt{16.7272} = 4.09
\]

OR
\[
S = \sqrt{\frac{\sum x^2 - (\sum x)^2}{n(n-1)}}
\]
\[
= \sqrt{\frac{n\sum x^2 - (\sum x)^2}{n(n-1)}}
\]
\[
= \sqrt{\frac{12(4072) - (216)^2}{12(12-1)}}
\]
\[
= 4.09
\]

Test statistic is \(t\)-test \(= \frac{\bar{x} - \mu}{s/\sqrt{n}}\)
\[
|t| = \frac{18 - 23}{4.09/\sqrt{12}} = \frac{-5}{1.18} = 4.24
\]

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

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

Examiner’s Comment
This is on hypothesis testing of small samples using the \(t\)-test. Less than 5% of the candidates attempted the question with only 3% of them scoring 5 out of the maximum mark of 12½. The performance was generally poor. The main pitfall identified was their shallow knowledge of the principle governing hypothesis testing especially with respect to small samples.

Candidates’ should be advised not to ignore any aspect of the syllabus.
SOLUTION TO QUESTION 2

(a)

<table>
<thead>
<tr>
<th>X (₦'000)</th>
<th>Tally</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>10 - 20</td>
<td>IIII IIII IIII</td>
<td>14</td>
</tr>
<tr>
<td>20 - 30</td>
<td>IIII IIII II</td>
<td>12</td>
</tr>
<tr>
<td>30 - 40</td>
<td>IIII III</td>
<td>8</td>
</tr>
<tr>
<td>40 - 50</td>
<td>IIII II</td>
<td>7</td>
</tr>
<tr>
<td>50 - 60</td>
<td>IIII I</td>
<td>6</td>
</tr>
<tr>
<td>60 - 70</td>
<td>IIII</td>
<td>4</td>
</tr>
<tr>
<td>70 - 80</td>
<td>III</td>
<td>3</td>
</tr>
<tr>
<td>80 - 90</td>
<td>II</td>
<td>2</td>
</tr>
<tr>
<td>90 - 100</td>
<td>I</td>
<td>1</td>
</tr>
</tbody>
</table>

|       |       | 60 |

Total

60
Title: Histogram Showing the Distribution of Daily Sales
(c) (i) Number of days the branch made returns to the head office is
\[ \Sigma f = 3 + 14 + 12 + 8 + 7 + 6 + 4 + 3 + 2 + 1 = 60 \text{ days} \]

(ii) Number of days the branch made returns of at least N70,000 is
\[ = 3 + 2 + 1 = 6 \text{ days} \]

(iii) Number of days the branch made returns of at most N49,000
\[ = 7 + 8 + 12 + 14 + 3 = 44 \]
\[ \therefore \text{the percentage of the total number of days} \]
\[ = \frac{44}{60} \times 100 = 73.33\% \]

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

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

SOLUTION TO QUESTION 3

i. For \( C(x) = x + 10 \)
   When \( x = 0; \ C(x) = 10 \)
   \[ \therefore (0, 10) \text{ is a point on the line} \]
   When \( C(x) = 0; \ x = -10 \)
   \[ \therefore (-10; 0) \text{ is a point on the line} \]
   For \( R(x) = 2x \)
   When \( x = 0; \ R(x) = 0 \)
   \[ \therefore (0, 0) \text{ is a point on the line} \]
   By using any value of \( x \)
   i.e. when \( x = 5; \ R(x) = 10 \)
   \[ \therefore (5, 10) \text{ is a point on the line} \]
   The two graphs are as shown
a. The break-even point (BEP) for the bookshop is the point of intersection of the two straight lines i.e. (10, 20)
b. From the graph, the break-even revenue and break-even quantity respectively are
   \[
   BER = 20 \quad \text{and} \quad BEQ = 10
   \]
c. The implication of \( BEQ = 10 \) and \( BER = 20 \) is that books are bought and sold for the same amount which is 20. This means there is no loss and there is no profit.
d. The loss and profit areas are as indicated on the graph.

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

**SOLUTION TO QUESTION 4**

\[
\begin{array}{ccc}
100 & 140 & 180 \\
\text{Nov.} & \text{Dec.} & \text{Jan. 1993} \\
1992 & 1992 & \text{Nov. 2012}
\end{array}
\]

Number of months, \( n = 240 + 1 = 241 \)

a. Deposit on the first of November 2012
   
   \[
   a_{241} = a + (n - 1) d
   \]
   
   \[
   = 100 + (241 - 1)(40)
   \]
   
   \[
   = 100 + 240(40)
   \]
   
   \[
   = 100 + 9,600
   \]
   
   \[
   = \text{N}9,700
   \]

b. \( a = 100; \quad \ell = 9,700; \quad n = 241 \)
   
   \[
   s_n = \frac{n}{2}[a + \ell] \quad \text{or} \quad \frac{n}{2}[a + (n - 1)d]
   \]
   
   \[
   s_n = \frac{241}{2}[100 + 9,700]
   \]
Examiner's Comment

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

**SOLUTION 5**

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

For annual capital loss (A)

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

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

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

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

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

\[ \text{Second Entry} = \frac{59400}{2} = 29700 \]

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

Examiner’s Comment

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

SOLUTION TO QUESTION 6

a.
b. All the possible paths are

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

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

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

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

Examiner's Comment

Network Theory is the subject of this question. Ability of the candidates to draw Network diagram based on Activity-On Arrow concept is tested. The introduction of Dummy in Network diagram is also tested. About 98% of the candidates attempted the question with less than 20% of them obtaining above average. The inability of most of the candidates to draw the required diagram was the major pitfall identified.
SECTION A: PART I MULTIPLE-CHOICE QUESTIONS (30 MARKS)

ATTEMPT ALL QUESTIONS

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

1. A printer that works by having wires or embossed characters, strikes on a piece of paper or ribbon to form impression on a page is called
   A. Page Printer
   B. Ink-Jet Printer
   C. Non-Impact Printer
   D. Impact Printer
   E. Thermal Transfer Printer

2. The part of the processor where arithmetic and logic operations are carried out is referred to as
   A. Control Unit
   B. External Memory
   C. Central Processing Unit (CPU)
   D. Arithmetic Logic Unit
   E. Main Memory

3. A support equipment that transmits data to or receives output information from the Central Processing Unit (CPU) over a communication line is classified as
4. The processor speed of a microcomputer is measured in
   A. Byte
   B. Bits
   C. Hertz
   D. Gigabyte
   E. Megabyte

5. A temporary holding area for data that is subjected to repeated access is called a
   A. Cache
   B. Processor
   C. Main storage
   D. ROM
   E. Front-end processor

6. An Operating System (OS) may contain a Graphical User Interface (GUI) which includes, graphics and icons and are commonly navigated by using a mouse. Identify an example of the above OS from the list below.
   i. Windows 3.1
   ii. Windows 98
   iii. Windows ME
   A. i only
   B. ii only
   C. i, ii and iii
   D. iii only
   E. ii and iii

7. An operating system that allows for many users to use the same computer at the same time is known as
   A. Multi-user
   B. Multiplexor
   C. Operating system user
   D. Same user
   E. Different user
8. Which of the following is NOT a software application for most personal computers?

A. Database Management System
B. Web browser
C. Word processing
D. Batch processing
E. Spreadsheet

9. Application software can be broadly divided into the following classes. Identify the correct one

i. Word processor
ii. Spreadsheet
iii. Database Management System
iv. Browser
A. i and iv
B. i, ii, iii and iv
C. i, iii, and iv
D. i and ii
E. ii, iii and iv

10. A software which allows users to store information, create content and media as well as.................is called application software

i. Access information
ii. Run the computer hardware
iii. Process other users’ applications
iv. Process other users’ hardcopies
A. i only
B. i and ii
C. i, ii and iii
D. i, ii and iv
E. i, ii, iii and iv

11. An organized collection of logically related data is known as
A. Data house
B. Database
C. Data mining
D. Data warehouse
E. Data model

12. Which of the following is NOT a characteristic of good Information?
   A. Accuracy
   B. Timely
   C. Reliable
   D. Voluminous
   E. Relevant

13. A number system that has its digits as 0 and 1 is known as
   A. Octal number system
   B. Decimal Number system
   C. Hexadecimal Number System
   D. Double number system
   E. Binary Number System

14. Decimal number 29 in base two is
   A. 1 1 1 0 1
   B. 1 0 1 1 1
   C. 1 1 0 1 1
   D. 1 0 0 0 1
   E. 1 0 0 1 1

15. Which of the following is NOT an information processing technique?
   A. Centralized
   B. Decentralized
   C. Distributed
   D. Associated
   E. Time sharing

16. Which of these items carry an electronic signal between sender and receiver?
   A. Modem
B. Communication protocol
C. Transmission media
D. Telecommunication
E. Front End Processor

17. Which of the following is NOT a way to gain access to a network?

A. LAN Server
B. Usenet
C. Point - to - point protocol
D. LAN client
E. Online service

18. What is the standard description language for web pages?

A. Home page language
B. Hypermedia Markup Language
C. Java
D. Hypertext Markup Language
E. Uniform Resource Locator

19. The type of communication in which the receiver gets the message minutes, hours or days after it is sent is known as:

A. Asynchronous Communication
B. Synchronous Communication
C. Serial Communication
D. Voice Communication
E. Phone Communication

20. Which communication channel allows data to be transmitted in both directions but not simultaneously?

A. Simplex
B. Full Duplex
C. Half Duplex
D. Synchronous transmission
E. Asynchronous transmission
21. Which of the following is **NOT** the reason why it is often necessary to revisit previous stages in the System Development Life Cycle?

A. Design oversights or errors  
B. System errors discovered  
C. Changes in system requirements  
D. Requirements have been ill-defined  
E. Management gives its approval

22. Which of these approaches reduces errors in systems development?

A. Education and training  
B. Active involvement by senior staff  
C. Prototyping  
D. New approach to business self-image  
E. Problem definition

23. An organization not having its own computer system can process data electronically using the following methods **EXCEPT**

A. Senior system analyst  
B. Manual processing  
C. Electronic Accounting machines  
D. Service bureau  
E. Rental of computer time

24. Which of the following is **NOT** included in a Feasibility Study Report?

A. Current system issues  
B. Terms of reference  
C. Internal Rate of Return  
D. Executive summary  
E. Conclusion

25. Which of the following is **NOT** a disadvantage of using computer service bureaux?
A. Loss of control over time taken to process data
B. Insufficient workload to justify the installation of in-house computer
C. Inability of a client staff to gain experience in computing
D. Possible loss of competitive advantage where client depends solely on bureau
E. Secrecy of the client may be impaired

26. The **TRUE** identity of a user of information may be determined using
   A. Firewall
   B. Identification
   C. Authentication
   D. Proxy server
   E. Gateway

27. What is the name given to the formal investigative technique used to evaluate digital information for judicial review?
   A. Computer forensic
   B. Computer data diddling
   C. Computer ethics
   D. Computer phreaking
   E. Computer auditing

28. The sending of bogus messages purportedly from legitimate institution to pry personal information from consumers by convincing them to go to a spoof website is called
   A. Phishing
   B. Vishing
   C. Piggybacking
   D. Phreaking
   E. Masquerading

29. A centrally managed group of web pages containing texts, images and all types of multimedia files presented to internet users in an easily accessible way is called
   A. E-mail
   B. Web-centre page
   C. Web
   D. Web Centre
   E. Website
30. Which of the following is a process in Forensic Computing?
   A. Specialisation
   B. Separation
   C. Preservation
   D. Authentication
   E. Combination

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

ATTEMPT ALL QUESTIONS

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

1. The computer crime committed by copying software illegally is known as ............................................

2. A software that accesses and manages both traffic and security between clients and servers in a network is known as ............................................

3. The system software associated with the conversion of a source program to an object program is known as ............................................

4. An electronic device that is capable of accepting data, processing data and producing information at a very high speed with accuracy is called .................................

5. A computer that measures in continuous variable is called .................................

6. An optical scanning equipment used to record purchases as source data entry and generates an electronic cash register is called ............................................

7. Processing technique that is performed in one computer or in a cluster of coupled computers in a single location is known as ............................................

8. A number system that has its digits between 0 and 7, with highest number 7 and least number 0 is known as ............................................

9. In users’ interaction with the personal computer, what is the meaning of the acronym GUI? ............................................

10. Computer files can be viewed physically and ............................................

11. A record showing who has accessed a computer system and what operations he or she has performed during a given period is referred to as ............................................

12. What is the name given to the unsolicited messages usually found in e-mails and mobile devices? ............................................
13. The real-time exchange of information between people who are not in the same physical space is called .........................................

14. What name refers to the computer-to-computer exchange of business documents in a standard electronic format between business partners?

15. A preliminary study undertaken by an organization to find out if it will be feasible for it to acquire, maintain and profit from the use of a computer system is called ..........................................

16. The Change of the old file data into the form required by the new system is referred to as ..........................................

17. At the implementation stage, the changing from the old system to the new system is called ..........................................

18. Any company that provides individuals or organizations with access to the Internet is referred to as..........................................

19. Data gathered based on the websites visited and the items clicked on is called ........................................... data

20. Any of the several types of software that enables users of computers in remote locations to work together on the same project is called ..........................................

SECTION B ATTEMPT ANY FOUR QUESTIONS (50 Marks)

QUESTION 1

a. List FIVE special keys of a standard keyboard (2½ Marks)

b. State FIVE contents of the primary memory in a PC (6 Marks)

c. Describe what you understand by an Immediate Access Storage (IAS) and give ONE example (4 Marks)

(Total 12½ Marks)

QUESTION 2

A computer administrator requires TWO types of software

You are required to:

a. State what you understand by a software application package (2½ Marks)
b. List **FIVE** operating systems used in a PC (5 Marks)

c. List and Explain **FIVE** functions of a computer administrator (5 Marks)  

*(Total 12½ Marks)*

**QUESTION 3**

Files are essential parts of a Computer System

**You are required to:**

a. Describe **SIX** types of files (6 Marks)

b. Explain the following terms as used in file processing
   i. Hit rate
   ii. Volatility
   iii. Access time (6½ Marks)

*(Total 12½ Marks)*

**QUESTION 4**

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

**You are required to:**

a. Define the term “Electronic Data Interchange” (EDI) (1½ Marks)

b. Enumerate any **THREE** benefits of EDI (3 Marks)

c. Describe what roles each of the following hardware devices play in a network
   i. Bridge
   ii. Repeater
   iii. Switch
   iv. Hub (8 Marks)

*(Total 12½ Marks)*

**QUESTION 5**
One technique of systems development is Systems Development Life Cycle which comprises of many phases including feasibility study

You are required to:

a. Define feasibility study
   Marks) (2½

b. List FOUR key members of a Feasibility Study Committee
   Marks) (2

c. Justify the importance of each member in (b) above
   Marks) (4

d. List FOUR functions of a Feasibility Study Committee
   Marks) (4

(Total 12½ Marks)

QUESTION 6

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

Required:

a. i. What is cloud computing
   Mark) (1
   ii. List FIVE cloud computing providers
   Marks) (2½Marks)

b. i. What is an e-mail
   Marks) (1
   ii. Explain briefly FOUR benefits of using an e-mail service
   Marks) (8

(Total 12½ Marks)

SECTION A: PART I ANSWER (Multiple Choice)

1. D
2. D
3. C
4. C
5. A
Examiner’s Comment:
This section consisted of thirty compulsory questions which covered almost all sections of the syllabus. The performance was good as over 60% of the candidates scored above 50% of the allocated marks.

SECTION A: PART II ANSWER

1. Software piracy
2. Network Operating System (NOS)
3. Language Translator
4. Computer system
5. Analog computer
6. Point – of – Sale (POS)
7. Centralized processing
8. Octal Number System/Base 8 Number System
9. (GUI) Graphical user interface
10. Logically
11. Log
12. Spam
13. Teleconferencing
14. Electronic Data Interchange (EDI)
15. Feasibility study
16. File conversion
17. Changeover
18. Internet Service Provider (ISP)
19. Clickstream
20. Groupware

Examiner's Comment:

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

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

SOLUTION TO QUESTION 1
a. Contents of a standard keyboard include
   i. Function keys (F1 – F12)
   ii. Ctrl key
   iii. Alt key
   iv. Shift key
   v. Tab key
   vi. Cap lock key
   vii. Page up/Page down keys
   viii. Back space key
   ix. Delete key
   x. Enter key
   xi. Home/End keys
   xii. Insert key
   xiii. Esc key
b. Contents of the Primary Memory in a Personal computer include:

i. Programs - which contain instructions that will be used for processing

ii. Data – that have been read from an input device or a secondary storage.

iii. Data that are currently being processed.

iv. Output information that is ready to be sent to an output device

v. Programs that start/boot the computer system

c. Immediate Access Storage (IAS) - refers to the location in the computer system where data and stored instructions can be accessed and addressed very quickly.

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

Examiner's Comment:

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

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

Candidates are advised to be very familiar with this basic topic

SOLUTION TO QUESTION 2

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

Application software consists of programs designed to perform specific tasks for users.
Examples of such tasks include, assisting with graphics and multimedia projects to support homes, personal and educational activities and to facilitate communications.

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

b. Types of operating system in personal computers include:
   i. DOS
   ii. Windows
   iii. Unix
   iv. linus
   v. OS/2
   vi. Xenix
   vii. Apple
   viii. Mac OS

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

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

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

SOLUTION TO QUESTION 3

a. Types of Files include:
   i. Master File:
This is a file that contains records that rarely change e.g. names, address, payroll, etc

ii. Transaction file:
This is a file that contains records that are used to update the master file e.g. purchases, orders, invoices, overtime records, etc.

iii. Backup file:
This is a duplicated file of an existing file that is kept for security reasons.

iv. Reference file:
This is a file that can be easily referenced i.e. contents are stable and cannot be denied.

v. Archival File:
This is a historical file that can be used anytime needed.

vi. Output file:
This is a file that contains the result of processing e.g. print out.

vii. Data file:
This is a file that contains data/information to be used for processing e.g. database files

b.

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

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

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

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

Examiner's Comment:

This question tests candidates knowledge on types of processing files and some technical terms associated with Data Processing. This question is very unpopular as less than 35% of the candidates attempted it and the performance was very poor. Only very few candidates scored over 40% of the allocated marks.
The major pitfall was that many candidates could not define the technical terms. Candidates are advised to use standard texts when preparing for future examinations.

**SOLUTION TO QUESTION 4**

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

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

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

i. Rapid fulfillment of orders due to reduced times in placing and receiving orders, reduced time of information in transit and integration with other processes.

ii. Fewer errors in data entry and less time spent by the buyer and supplier on exception handling.

iii. Reduced costs resulting from reduce staff time, material savings (e.g. paper and forms) and improved inventory control

iv. Increased competiveness.

**c.**

i. Bridge in a network – is used to connect two or more networks that use the same communication protocol. It examines each message on the network, passing each message known to be destined for someone on the same network and forwarding them to someone on another network

ii. Repeater – is a device that strengthens received signals and then sends them on the next leg of their journey to the next destination. In other words, repeaters are necessary to increase transmission strength by regenerating signals and retransmitting them.

iii. Switch – is a telecommunication device that routes incoming data from any one of many input ports to a specific output port that will take the data towards its intended destination. A network switch determines from the physical device address in each incoming message frame which output port the message should be forwarded.
iv. Hub – is a network device for connecting multiple ethernet devices together and making them act as a single network segment.

Examiner's Comment:

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

Candidates are advised to get more familiar with Networking.

SOLUTION TO QUESTION 5

a. Feasibility study
   This is a preliminary study undertaken by an organization to find out if it will be feasible for them to acquire, maintain and profit from the use of computer system.

b. Members of a feasibility study committee consist of
   i. One member of each department in the company
   ii. A member of the executive committee of the company
   iii. A senior system analyst
   iv. An external/outside consultant

c. The importance of each of the above member includes:
   i. Department member is there to brief the committee on the activities of the department, the potentials and weaknesses as it affects computerization
   ii. The executive member is there to give status, recognition to the committee and also to view the financial requirements of the project and communicate same to the management.
   iii. The senior system analyst is there as a specialist who carries out fact findings about the system
iv. The outside consultant is there to bring his wealth of experience on such similar projects and to ensure the integrity of the system.

d. Functions of a feasibility study committee includes:

   i. To analyse the current operations of the company.
   ii. To determine if the implementation of a computer system can be justified
   iii. To devise a list of requirements and criteria to be fulfilled by the prospective computer.
   iv. To evaluate carefully the bids/quotations received from computer vendors, manufacturers and leasing firms.
   v. To devise a plan for the company to prepare for the installation of the computer system, if management gives its approval.

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

SOLUTION TO QUESTION 6

a. 
   i. Cloud Computing refers to the hosting of computer related services over the internet.
   ii. Cloud computing Providers include:
       ✓ Microsoft
       ✓ Google
       ✓ CISCO
       ✓ Apple
       ✓ Sales force
       ✓ Yahoo
       ✓ Amazon
       ✓ AT&T
       ✓ Rival Verizon
       ✓ Enomaly
       ✓ Gogrid
       ✓ Netsuite
       ✓ Rackspace
       ✓ Rightscale

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

Examiner’s Comment:
This question tests candidates knowledge on Cloud Computing and E-mail. Many candidates attempted this question and the performance was very good. Candidates are advised to read widely for improved performance.