

THE ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA



**ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
MARCH 2022 EXAMINATIONS (PART II)**

PRINCIPLES AND PRACTICE OF FINANCIAL ACCOUNTING

PLEASE READ THESE INSTRUCTIONS BEFORE COMMENCEMENT OF THE PAPER

EXAMINATION INSTRUCTIONS

1. All solutions should be in ink. Any solution in pencil will not be marked.
2. Read all instructions on each part of the paper carefully before answering the questions.
3. Ensure that you do not answer more than the number of questions required for **Section B (The Essay Section)**.
4. Check your pockets, purse, mathematical set, etc to ensure that you do not have prohibited items such as telephone handset, electronic storage device, wrist watches, programmable devices or any form of written material with you in the hall. You will be stopped from continuing with the examination and liable to further disciplinary actions including cancellation of examination result if caught.
5. Do not enter the hall with anything written on your docket.
6. Insert your examination number in the space provided above.

TUESDAY, 29 MARCH, 2022

DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS – MARCH 2022
PRINCIPLES AND PRACTICE OF FINANCIAL ACCOUNTING**

Time Allowed: 3 hours

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

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

1. The totality of methods adopted by an economic entity for applying fundamental accounting concepts to its financial transaction is
 - A. Accounting estimates
 - B. Accounting concepts
 - C. Accounting methods
 - D. Accounting basis
 - E. Accounting principles

2. In recording the values of a newly acquired non-current asset in the books of economic entity, which of the following should be considered?
 - A. Depreciated value
 - B. Estimated value
 - C. Verifiable objective value
 - D. Conservative value
 - E. Set-off value

3. Just-in-time enterprises received GMD15,000 from a customer (Teniola Amusan) and the amount was erroneously recorded on the credit side of the Cash Book with the double entry completed in the customer's account. The correcting journal entries are
 - A. Dr. Teniola Amusan Account GMD15,000
Cr. Cash Book GMD15,000
 - B. Dr. Cash Book GMD15,000
Cr. Teniola Amusan Account GMD15,000
 - C. Dr. Cash Book GMD30,000
Cr. Teniola Amusan Account GMD30,000
 - D. Dr. Teniola Amusan Account GMD30,000
Cr. Cash Book GMD30,000
 - E. Dr. Suspense Account GMD30,000
Cr. Teniola Amusan Account GMD30,000

Use the following to answer questions 4 - 6

Alex and Umaru are in partnership with the following relevant information for the year ended 31 December, 2021.

	Alex ₦	Umaru ₦
Fixed Capital	1,500,000	2,500,00
Current Account (Cr.)	400,000	600,000
Salary per annum	600,000	800,000
Interest on capital p.a	3%	3%
Drawings for the year	300,000	400,000
Interest on Drawings	4%	4%
Profit or loss sharing ratio	2:5	3:5

The net profit for the year ended 31 December, 2021 is ₦2,800,000

4. What is the distributable profit for the year ended 31 December, 2021?
- A. ₦2,800,000
 - B. ₦2,772,000
 - C. ₦2,762,000
 - D. ₦2,708,000
 - E. ₦2,680,000
5. What is the net income realised by Alex from the partnership?
- A. ₦1,624,800
 - B. ₦1,128,000
 - C. ₦1,120,000
 - D. ₦1,116,200
 - E. ₦1,083,200
6. The accounting entries to record Umaru's share of profit from the partnership for the year ended 31 December, 2021 are
- A. Dr. Appropriation Account ₦1,083,200
Cr. Capital Account ₦1,083,200
 - B. Dr. Capital Account ₦1,083,200
Cr. Appropriation Account ₦1,083,200
 - C. Dr. Appropriation Account ₦1,624,800
Cr. Capital Account ₦1,624,800
 - D. Dr. Capital Account ₦1,624,800
Cr. Appropriation Account ₦1,624,800
 - E. Dr. Appropriation Account ₦1,624,800
Cr. Current Account ₦1,624,800

7. The profit on hire purchase transaction is calculated, by the hire purchase vendor as
- Cash selling price less cost price
 - Hire purchase price less cost price
 - Hire purchase price less cash selling price
 - Cash selling price less higher purchase price
 - Cash selling price less deposits
8. Okoro, a non-governmental, not-for-profit organisation uses indirect method to prepare its statement of cash flows. In determining its net cash flow from operating activities Okoro must add back which of the following
- Purchase of equipment and proceeds from sales of equipment
 - Amortisation and profit on sale of equipment
 - Loss on sale of equipment and depreciation
 - Proceeds on sales of equipment and depreciation
 - Amortisation and purchase of equipment
9. Master Company Limited's closing inventory was over stated in the financial statements for the year ended 31 December, 2021. What will be the effect on the company's cost of sales for the year?
- Cost of sales will be over stated
 - Current year cost sales will be equal to previous year cost of sales
 - Cost of sales will be understated
 - Purchases will be greater than the cost of sales
 - Cost of sales will be greater than revenue
10. Accra Limited purchased land for GH¢450'000 as a factory site. An existing building on the site was razed before construction began. Additional information is as follows:

	GH¢'000
Cost of razing old building	60
The insurance and legal fee to purchase land	30
Architect fees	95
New building construction cost	1,850

What amount should Accra Limited capitalised as cost of the completed factory building?

- GH¢1,910,000
- GH¢1,945,000
- GH¢1,975,000
- GH¢2,005,000
- GH¢2,485,000

11. The following information relates to Adatan Nigeria Limited's Electricity bills

Period Covered	Amount	Date Paid
	Le'000	
16 April - 15 May	5,000	1 st June
16 May - 15 June	6,000	1 st July
16 June - 15 July	8,000	1 st August

Electricity bill accrue evenly over the month

What is the electricity bill outstanding for the company as at 30 June?

- A. Le6,000,000
 - B. Le7,000,000
 - C. Le10,000,000
 - D. Le14,000,000
 - E. Le19,000,000
12. How is a bank overdraft classified in the statement of financial position?
- A. Current liability
 - B. Non-current asset
 - C. Current asset
 - D. Non-current liability
 - E. Owner's equity
13. Which of the following items are non-current assets?
- I. Land
 - II. Machinery
 - III. Bank overdraft
 - IV. Inventory
- A. I
 - B. I and II
 - C. I, II and III
 - D. II, III and IV
 - E. I, III and IV

14. Which of the following is **NOT** true about the accounts of clubs and societies?
- A. A deficit on income and expenditure account reduces accumulated fund
 - B. Income and expenditure account does not contain capital receipts and expenditure
 - C. The excess of total assets over total liabilities represents accumulated fund
 - D. The closing balance of receipts and payments account is not transferred to income and expenditure account
 - E. The gains or losses on bar trading account is transferred to receipts and payments account
15. When no partnership agreement exists, which of the following will govern the partnership?
- A. Trade laws
 - B. Constitution
 - C. Memorandum and articles of association
 - D. Partnership Act
 - E. Deed of agreement
16. Which of the following would result from an increase in the provision for doubtful debts?
- A. A decrease in gross profit
 - B. An increase in gross profit
 - C. A decrease in net profit
 - D. An increase in net profit
 - E. An increase in receivable figures
17. Calculate the interim profit where the final costs on a contract are estimated at GH¢2,500,000, the contract price is GH¢3,500,000 and cash received to date is GH¢2,625, 000
- A. GH¢1,000,000
 - B. GH¢875,000
 - C. GH¢850,000
 - D. GH¢750,000
 - E. GH¢125,000

18. Under IAS 2, which of the following is **NOT** permitted as a cost of inventory?
- A. Cost of Purchase
 - B. Cost of shipping transport and non-recoverable taxes
 - C. Cost of storage
 - D. Cost of Conversion including fixed and variable manufacturing overhead.
 - E. Other costs incurred in bringing the inventory to present location and conditions
19. Under IAS 16, what is an impairment loss?
- A. The amount by which the market value of an asset exceeds the net present value
 - B. The amount by which the carrying amount of an asset exceeds the realisable amount
 - C. The difference between the fair value of an asset and the net realisable value
 - D. The amount by which the carrying amount of an asset exceeds the book value
 - E. The amount by which the market value exceeds the fair value
20. Which of the following is **NOT** true of the difference between salaries and drawings of a sole-trader?
- A. Salaries are charge against profit while drawing is a withdrawal of income
 - B. Salaries reduces the amount of net income while drawings only reduces equity
 - C. Salaries may be constant from month to month, Drawings are usually unregulated
 - D. Salaries are subject to pay as you earn tax while drawings are subject to personal income tax
 - E. Sometimes Drawings may be taken in kind - goods, while salaries are usually taken in cash
21. Which of the following product is **NOT** exempted from VAT?
- A. Agricultural Equipment
 - B. Basic food items
 - C. Pharmaceuticals and Medicals
 - D. Cements to repair government roads
 - E. Books or Educational materials

22. When shares are issued at a bonus, which of the following accounts may be affected?
- I. Ordinary share capital
 - II. Preference share capital
 - III. Share premium
 - IV. Cash account
- A. I and III
 - B. I, II and III
 - C. I and IV
 - D. I, II and IV
 - E. I, III and IV
23. Which of the following adjustment should be recognised retrospectively?
- A. Recognition on change from cost method to revaluation method in revaluation of property, plant and equipment
 - B. Change in the useful life of assets
 - C. Change in recognition of item from administration overhead to cost of sales
 - D. Change in the allowances for bad and doubtful receivables
 - E. Reduction in the net realisable value of inventory below cost
24. The following balances were extracted from the account of Jebu Limited at 31 March 2020 and 31 March 2019.

	31 March 2020	31 March 2019
	L\$	L\$
Cash in hand	1,000	1,100
Cash at bank	20,402	-
Bank overdraft	-	26,071

Calculate the net cash and cash equivalents for the period.

- A. L\$5,069
- B. L\$5,169
- C. L\$20,069
- D. L\$46,373
- E. L\$46,983

25. Which of the following does **NOT** affect acid-test ratio?
- A. Cash sales
 - B. Credit sales
 - C. Goods purchased on credit
 - D. Cash received from customers
 - E. Cash paid to suppliers
26. In the books of consignee, the sale of goods is credited to
- A. Consignor's account
 - B. Sales account
 - C. Consignee's account
 - D. Consignment account
 - E. Goods sent on consignment account
27. On 30 Sept. 2019, a fire destroyed some of the company inventory and its inventory records. Extracts from the company's records:

	GMD'000
Inventory on 1 Sept. 2019	159,000
Sales for Sept 2019	306,000
Purchases for Sept. 2019	206,000
Inventory in good condition @ 30 Sept. 2019	107,000

Standard gross profit on sales is 25%

What is the value of inventory lost?

- A. GMD13,200,000
 - B. GMD28,500,000
 - C. GMD48,000,000
 - D. GMD135,500,000
 - E. GMD137,000,000
28. Which of the following sets of items will appear on the same side of the Trial Balance of a company?
- A. Revenue, prepayments, share capital
 - B. Receivables, drawings, non-current assets
 - C. Sundry expense, interest received, commission paid
 - D. Share premium, office expenses, salaries & wages
 - E. Other income, interest paid, cash and bank

29. The opening inventory of a firm at the beginning of the financial year is Le300,000 and at the end of the financial year it is Le200,000 while the turnover and purchases are Le3,500,000 and Le2,500,000 respectively.

What is the gross profit or loss?

- A. Le900,000 loss
 - B. Le900,000 profit
 - C. Le500,000 profit
 - D. Le200,000 profit
 - E. Le100,000 loss
30. Which of the following disclosure is **NOT** required under IAS 1?
- A. A description of the entity's operation and its' principal activities
 - B. The level of rounding used in presenting the financial statements
 - C. Name of the reporting entity
 - D. Name of major shareholders of the entity
 - E. The measurement basis used in preparing financial statement

SECTION A: PART II

SHORT-ANSWER QUESTIONS

(20 MARKS)

ATTEMPT ALL QUESTIONS

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

1. An expenditure which would normally be treated as revenue expenditure but is not written off in one period is called
2. An error in Trial Balance where an account which should have been debited was credited while an account that should have been credited was debited with similar amounts is called
3. An accounting concept that says every transaction has two folds, for every credit, a corresponding debit is made is called
4. The accounting entries to record goods bought for sale on credit later returned are and
5. The principal who owns the goods and sends them to an agent for sale is called
6. The accounting ratio that shows the relationship existing between the shareholders' fund and long-term liabilities is called
7. With regards to a not-for-profit organisation, a debit balance on the subscription account is reported in Account
8. The fact that provisions are made against doubtful debts upholds the concept of

9. TWO standard headings in statement of cash flows according to IAS 7 is and
10. When a partnership is converted into a company, the purchase consideration could be in the form of and
11. TWO reasons why partners of a firm may decide to dissolve a partnership are and
12. The condition where a company increases its sales revenue without having adequate financial capacity to cope with rate of expansion is called.....
13. Which users of financial statement will be interested in the gearing ratio of a company?
14. The necessary accounting entries required to record the cash sale price of the goods on hire when Hire Purchase Interest suspense account method is used are and
15. The necessary accounting entries required to record profit on goods sent to branch when adjustment account method is used are
16. In partnership business, state the condition(s) that will warrant the preparation of Revaluation account and Realisation account respectively.
17. The formula for the computation of rate of return on sales or profit margin is
18. Loss on revaluation of property, plant and equipment is recognised in the statement of
19. Income received in advanced is shown as in the statement of financial position?
20. An account that an entity prepares, when it sends goods to another person to sell or return on its behalf is called

SECTION B: ATTEMPT ANY FOUR QUESTIONS (50 MARKS)

QUESTION 1

On 31 July, 2019, SuperV Limited appointed Jude as its sales agent in Akwa. On 15 August, 2019 SuperV sent 400 computer laptops to Jude to be sold on behalf of SuperV Limited. The cost of one computer laptop was Le60,000, but was invoiced to Jude at Le70,000. SuperV Limited incurred Le1,000,000 on freight and insurance. Jude received the consignment on 10 August 2019 and accepted a draft drawn on him by SuperV Limited for Le16,000,000. Jude paid Le52,500 as rent and Le12,500 as insurance.

By 31 March 2020, Jude had disposed 320 laptops at Le82,000 each. Jude is entitled to a commission of 5 percent on sales including a del credere commission of 1 percent.

You are required to:

Prepare the following ledger accounts in the books of SuperV Limited.

- a. Consignment to Jude's account (5¹/₂ Marks)
 - b. Goods on consignment account (1¹/₂ Marks)
 - c. Consignment inventory account (1¹/₂ Marks)
 - d. Bills receivables account (1¹/₂ Marks)
 - e. Jude's account (2¹/₂ Marks)
- (Total 12¹/₂ Marks)**

QUESTION 2

The main objective of International Accounting Standard (IAS) 2 is to prescribe the acceptable accounting treatment for inventories when an economic entity is presenting its Final Accounts.

- a. Define Net Realisable Value of Inventories according to IAS 2. (2¹/₂ Mark)
 - b. According to IAS 2, state **FIVE** items that must **NOT** be included in the measurement of inventory in the books of an economic entity. (5 Marks)
 - c. What are the Disclosure Requirements for inventories according to IAS 2? (5 Marks)
- (Total 12¹/₂ Marks)**

QUESTION 3

- a. Identify and explain **FOUR** key issues that should be covered in a partnership agreement when setting up a partnership. (4 Marks)
- b. Edo and Rivers are in partnership sharing profit and loss in the ratio of 2:1. They had originally invested ₦2,500,000 and ₦2,000,000 respectively. Their current account balance on 1 January 2019 were ₦700,000 credit for Edo and ₦495,000 debit for Rivers.

The partnership agreement specify the following:

- (i) The payment of interest on drawings and receipts of interest on capital at the rate of 5% p.a. and 3% p.a. respectively.
- (ii) The partners receive drawings in the same proportion as they share profit or losses. Edo receives drawings of ₦120,000 a month with Rivers taking the amount of drawings as allowed by the partnership rules.
- (iii) Rivers is entitled to take a salary of ₦100,000 a month.
- (iv) The interest on drawings is calculated as if the drawings for the six month period had been taken in full on the first day of the period.

On 1 July 2019 Edo decides to retire. Both partners agree to have the partnership valued and bring in the resultant goodwill into the partnership. Edo agrees to leave ₦1,500,000 of his capital as a loan to the business earning interest at the rate of 4% p.a and to withdraw the balance of what is due to him. An independent expert values the goodwill on 1 July, at ₦4,500,000.

On 1 July, 2019 'Rivers' decides to enter a new partnership with 'Ogun' where they share profit or losses in the ratio of 3:1. They decided to keep the same interest rates from the previous partnership agreement in relation to drawings and capital. Rivers salary was changed to ₦110,000 a month from this period to the year end. Rivers took drawings of ₦500,000 and Ogun took drawings of ₦250,000. Ogun introduced capital of ₦1,250,000 on his admission to the partnership. The goodwill was cancelled in the same proportion as they share profit or losses.

The profit for the year amounted to ₦5,400,000 and this profit accrued evenly throughout the year.

Required:

Prepare the profit or loss appropriation accounts for the year ended 31 December 2019 in columnar form.

(8½ Marks)

(Total 12½ Marks)

QUESTION 4

The following is a summary of the cash book of the Likeminds Club for the year ended December 31, 2019

RECEIPTS	GH¢	PAYMENTS	GH¢
Bank balance - 1/1/19	838,000	Bar wages	1,000,000
Annual subscription	2,820,000	Bar purchases	1,900,000
Entry fees	706,000	Rent	3,300,000
Gala night ticket sales	240,000	Secretary allowance	360,000
Bar sales	3,150,000	Cost of gala night	140,000
Donation by a Patron	2,000,000	Competition prizes	585,000
		Treasurer honorarium	600,000
		Club house repair	40,000
		New members night	100,000
		Purchase of furniture	600,000
		Bank balance 31 Dec	<u>1,129,000</u>
	<u>9,754,000</u>		<u>9,754,000</u>

Examination of the club's records disclosed the following:

- (i) The assets of the club at January 1, 2019 were furniture GH¢1,500,000 and bar inventory GH¢210,000.
- (ii) Membership subscriptions for the year ending December 31, 2019 in arrears was GH¢360,000.
- (iii) On December 31, 2019 the bar inventory was GH¢150,000 and GH¢40,000 as owing for bar purchases.
- (iv) The rent paid during the year was paid in December and was for 5 years beginning from January 1, 2020.
- (v) Depreciation on furniture is 10% per annum.

Required:

- a. Prepare an income and expenditure account for the year ended December 31, 2019; and (6¹/₂ Marks)
 - b. Statement of financial position as at December 31, 2019. (6 Marks)
- (Total 12¹/₂ Marks)**

QUESTION 5

- a. Distinguish between Accounting Concepts and Accounting Conventions (3½ Marks)
- b. State and explain FIVE accounting concepts (5 Marks)
- c. State and explain FOUR Accounting Conventions (4 Marks)
- (Total 12½ Marks)

QUESTION 6

The following Trial Balance relates to the operations of Kafo Limited for the year ended 31 December, 2019

	DR	CR
	L\$'000	L\$'000
Revenue		98,200
cost of sales	51,000	
Admin expenses	31,350	
Building at cost	120,500	
Equipment at cost	26,500	
Motor vehicle at cost	17,200	
Accumulated depreciation 1/1/2019		28,500
Accumulated depreciation 1/1/2019		5,600
Accumulated depreciation 1/1/2019		8,160
10% Preference shares		20,000
Ordinary shares of ₦1 each		70,000
10% loan notes		30,000
Inventory 31/12/2019	27,220	
Receivables	18,610	
Loan interest	1,500	
Bank	8,390	
Trade payables		11,370
Share premium		14,000
Dividend paid on ordinary shares	3,500	
Preference dividends paid	2,000	
Retained earnings 1/1/2019		<u>21,940</u>
	<u>307,770</u>	<u>307,770</u>

The following information is also relevant

- (i) Accrued loan interest is L\$1,500,000
- (ii) Preference shares is treated as debt instrument
- (iii) Estimate of income tax expense is L\$3,000,000

You are required to prepare for Kafo Limited:

- a. Statement of profit or loss for the year ended 31 December 2019 (4 Marks)
- b. Statement of changes in equity for the year ended 31 December 2019
(3 Marks)
- c. Statement of financial position as at 31 December 2019 (5¹/₂ Marks)

SOLUTIONS - MCQ

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

WORKINGS

4.	Net Profit		2,800,000
	Add: Int. on drawings:		
	A	12,000	
	U	16,000	
			<u>28,0000</u>
	Less: Int. on capital:		2,828,000
	A	45,000	
	U	75,000	<u>120,000</u>
	Adjusted profit		<u>2,708,000</u>
	Share of profit		
	A = $\frac{2}{5} \times 2,708,000$		1,083,200
	U = $\frac{3}{5} \times 2,708,000$		1,624,800
			<u>2,708,000</u>

5. $1,083,200 + 4,500 - 12,000 = \text{N}1,116,200$

11 $[6,000,000 + \frac{1}{2} (8,000,000)] = \text{N}10,000,000$

27 $[159,000 + 206,000 - 107,000 - (75\% \times 306,000)] = \text{N}28,500$

29	Turnover		3,500,000
	Opening inventory	300,000	
	Add: Purchases	2,500,000	
		2,800,000	
	Less: Closing inventory	<u>200,000</u>	<u>2,600,000</u>
	Gross Profit		<u>900,000</u>

Examiner's report

This question tests candidates' knowledge on all the areas of the syllabus. It is a compulsory question. Their performance was good. Candidates' major pitfall was their poor preparation for the examination.

PART II - SHORT ANSWER SOLUTION

1. Deferred Revenue Expenditure
2. Complete Reversal of Entries
3. Dual or double Aspect concept
4. Dr Trade Payables Account
Cr Return outward/Purchases Return Account
5. Consignor
6. Gearing ratio or debt/equity ratio
7. Statement of financial position
8. Prudence or conservatism
9. Operating activities, Investing activities, financing activities, cash and cash equivalents (Any two).
10. Component of purchase consideration
 - Cash and cash equivalent
 - Cash
 - Issues of shares to the partners
 - Issue of debentures
 - Liabilities taken over
11. Two reasons for dissolution of partnership
 - The death of partner
 - The bankruptcy of partner,
 - The lunacy of a partner.
 - Misunderstanding among the partners
 - A withdrawal of a major technical partner which handicapped the partnership financially
 - Withdrawal of technical partners
 - The business, which partnership is involved, declared illegal
 - The partnership is no longer doing well and cannot be revamped
12. Over-trading
13. Lenders and Creditor
14. Dr Hire Purchase Receivables Account or Hirer/ Cr Hire purchase sales account
15. Dr. Branch Inventory Account
Cr. Branch Adjustment Account

16. Revaluation Account can be prepared under any of the following situations in a going concern partnership.
- When assets has been fully depreciated but still remain productive
 - When there is a strong belief that the book value does not reflect its current economic value
 - When there is a change of interest
 - When partners(s) is/(are) admitted
 - When partners retire
 - When partnership businesses are amalgamated
- Realisation Account can be prepared under any of the following situations in a partnership business.
- When partnership businesses are amalgamated
 - When partnership business is dissolved
 - When partnership is converted to Limited Liability Company
 - When there is absorption of partnership
17. Profit/Revenue x 100
18. Statement of Profit or Loss
- 19 Current Liabilities
20. Consignment account

Examiner's report

The question tests candidates' knowledge on all the areas of the syllabus. All the candidates attempted the question and their performance was good Candidates' observed major pitfalls were their poor preparation for their examination.

SECTION B

SOLUTION 1

In the Book of the Consignor - SuperV Limited

a. <u>Consignment to Jude's Account</u>			
<u>Consignor:</u>	Le		Le
Goods on Consignment	28,000,000	Sales	26,240,000
Freight and Insurance	1,000,000	Closing Inventory	5,813,000
<u>Consignee:</u>			
Rent	52,500		
Insurance	12,500		
Commission on sales	1,312,000		
Del-credere Commission	262,400		
Gross Profit - SOPL	<u>1,413,600</u>		
	<u>32,053,000</u>		<u>32,053,000</u>

b. <u>Goods on Consignment Account</u>			
	Le		Le
Consignment Inventory	<u>28,000,000</u>	Consignment to Jude	<u>28,000,000</u>

<u>Consignment Inventory Account</u>			
	Le		Le
Trading Account	<u>5,813,000</u>	Goods on Consignment	<u>5,813,000</u>

d. <u>Bills Receivables Account</u>			
	Le		Le
Consignee - Jude's Account	<u>16,000,000</u>	Balance c/d	<u>16,000,000</u>
Balance b/d	16,000,000		

e. <u>Consignee - Jude's Account</u>			
	Le		Le
Sales - 320 laptops	26,240,000	Rent	52,500
		Insurance	12,500
		Commission on sales	1,312,000
		Del-credere Commission	262,400
		Commission	262,400
		Bills Receivables	16,000,000
		Bank	<u>8,600,600</u>
	<u>26,240,000</u>		<u>26,240,000</u>

Workings

i	Choosing inventory	
	Goods on consignment	28,000,000
	Freight and Insurance	1,000,000
	Rent	52,500
	Insurance	12,500
		29,065,000

$$= 29,065,000 \times 400 - 320$$

$$= 72,662.50 \times 80 = 5,813,000$$

ii Commission on sales

$$5\% \text{ of } 26,240,000$$

$$= 1,312,000$$

iii Del-credre commission

$$1\% \text{ of } 26,240,000$$

$$= \text{N}262,400$$

Examiner's report

The question tests candidates' knowledge on the preparation of various ledgers relating to consignment accounts.

About 95% of the candidates attempted the question and their performance was below average.

Major pitfalls of the candidates were their poor understanding of consignment accounts. Candidates should prepare well for future examination.

SOLUTION 2

- a. Net Realisable Value of inventories is the estimated selling price in the ordinary course of business, less the estimated cost of completion and estimated costs necessary to make the sale.

- b. In the measurement of inventories the following must not be included
 - (i) Abnormal waste
 - (ii) Storage cost
 - (iii) Administrative overheads unrelated to production
 - (iv) Selling cost
 - (v) Foreign exchange differences arising directly on the recent acquisition of inventories invoiced in foreign currency.
 - (vi) Interest cost when inventories are purchased with deferred settlement terms

- c. Disclosure Requirement for inventories according to IAS2
 - (i) Accounting policy for inventories
 - (ii) Carrying amount, generally classified as merchandise, supplies, materials, work-in-progress and finished goods. The classification depend on what is appropriate for the entity
 - (iii) Carrying amount of any inventories carried at fair value less cost to sell.
 - (iv) Amount of any write-down of inventories recognized as an expense in the accounting year.
 - (v) Amount of any reversal of a write-down to Net Realizable value and the circumstances that led to such reversal.
 - (vi) Carrying amount of inventories pledged as security for liabilities.
 - (vii) Cost of inventories recognized as expense (Cost of goods sold).

Examiner's report

The question tests candidates' knowledge on provisions of International Accounting Standards (IAS) 2 (Accounting for inventories).

About 70% of the candidates attempted the question and their performance was below average.

Candidates' major pitfalls were their poor understanding of IAS 2 (Accounting for inventories).

Candidates are advised to prepare well for future examinations.

SOLUTION 3

- a. The following are the key issues that should be covered in a partnership agreement when setting up a partnership:
 - i. Capital: The agreement would indicate whether each partner should contribute a fixed amount of capital or not and how much each partner should contribute.
 - ii. Profit Sharing: How profits and losses should be shared among the partners will be spelt out; whether they are capital or revenue profits or losses.
 - iii. Interest on capital and drawings: Whether interest on capital or drawings should be allowed or charged before arriving at divisible profits, and if so at what rate.
 - iv. Interest on loan by partners: The rate of interest payable on any loan advanced by any of the partners.
 - v. Whether current accounts are to bear interest, and if so at what rate;
 - vi. Whether partners' drawings are to be limited in amount so that the current account does not turn into debit balance or not;
 - vii. Whether partners are entitled to remuneration for their services before arriving at divisible profits and if so what amounts and which of the partners;
 - viii. How the books of account would be kept and where they should be kept.
 - ix. The method for the valuation of assets i.e. goodwill in case of an incoming or outgoing partner;
 - x. The method and procedures for settlement of disputes;

b.

Edo, Rivers and Ogun

Profit or Loss Appropriation Account for the year ended December 31, 2019

	Jan. - June (6months)		July - Dec. (6months)		Jan. - Dec. (12months)	
	N	N	N	N	N	N
Net Profit for the year		2,700,000		2,700,000		5,400,000
Less: Interest on loan		<u>-</u>		<u>(30,000)</u>		<u>(30,000)</u>
Adjusted Net Profit		2,700,000		2,670,000		5,370,000
Interest on Drawings:						
Edo		18,000		-		18,000
Rivers		9,000		12,500		21,500
Ogun		<u>-</u>		<u>6,250</u>		<u>6,250</u>
Profit avail. for appropriation		2,727,000		2,688,750		5,415,750
<u>Deduct:</u>						
Interest on Capital:						
Edo	37,500		-		37,500	
Rivers	30,000		30,000		60,000	
Ogun	-		18,750		18,750	
Partner's Salary - Rivers	<u>600,000</u>	<u>(667,500)</u>	<u>660,000</u>	<u>(708,750)</u>	<u>1,260,000</u>	<u>(1,376,250)</u>
Divisible Profit		2,059,500		1,980,000		4,039,500
Share of Profit:						
Edo	1,373,000		-		1,373,000	
Rivers	686,500		1,485,000		2,171,500	
Ogun	<u>-</u>		<u>495,000</u>		<u>495,000</u>	
		<u>(2,059,500)</u>		<u>(1,980,000)</u>		<u>(4,039,500)</u>
		<u>NIL</u>		<u>NIL</u>		<u>NIL</u>

Examiner's report

The question tests candidates' knowledge on the preparation of partnership appropriation accounts in columnar form.

About 40% of the candidates attempted the question and their performance was below average.

Candidates' major pitfall was their poor understanding of Partnership appropriation accounts in columnar form.

Candidates are advised to prepare well for the future examination.

SOLUTION 4

**LIKEMINDS CLUB
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER, 2019**

	₦		₦
Secretary allowance	360,000	Subscription	3,180,000
		(2,820 + 360)	
Cost of gala night	140,000	Entry fee	706,000
Competition prizes	585,000	Sales of ticket	240,000
Treasurer honorarium	600,000	Profit from bar	150,000
Club house repair	40,000	Donation	2,000,000
New members' night	100,000		
Depreciation on furniture	<u>210,000</u>		
	2,035,000		
Net surplus	<u>4,241,000</u>		
	<u>6,276,000</u>		<u>6,276,000</u>

17 ticks at ¼ mark = 41/4 Marks

**LIKEMINDS CLUB
STATEMENT OF FINANCIAL POSITION
AS AT 31 DECEMBER, 2019**

	₦	₦	₦
	Cost	Depreciation	NBV
Non-current asset			
Furniture	<u>2,100,000</u>	<u>210,000</u>	1,890,000
Current assets			
Bar inventory		150,000	
Subscription in arrears		360,000	
Bank		1,129,000	
Rent in advance		<u>3,300,000</u>	
		4,939,000	
Current liabilities			
Bar creditors		40,000	4,899,000
			<u>6,789,000</u>
Represented by			
Accumulated fund			2,548,000
Add: Net surplus			<u>4,241,000</u>
			<u>6,789,000</u>

17 ticks at ¼ Mark = 41/4 Marks

BAR TRADING ACCOUNT

	N	N		N
Opening inventory		210,000	Sales	3,150,000
Add: Purchases	1,900,000			
Add: Accrued purchases	<u>40,000</u>	<u>1,940,000</u>		
		2,150,000		
Less: Closing inventory		<u>150,000</u>		
		2,000,000		
Add: Bar wages		<u>1,000,000</u>		
		3,000,000		
Profit taken to income & expenditure		<u>150,000</u>		
		<u>3,150,000</u>		<u>3,150,000</u>

16 ticks at ¼ Mark = 4 Marks

Examiner's report

The question tests candidates' knowledge on the preparation of financial statements for not-for-profit organisations.

About 60% of the candidates attempted the question and their performance was above average.

Major pitfall of the candidates was poor preparation for the examination. Candidates are advised to prepare well before writing future examination.

SOLUTION 5

a. Difference between Accounting Concepts and Accounting Conventions

Accounting concepts are basic assumption, postulations or ideas adopted and used in accounting practice for the preparation of financial statements. They are said to be the broad basic assumptions used in preparing the periodic financial accounts of a business. It can be defined as those sets of rules and regulations guiding the way and manner in which financial transaction of an entity are to be recorded, analyzed and interpreted to the management and other users for the purpose of making an economic decision.

Accounting Conventions on the other hand are generally accepted approaches to the application of the concepts. They are those set of rules and regulations guiding the way and manner in which conflicts arising as a result of the application of two or more accounting concepts are to be resolved.

b. State and Explain Five Accounting Concepts

- i. Business Entity or Entity Concept
- ii. Dual Aspect concept
- iii. Matching concept
- iv. Accrual concept
- v. Money measurement concept
- vi. Realisation or Recognition concept
- vii. Historical cost concept
- viii. Going concern concept
- ix. Stable Monetary Concept
- x. Periodicity or Time Interval Concept
- xi. Cost concept

1. **MONEY MEASUREMENT:** This state that events that are recorded, in any business organization are those that can be expressed in monetary term in order words; in naira and kobo. Measuring items in terms of money is objective and does not rely on personal opinions. There are many aspects of a business which do not appear in the accounting records because they cannot be measured in terms of money. The value of a good manager, a loyal workforce and high staff morale are of great benefit to a business.
2. **STABLE MONETARY CONCEPTS:** In other for people to have Confidence in the way they record, there is an assumption that the value of money will be stable whenever events are being expressed in monetary terms.
3. **HISTORICAL CONCEPTS:** the amounts that are recorded in accounting are normally real amount. In other words, they are truthful and actual figure. They are amount that has already occurred and are recorded as certainty. All these are done in other for people to have confidence in the financial report.
4. **GOING CONCERN:** Accounting always assumes that the business will continue to operate for an indefinite period of time. The final account of a business are prepare on the basis that there is no intention to close down the business or to reduce the size of the business by any significant amount. Therefore, accounts are prepared on the basis that the business will continue to operate for an indefinite period of time e.g. the fixed assets of a business appear in the balance sheet at the book value.

5. **BUSINESS ENTITY:** For accounting purpose, the business is treated as completely separate from the owner of that business. There are distinct between the business and the owner. The business is regarded as an artificial person in other words, as a party or entity that can sue and can be sued. It can own property and be liable. The owner's personal assets, the owner's personal spending etc. do not appear in the accounting records of the business. The only time that the personal transaction appears in the accounting records of the business, when the business is also affected. This can occur when the owner introduces capital into the business and when he/she makes drawings from the business. In the books of the business, capital introduced will appear as a credit in the capital account showing the funds coming from the owner who thus becomes a "creditor" of the business. Drawings are debited to the owner's account in the books of the business showing the amount going to the owner and so reducing the indebtedness of the business to the owner.
6. **PERIODICITY OR TIME INTERVAL:** This concept is telling us that there must be a specified period of time when the business will want to find out whether or not its objective has been achieved. This period of time is common to all business. It is called financial year and is normally 12 months calendar year.
7. **ACCRUAL CONCEPT:** During the period when we want to determine whether the objective of the business have been achieved or not, the expense used is the expenses incurred and not expenses paid. That is income and expenses are recognized when earned and incurred and not when received and paid for.
 - $\text{Expenses incurred} = \text{expenses paid} + \text{expenses incurred but not yet paid} - \text{expenses paid but not yet due.}$
 - $\text{Income earned} = \text{income received} + \text{income due but not yet received} - \text{income received but not yet due.}$
8. **RECOGNITION OR REALISATION:** This concept is telling us about the point at which recognition is given to both income and expenses. It is important that a profit is only recorded when it has actually been earned. Profit is not regarded as being earned when the customer actually pays for the goods or services. In accounting, profit is regarded as being earned at the time the goods or services pass to the customer. Realization concept states that sales are recognised when the ownership of goods sold and legal liability to pay passes to the customer. Revenue relates to the output

of goods and services. In most cases revenue is recognised when goods are delivered or services rendered. In some cases revenue is recognised:

- i. During production
- ii. When production is completed or
- iii. When cash is collected.

9. **MATCHING CONCEPT:** It states that at the end of a define period the expenses are deducted from income of the same period in order to calculate the profit. The figure shown in the trading and profit and loss account should relate to the period of time covered by that account irrespective of the actual amount paid or received. It is therefore, necessary to adjust the items of income and expenses for amounts prepaid or accrued.
10. **DUALITY:** This is the rule guiding how our transactions are recorded. Tells us that every transaction must be recorded twice; the first entry is called the debit while the other is called credit entry. The term double entry is used to describe how the dual aspect of all transactions is recorded.
11. **COST CONCEPT:** This concept holds that all assets of the enterprise are recorded in the account at costs i.e. purchase price. In other words, at any moment in time the value recorded in books do not necessarily reflect the current value of the assets.

c. State and Explain Four Accounting Conventions

1. Materiality
2. Consistency
3. Fairness
4. Prudence or conservatism
5. Objectivity
6. Substance over form
7. Disclosure

1. **MATERIALITY:** This rule means that in the application of the accounting concept, the items that are accorded the specific rules are those that are significant. In most cases, significant has something to do with size of the transactions. What is significant in a business may not be treated as being significant in another business. The accountant must be practical and must consider the relative importance of data; the decision as to what is

material and what is unimportant require judgment rather than inflexible rules.

2. **CONSISTENCY:** In some areas of accounting, a choice of method is available e.g. depreciation. The accounting method which is likely to give the most realistic outcome should be selected. Once a certain method is chosen it should be applied consistently from year to year. Changing to a different method would lead to profits being distorted and would make comparison of the financial results of different years impossible e.g. a company cannot use a straight-line method of calculating depreciation in one year and suddenly change to the use of reducing balancing method in another year.
3. **FAIRNESS:** This is an extension of the objectivity principle this rules state that when we are keeping records, analyzing and interpreting it, we should realize that many parties will make use of the records. When such records are being interpreted accountant must ensure that none of the parties involved is favored. In other words, we should not be biased or manipulate the record to favor any party.
4. **PRUDENCY OR CONSERVATION:** The following phrase is often used to describe this concept “never anticipate a profit but provide for all possible losses”. The accountant should be cautious and always avoid overstating profit, overvaluing assets and understating liabilities. Profit should always be recognized when it is reasonably certain that they will be realized, and all known liability should be provided for. If it seems likely that a proportion of the debtors will not pay their accounts, this expected loss should be anticipated by making a provision for doubtful debts. The term “prudence prevails” is often used as this concept overrides (overrules) the other entity concept. In a situation where applying one of the other concepts would go against prudence, then the concept of prudence is applied in preference to the other concept e.g. under the realization concept, profit is regarded as being earned when the goods pass to the customer after the debt has been owing for some time, the prudence concept may override this and the debt may be written off.
5. **OBJECTIVITY:** This rule is telling us that we should be very objective during the course of recording and preparing financial statement and the interpretation of the statement there is need to be uniformity in the acceptance of opinion expressed and the content of the financial statement prepared. For statement to be universally acceptable, such statement must

be factual. It is the statement that is based on historical that can have above properties.

6. **SUBSTANCE OVER FORM OR REALITY OVER LEGALITY:** This principle holds that although business transaction are usually governed by legal principles, they are nevertheless accounted for and presented in accordance with their substance and financial reality and not merely with legal form. This principle emphasizes the need to present information based on reality, which in certain situation will deviate from the expectation of the owner of the business. It is ideal for us to place reality above legality. E.g. if an asset is purchased on hire purchase, it is recorded in the books, but legally the asset could be recovered if there is any default in payment of any installment.

Traditionally, there are two competing views of accounting.

- a) The legal view
- b) And the economic view.

According to the legal view, accounting should reflect the legal nature of transactions, whereas under the economic view, it should reflect their economic substance.

To show the opposition between these two approaches let us consider the case of financial leases, such as leases that give the lessee the right to acquire the lease asset by the end of the lease term.

- i. According to the legal view of accounting the leased asset should be recognized in the balance sheet of the lessor because as long as title has not been transferred, the lessor has the ownership of the asset.
- ii. According to the economic view of accounting, the relevant issue is not who has the ownership title but bears the risks and rewards incidental to the ownership of the asset. In a financial lease contract, these risk and rewards have been transferred to the lessee at the inception date. The leased asset should thus be recognised in the balance sheet of the lessee.

In a nutshell, the substance over form convention requires that transaction be accounted for and presented in accordance with their substance and economic reality and not merely their legal form. In order words, the economic view of accounting prevails over the legal view.

7. **DISCLOSURE:** This means that the financial statement should be prepared in such a way that it fairly discloses all material information to the users so as to help in taking rational decisions.

Examiner’s report

The question tests candidates’ knowledge on Accounting concepts and Accounting conventions.

About 60% of the candidates attempted the question and their performances was good.

Candidates’ major pitfall was their poor understanding of the tested area of the syllabus.

Candidates are advised to adequately cover the syllabus when preparing for the examination.

SOLUTION 6

Kafo Limited

Statement of Profit or Loss for the year ended December 31, 2019

	L\$'000	L\$'000
Revenue		98,200
Cost of Sales		<u>(51,000)</u>
Gross Profit		47,200
Administrative Expenses		<u>(31,350)</u>
Profit from operation		15,850
Finance Cost/Interest Expenses:		
Loan Interest (1,500 + 1,500)	3,000	
Preference dividends paid	<u>2,000</u>	<u>(5,000)</u>
Profit Before Taxation		10,850
Income Tax Expenses		<u>(3,000)</u>
Profit for the year		<u><u>7,850</u></u>

Kafo Limited

Statement of Changes in Equity for the year ended December 31, 2019

	Ordinary Share	Share Premium	Retained Earnings	Total
	N'000	N'000	N'000	N'000
Balance 1/1/2019	70,000	14,000	21,940	105,940
Dividend paid			-3,500	-3,500
Profit for the year			<u>7,850</u>	<u>7,850</u>
Balance 31/12/2019	<u>70,000</u>	<u>14,000</u>	<u>26,290</u>	<u>110,290</u>

Kafo Limited

Statement of Financial Position as at December 31, 2019

	Cost	Acc. Depr.	C. Amount
	L\$'000	L\$'000	L\$'000
<u>Non-Current Assets:</u>			
Building	120,500	(28,500)	92,000
Equipment	26,500	(5,600)	20,900
Motor Vehicle	<u>17,200</u>	<u>(8,160)</u>	<u>9,040</u>
	<u>164,200</u>	<u>(42,260)</u>	121,940
<u>Current Assets</u>			
Inventories		27,220	
Receivables		18,610	
Bank		<u>8,390</u>	
Total Current Assets			<u>54,220</u>
Total Assets			<u>176,160</u>
<u>Equity and Liabilities:</u>			
Ordinary Share Capital of N1 each			70,000
Share premium			14,000
Retained earnings			<u>26,290</u>
Total Equity			110,290
<u>Non-Current Liabilities:</u>			
10% Loan Notes	30,000		
10% Preference Shares	<u>20,000</u>		
Total Non-Current Liabilities		50,000	
<u>Current Liabilities:</u>			
Trade Payables	11,370		
Accrued Loan Note Interest	1,500		
Income Tax Payables	<u>3,000</u>		
Total Current Liabilities		<u>15,870</u>	
Total Liabilities			<u>65,870</u>
Total Equity and Liabilities			<u>176,160</u>

Examiner's report

The question tests candidates' knowledge on the preparation of simple financial reports of a company (Income statement, statement of changes in equity and statement of financial position).

About 80% of the candidates attempted the question and their performance was good.

Major pitfall of the candidates was their poor preparation for the examination. They are advised to prepare adequately for the Institute's examination.

THE ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA**ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
MARCH 2022 EXAMINATIONS (PART II)
PUBLIC SECTOR ACCOUNTING**

PLEASE READ THESE INSTRUCTIONS BEFORE COMMENCEMENT OF THE PAPER

EXAMINATION INSTRUCTIONS

1. All solutions should be in ink. Any solution in pencil will not be marked.
2. Read all instructions on each part of the paper carefully before answering the questions.
3. Ensure that you do not answer more than the number of questions required for **Section B (The Essay Section)**.
4. Check your pockets, purse, mathematical set, etc, to ensure that you do not have prohibited items such as telephone handset, electronic storage device, wrist watches, programmable devices or any form of written material on you in the examination hall. You will be stopped from continuing with the examination and liable to further disciplinary actions including cancellation of examination result if caught.
5. Do not enter the hall with anything written on your docket.
6. Insert your examination number in the space provided above.

WEDNESDAY, 30 MARCH, 2022

DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS – MARCH 2022**

PUBLIC SECTOR ACCOUNTING

Time Allowed: 3 hours

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

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

1. Which of the following is **NOT** an objective of Medium Term Expenditure Framework (MTEF)
 - A. To make public expenditure more efficient and effective
 - B. To increase greater political accountability for expenditure outcomes through good decision making
 - C. To improve inter and intra sectoral resource allocation by effective prioritising all expenditures
 - D. To improve macroeconomic balance, fiscal discipline through good estimates of available resources
 - E. To ensure accounting officers have enough to spend by using increment methods

2. Which of the following **CANNOT** arise where there is loss of funds
 - A. Misappropriation of funds and fraud
 - B. Falsification of records
 - C. Theft
 - D. Reduction in value of exchange currency
 - E. False claim

3. Which of the following is **NOT** emphasised in the Fiscal Responsibility Act 2007?
 - A. Preparation of Medium Term Expenditure Framework
 - B. Collection of public revenue
 - C. Public expenditure
 - D. Transparency and accountability
 - E. Loss of stores

4. Which of the following budgeting methods is currently being adopted by Extra-Ministerial Departments (MDAs)
 - A. Zero base budgeting system
 - B. Incremental budgeting system
 - C. Rolling plan budgeting system
 - D. Programme performance budgeting system
 - E. Cash basis budgeting system

5. Which of the following is **NOT** a concept of Financial Control in the Public Sector?
- Budgeting for public revenue and expenditure over a period of time
 - Recording the revenue collected and the expenditure incurred
 - Comparing actual results with set targets
 - Establishing Systems for flow of information and control
 - Posting Finance officers to Federal pay offices
6. Which of the following constitutional provision does **NOT** insulate the Auditor General from being compromised?
- The Auditor General shall not be subject to the direction or control of any other authority or person
 - The Auditor General shall not be removed from office before his retiring age
 - The Auditor General's remuneration shall be drawn on the consolidated revenue fund
 - The Auditor General's salaries, remuneration and other conditions of service other than allowances shall not be altered to his detriment
 - The Auditor General shall be responsible for the preparation of the financial statements
7. The Accountant-General of the Federation prepares and present Financial Statements to the relevant and appropriate authorities. Which of the following is **NOT** included in the content of the report
- Statement 1: Statement of Cashflow
 - Statement 2: Statement of Assets and Liabilities
 - Statement 3: Statement of Consolidated Revenue Fund
 - Statement 4: Statement of Development Fund
 - Statement 5: Statement of Public Debt and Personnel Cost
8. Which of the following conditions is **NOT** necessary for capturing an employee on the IPPIS platform?
- New Appointment
 - Statutory Appointment
 - Acting Appointment
 - Retirement from Service
 - Political Appointment

9. Which of the following uses Monetary and Fiscal Policies as a means of control over Public Expenditure of the government?
- A. Ministry of Finance
 - B. The Treasury
 - C. The Legislature
 - D. The Executive
 - E. Ministries and Extra-Ministerial Departments
10. In line with Annual Estimate, Distributable Pool Accounts is made up of the following Revenues:
- A. Heads 1, 2, and 3
 - B. Heads 2, 3, and 4
 - C. Heads 3, 6, and 7
 - D. Heads 1, 3, and 6
 - E. Heads 6, 7, and 8
11. Which of the following is NOT an Accounting Officer?
- A. Director- General
 - B. Auditor-General
 - C. Comptroller-General
 - D. Inspector-General
 - E. Post-Master-General
12. A document indicating the total and composition of government expenditure and the sources from which such expenditure is expected to be financed in the course of the year is known as
- A. Development plan
 - B. Perspective plan
 - C. Budget
 - D. Revenue allocation
 - E. Rolling plan
13. Every spending transaction passes through the following five stages:
- I. Management decision to spend money
 - II. Issuance of order for goods and services
 - III. Receipt of goods and services and acknowledge of liability
 - IV. Payment for goods and services received
 - V. Consumption of value

The Accrual basis of accounting recognises and recorded financial transaction at stage

- A. I
- B. IV
- C. II
- D. III
- E. V

14. The Officer who is constitutionally empowered to make periodic check on Parastatals is the
- A. Accountant-General of the Federation
 - B. Senate President
 - C. Chief Justice of the Federation
 - D. Auditor-General for the Federation
 - E. Attorney-General of the Federation
15. Which of the following officers is required to report on the strength of the internal control system?
- A. The Inspector of Internal Control System
 - B. The Vote Controller
 - C. The Internal Control System Office
 - D. The Accountant-General
 - E. The Auditor-General
16. The Body set up to establish pricing standards and benchmarks in Nigeria is the
- A. Bureau of Public Procurement
 - B. Bureau-de-Change
 - C. Bureau of Public Enterprises
 - D. Bureau of Public Investigation
 - E. Public Sector Enterprises
17. The Commission responsible for compelling any person or government institution to disclose information relating to public revenue and expenditure is
- A. Economic and Financial Crimes Commission
 - B. Fiscal Responsibility Commission
 - C. Audit Committee
 - D. Public Complaints Commission
 - E. Security Service Commission

18. The Act that provides for prudent management of the nation's resources, ensures long-term macro-economic stability of the national economy, secures greater accountability and transparency in fiscal operations within a medium-term fiscal policy framework is known as
- A. The Public Procurement Act 2007
 - B. The Nigeria Sovereign Investment Authority Act 2011
 - C. The Fiscal Responsibility Act 2007
 - D. Appropriation Act
 - E. The Commitment Act
19. Which of the following is **NOT** a benefit of Treasury Single Account (TSA)?
- A. Provides complete and timely information on government cash resources
 - B. Increases the ability to access information on financial and operational performance
 - C. Improves operational control on budget execution
 - D. Facilitates efficient payment mechanisms
 - E. Reduces bank fees and transaction costs
20. Which of the following is **NOT** the function of a Storekeeper?
- A. Proper arrangement of the store
 - B. Proper cleanliness of the Store
 - C. Preparation of store receipt voucher
 - D. Preparation of store ledger
 - E. Preparation of store issue voucher
21. Which of the following is **NOT** expected to receive the report of Board of Enquiry?
- A. Permanent Secretary
 - B. Accountant – General of the Federation
 - C. Auditor – General for the Federation
 - D. Attorney – General of the Federation
 - E. Secretary, Federal Public Service Commission
22. A method available to the government to control aggregate demand and reduce inflationary pressures is
- A. Expenditure Budget
 - B. Balanced Budget
 - C. Budget Surplus
 - D. Budget Deficit
 - E. Overhead Budget

23. Public Companies and Corporations are set up to
- I. Beat down high prices charged by commercial business
 - II. Raise the standard of living of the people
 - III. Ensure the survival of some industries
- A. I
 - B. II
 - C. III
 - D. I and II
 - E. I, II and III
24. Which of the following is **NOT** a source of supply to Government stores?
- A. Local purchase
 - B. Transfer from other stores
 - C. Returned stores
 - D. Prisoners material
 - E. Conversion and manufacture.
25. Under Section 125(5) of the Constitution, the Auditor-General at the State level has to report on Accountant General's financial statements and annual accounts to the House of Assembly within
- A. Thirty days of receipt of the financial statements
 - B. Sixty days of receipt of the financial statements
 - C. Ninety days from first January of the financial year
 - D. Ninety days that ends on 31st December of the financial year
 - E. Ninety days of receipts of the statement
26. Which of the following classifications is **NOT** relevant in accounting for Employee Benefits?
- A. Short-Term Benefits
 - B. Termination Benefits
 - C. Long-Term Benefits
 - D. Award of Contract
 - E. Post-Employment Benefits
27. IPSAS 12 on inventories applies to all inventories relating to the following, **EXCEPT**
- A. Assets held for sale in the ordinary course of business
 - B. Inventories accumulated under long term construction contracts
 - C. Assets in the process of production for sale or distribution
 - D. Assets held for sale or distribution in the ordinary course of operations
 - E. Assets to be consumed in the production of goods or services for sale

28. Which of the following statements is **NOT** correct about the subsequent measurement of intangible assets?
- A. An intangible asset with a finite useful life is amortised
 - B. Where a revaluation model is used in accounting for intangible assets, all other assets in the same class use the same model
 - C. An entity can decide to use the cost model
 - D. Amortisation commences when the asset is ready for use
 - E. Amortisation ceases on the date the asset is held for sale though derecognised at earlier date
29. Which of the following is **NOT** a type of fraud in government establishment?
- A. Round tripping
 - B. Misappropriation of assets such as cash and goods
 - C. Gratification for work done
 - D. Insider dealings
 - E. Advance fee fraud
30. The Report of the Board of Survey on cash and stamps are usually embodied in
- A. Treasury form 147
 - B. Store form 147
 - C. Store verification form 42
 - D. Treasury form 42
 - E. Store verification Receipt 147

SECTION A: PART II SHORT-ANSWER QUESTIONS

ATTEMPT ALL QUESTIONS

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

1. The warrant allows an officer to spend more than the budgeted amount
2. The control concept that has to do with various measures that National Assembly/Parliament can use for purpose of controlling use of public fund is called
3. The technique for ensuring that there is strict compliance with openness, competitiveness, cost accuracy, rules and procedures in the award of contract is called.....
4. Audit of economy, efficiency and effectiveness is also called

5. The public fund set aside to mitigate the unforeseen circumstances such as Ebola Disease, COVID '19, Fire Control etc. is known as
6. In line with the Public Financial Management Reforms the monthly transcript rendered or submitted by the Ministries, Extra-Ministerial Department and Agencies (MDA's) to the Accountant-General of the Federation is now known as
7. The legal framework that provides for the "Prudent Public Financial Management" of the resources, in order to ensures accountability and transparency in handling the nation's resources is
8. The is an officer who is "accountable" for the receipts and payments of government financial activities in the Ministry, Extra-Ministerial Department and Agencies (MDA)
9. The appointment of the Auditor-General is subject to by the National Assembly
10. The Committee that is set up in accordance with Section 162(6) of the Constitution to administer the Federation Account at the State Level is called
11. Amount of money set aside to meet daily and routine cash payments, the vouchers of which cannot be presented to a Sub-Accounting Officer immediately is called
12. The authority that confers power on the officer controlling expenditure or a vote to incur expenditure is called
13. The materials purchased for general stock for which the final vote if charged cannot be stated at the time of purchase is called
14. A period of service after an officer has served for a period not less than the period for which he is qualified for pension or gratuity is called
15. The sector of the economy that is concerned with the transactions of Government is referred to as
16. Any officer found guilty of contravention of any of the provisions of the Code of Conduct Tribunal shall appeal to
17. In the newly adopted Financial Statements (IPSAS 1), Balance sheet is now replaced with
18. The method of effecting payments from one year end to another, through the medium of the computer without manual intervention beyond inputting the payment date is called

19. The legislative organ that performs a post mortem function on the report submitted by the Auditor-General is
20. Financial Reports prepared with intention to meet the information needs of users who are unable to require the preparation of financial reports tailored to meet their specific information needs is called

SECTION B: ATTEMPT FOUR QUESTIONS

QUESTION 1

The Fourth Schedule of the 1999 Constitution states the functions of key officers of the Local Government

- a. State **FIVE** functions of a Local Government Treasurer
- b. State the responsibilities of the following standing committees of the National Assembly
 - i. Public Account Committee
 - ii. Public Finance Committee
 - iii. Appropriation Committee
 - iv. Other Functional Committee
 - v. Concept of Appropriation

QUESTION 2

As the newly appointed Treasurer for Kaura-Namoda Local Government, the Local Government Chairman and the Councillors have approved the implementation of the Local Government Integrated Payroll and Personal Information System (IPPIS) template into the Council 2021 Annual Estimate.

You are required:

- a. State the financial procedures or steps involve in the implementation of the IPPIS
- b. State the functions of Payroll or IPPIS Unit in the Local Government
- c. State the shortfall or challenges of the IPPIS

QUESTION 3

- a. Enumerate **FIVE** functions of Director of Budget.
- b. State **TEN** among the 31 Corporations, Agencies and Government-owned Companies in Nigeria listed in the schedule to the Fiscal Responsibility Act
- c. Money Laundering Prohibition Act 2011 listed a number of actions that constitute money laundering offences. List these actions.

QUESTION 4

The following information are extracted from the records of TIMSEL University for the year ended 31st December, 2018

(i) Income:	₦	₦
School Fees: Post Graduate Students		6,516,340
Others: Undergraduate students	9,917,302	
Diploma students	<u>2,153,866</u>	12,071,168
Examination fees:		
Undergraduate students	40,226,382	
Diploma students	<u>12,154,558</u>	52,380,940
Investment Income		2,000,000
Government Subventions		2,629,206
Sundry Income		1,588,848
(ii) The Charges:		
Establishment costs	1,738,068	
Staff Costs	5,660,194	
Administrative Expenses	10,152,628	
Academic affiliation costs	2,311,912	
Subvention to Agencies	50,000	
Examination expenses	45,040,776	
Education & Training expenses	4,092,312	
Professional Charges	800,000	
Contribution to research fund	1,157,828	
General expenses	2,000,000	
Publications	842,172	
(iii) The examination expenses of ₦ 45,040,776 comprised of the following		
Undergraduate students	34,390,516	
Diploma students	10,650,260	

- (iv) Provision for outstanding school fees of ₦2,478,720 written off against income from post graduate students of ₦6,516,340.
- (v) A transfer of ₦648,800 was made from Revenue Account to the Building Fund which generated the sum of ₦567,200 as interest.

You are required to:

- a. Determine the Surplus/Deficit from conducting Undergraduate and Diploma Programmes by the University.
- b. Extract the Revenue Account for the year ended 31 December, 2018.

QUESTION 5

Tenders Board is made up of public officers constituted to administer or award contracts in respect of all Government awards.

You are required to:

- a. State **THREE** types of Tenders Board
- b. The composition of any **TWO** Tenders Board
- c. Briefly explain the term "Contingencies Clause"
- d. State the information on payment vouchers in respect of a contract awarded through Tender

QUESTION 6

A cash flow statement shows the various sources of income and expenditure in analytical form comprising inflows and outflows from operating activities, investing activities and financing activities.

You are required to:

- a. List **FIVE** examples of outflows from operating activities
- b. List **FIVE** examples of inflows from investing activities
- c. State the standard that describes the cash flow statement under IPSAS Accrual Basis and how it should be treated as summarised by the Standard.

SECTION A

PART 1

MULTIPLE-CHOICE SOLUTION

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

EXAMINER'S COMMENT

This consists of 30 multiple-choice compulsory questions which covers the entire syllabus. Being a compulsory question, almost all the candidates attempted the questions.

Performance was above average, the commonest pit-fall was the inadequate preparation for the examination.

Candidates are enjoined to familiarize themselves with previous diets' past questions as provided in the insight as well as the Study Text.

PART II SHORT-ANSWER SOLUTION

1. Supplementary Statutory General Warrant.
2. Legislative control
3. Due Process
4. Value for money
5. Contingency Funds
6. Cash/Main Transcript
7. Fiscal Responsibility Act
8. Accounting Officer or Permanent Secretary or Director-General or Comptroller-General or Inspector-General or Post-Master- General or Any equivalent
9. Ratification
10. Federation Accounts Allocation Committee (FAAC)
11. Imprest
12. Warrant
13. Unallocated Stores
14. Qualifying Service/Qualifying years
15. Public Sector
16. Court of Appeal
17. Statement of financial Position
18. E-payment
19. Public Accounts Committee (PAC)
20. General Purpose Financial Reports (GPFRs)

EXAMINER'S COMMENT

This consists of 20 compulsory short-answer questions that cover the entire syllabus.

Majority of the candidates attempted it. Performance was good.

Common pit-fall observed was the inability of some candidates to understand the requirements of the examiner.

Candidates are advised to be conversant with the entire areas of the syllabus. They are enjoined to read the Study Text very well against future diets examination.

SECTION B

SOLUTION1

A. Functions of Local Government Treasurer.

- i. He is responsible for all the receipt and disbursement of funds.
- ii. He is responsible for keeping accurate and timely Accounting records of funds received and disbursed.
- iii. He should ensure that all records kept by his subordinate officers are checked routinely for accuracy.
- iv. He is to intimate the Local Government of any economic policy that will increase the Internally Generated Revenue (IGR) of the council.
- v. He should exploit all opportunities available for the collection of all forms of revenue as specified in the budget estimate.
- vi. He is to ensure that all laid down procedures as regard the disbursement of funds are followed.
- vii. He should assist in the preparation of annual and supplementary budgets.
- viii. He is to make recommendation to the council in his capacity as the Financial Adviser.
- ix. He is to be actively involved in the appraisal of all capital projects before they are executed.
- x. He is responsible for ensuring that the liquidity position of the council is favourable at all times.
- xi. He should ensure that payment vouchers are validly prepared and presented for Payment.
- xii. He should maintain all records of accounts in a form suitable for decision making by the council.

B. (i). Public Account Committee.

The committee receives the audited Public Account and other special audit reports, examines and debates the contents and submit its report in the form of its finding and recommendation to the whole house (National Assembly) which takes action on the Public accounts on the basis of recommendation of the Committee.

ii.) Public Finance Committee.

This is a sub-committee of the National Assembly responsible for the receipts of the Appropriation Bill which is made up of the annual revenue, expenditure estimates and other proposal of Government for the consideration of the National Assembly.

iii.) Appropriation Committee.

The Committee is responsible for the passing of the Appropriation Bill into Appropriation Act in order to give authorization to the estimates after the examination made by various Sub committees. The Appropriation Committee is the whole House of the National Assembly when it sits to pass the Appropriation Act.

iv.) Other Functional Committee.

This Committee of the National Assembly is responsible for the examination of individual estimates of the organizations. They also monitor the expenditure of relevant organizations.

Their role is a major mechanism and also known as oversight functions.

v.) Concept of Appropriation.

This refers to the procedure through which National revenue is made available annually to the Executive arm of Government or government organisations to finance their programmes or activities.

EXAMINER'S COMMENT

The question tests candidates' knowledge and understanding of the 1999 constitution as regards the functions of key officers of the Local Government and 1(b) on the responsibility of standing committee of the National Assembly.

Many candidates attempted the question. Performance in 1(a) was good, however 1(b) was poorly performed, as many candidates could not differentiate the responsibilities of the committee.

Common pit-fall observed was the inability of many candidates in differentiating the committees responsibilities candidates are advised to be much exposed to contemporary issues in the syllabus and make use of past questions as provided in the insight.

SOLUTION 2

- a. The financial procedures or steps involve in the implementation of the Integrated Payroll and Personal Information System (IPPIS) include:
1. Biometric Data Enrolment or Capturing
Data capture equipment with finger print scanners for biometric enrolment and camera for employee photographs
 2. Staff or Personal Profile Update and Verification Exercise
Obtain the updated “Staff Nominal Roll” for the captured staff, and process its personnel records.
 3. Stored in the Centralized Personnel Data base of IPPIS.
The Local Government whose staff records and biometric data have been captured, verified and stored in the centralized personnel data base of IPPIS
 4. Paid Directly into the Bank Accounts
Salaries are now paid directly into the bank accounts of public servants whose records exist in the IPPIS database.
 5. Payment of Third (3rd) Parties:
The relevant and appropriate deduction from employees’ payroll which include, Statutory (PAYE, PENCOM, NHF, NHIS) and Non-Statutory (Union Due, Cooperative and Loan) deductions to the appropriate government agencies at source through on-line transfer
- b. Functions of Payroll or IPPIS Unit in the Local Government
The functions of Payroll or IPPIS Unit in the Local Government include:
1. Preparation of employee’s payroll, corpers allowances and so forth
 2. Preparation of biometric data for capturing of newly employed staff
 3. Implementing all the variation advice raised by the Personnel or Administrative or Human Resource Department on employees’ promotion, upgrading or advancement and so on
 4. Implementing the withhold or ceased payroll of all employees on retirement, resignation, death, and so forth.

5. Controlling of Group Register for Junior and Senior Staff on Soft and Hard Copies
6. Issue of IPPIS pay slip to staff
7. Implementing all Treasury Circulars or Guidelines on personnel cost
8. To maintain all treasury records, books of accounts and e-mandate (or schedules) on Personnel Cost
9. To perform any other functions or duties as may be directed by Director of Finance and Accounts

c. Shortfall of the IPPIS

The shortfall of the IPPIS are:

1. Lack of Audit Trail
2. Lack of Segregation of Duties: because all financial and accounting activities or control is mainly carried out by the Accountant –General of the Federation
3. Weak Password or PIN: which is being shared among various user within an organization .
4. Control of Users: the entire IPPIS staff are being managed and controlled by the consultants who have access to all the MDA’s financial information
5. Validation of Data: the gross or total pay should be from the grade level and steps, the completeness, accuracy and validity of the transaction is not known due to unavailability of the salary payment chart
6. Lack of effective and efficient internet facility
7. Rigid deadline submission for Payroll Variation Control or Advice
8. Poor management control

EXAMINER’S COMMENT

The question tests candidates’ knowledge and understanding of Integrated Payroll and Personnel Information System (IPPIS).

Candidates are expected to state the procedures for implementation of IPPIS, as well as its functions and challenges in the Local Government.

Many of the candidates attempted the question and the general performance was average.

Common pit-fall was gross misinterpretation of the requirements of the question by many of the candidates.

Candidates are advised to comply with the requirement of the questions as provided in the insight and also, take the advantage of the Study Text.

SOLUTION 3

3a Functions of the Director of Budget

- i. Monitoring of revenue generation and collection by the agencies of government.
- ii. Revenue estimation and publication in the budget book.
- iii. Comparing of actual revenue received from oil and non-oil sectors with the estimated figure.
- iv. Estimating revenue from Joint Venture operations in relation to oil explorations, production and personnel administration.
- v. Implementing the budget through the issuance of Authority to Incur expenditure papers or Warrants, for both capital and recurrent expenditure.
- vi. Assembling, collating and arranging all data, information and other necessary inputs required for budget preparation.
- vii. Rendering reports on the performance of the yearly budget and assessing its impact on the economy.
- viii. Collection and analysis of expenditure returns.
- ix. Establishing and maintaining a data bank in the budget office.
- x. Monitoring and evaluating the performance of programmes funded through the budget.
- xi. He is the liaison officer between the President, Ministries and Departments during budget preparation
- xii. Formulating fiscal, monetary and economic policies required to develop the economy.

3b. List of Corporations, Agencies and Government-Owned Companies

The schedule to the Fiscal Responsibility Act contains the following 31 names of corporations, Agencies and government owned companies in Nigeria.

1. Nigerian National Petroleum Corporation.
2. Nigeria Deposit Insurance Corporation.
3. Bureau of Public Enterprises.
4. National Agency for Science and Engineering Infrastructure.
5. Nigerian Social Insurance Trust Fund.
6. Corporate Affairs Commission.

7. National Clearing and Forwarding Agency.
8. Nigeria Unity Line.
9. Nigerian Airspace Management Agency.
10. Nigerian Shippers Council
11. National Maritime Authority.
12. Raw Material Research and Development Council.
13. Nigerian Civil Aviation Authority.
14. National Sugar Development Council.
15. Nigerian Postal Service.
16. Nigerian Ports Authority.
17. Federal Airport Authority of Nigeria.
18. Nigeria Mining Corporation.
19. Nigeria Re-insurance.
20. Niger dock Nigeria Plc.
21. Securities and Exchange Commission.
22. National Insurance Corporation of Nigeria.
23. Nigeria Re-insurance Corporation.
24. Nigerian Telecommunication.
25. National Automotive Council.
26. Nigerian Tourism Development Corporation.
27. National Communication Commission.
28. National Agency for Food & Drug Administration & Control.
29. Nigerian Customs Service.
30. Federal Inland Revenue Service.
31. Central Bank of Nigeria.

3c. Money Laundering offences

Money Laundering Prohibition Act 2011 listed a number of actions that constitute money laundering offences. Money laundering offence is committed by a person who:-

1. Converts or transfers resources or property derived directly or indirectly from illicit traffic in narcotic drugs or psychotropic substances, with the aim of either concealing or disguising the illicit origin of the resources or property, or aiding any person involved in the illicit traffic of narcotic drugs or psychotropic substances to evade the legal consequences of his action; or
2. Collaborates in concealing or disguising the genuine nature, origin, location, disposition, movement or ownership of the resources, property or rights thereto derived directly or indirectly from illicit traffic in narcotic drugs or psychotropic substances, is guilty of an

offence under this section and liable on conviction to imprisonment for a term of not less than fifteen years or more than 25 years.

3. Director or employee of a financial institution who warns or in any other way intimates the owner of the funds involved in the transaction referred to in section 10 of this Act about the report he is required to make or the action taken on it or who refrains from making the report as required under that section; or
4. Destroys or removes a register or record required to be kept under this Act; or
5. Carries out or attempts under a false identity to carry out, any of the transactions specified in section 1 to 5 of this Act; or
6. Makes or accepts cash payments greater than the amount authorized under this Act; or
7. Fails to report an international transfer of funds or securities required to be reported under this Act;

EXAMINER'S COMMENT

The question tests candidate's knowledge and understanding of financial responsibilities of finance officers of Government as well as on Fiscal Responsibility Act and Money Laundering offences. Many of the candidates attempted the question and performance was average common pit-fall was that candidates did not have proper understanding of the requirements of the question.

SOLUTION 4

a) **TIMSEL UNIVERSITY**
STATEMENT OF SURPLUS /DEFICIT FOR THE YEAR 31 DECEMBER 2018

	Undergraduate ¼	Diploma ¼	Total ¼
	₦	₦	₦
Examination Fees	40,226,382 ¼	12,154,558 ¼	52,380,940 ¼
School Fees	<u>9,917,302 ¼</u>	<u>2,153,866 ¼</u>	<u>12,071,168 ¼</u>
	50,143,684 ¼	14,308,424 ¼	64,452,108 ¼
Less: Examination Expenses (Note (iii))	<u>34,390,516 ¼</u>	<u>10,650,260 ¼</u>	<u>45,040,776 ¼</u>
Surplus	15,753,168¼	3,658,164 ¼	19,411,332 ¼
	=====	=====	=====

b) **TIMSEL UNIVERSITY**
Extraction of Revenue Account for the Year Ended 31 December, 2018

	₦	Total ₦
Income:		
School Fees: Postgraduate		6,516,340
Less: Outstanding to be written off (Note iv)		<u>(2,478,720)</u>
		4,037,620
Other Students		12,071,168
Examination Fees		52,380,940
Investment Income		2,000,000
Government Subvention		2,629,206
Sundry Income		1,588,848
Interest-building Fund		<u>567,200</u>
Total Revenue		75,274,982
Less Charges		
Establishment Costs	1,738,068	
Staffs Costs	5,660,194	
Administrative expenses	10,152,628	
Academic affiliation Costs	2,311,912	
Subvention to Agencies	50,000	
Examination expenses	45,040,776	
Education & Training expenses	4,092,312	
Professional Charges	800,000	
Contribution to Research fund	1,157,828	
General Expenses	2,000,000	
Publication	<u>842,172</u>	
		<u>(73,845,890)</u>
Less: Transfer to Building Fund (Note v)		1,429,092
Surplus for the year c/f		<u>(648,800)</u>
		780,292

EXAMINER'S COMMENT

The question tests candidates' knowledge and understanding of the preparation of statement of Surplus/Deficit and the Revenue Accounts of a tertiary institution.

Many candidatures' attempted the question and the performance was average. Those who failed to earn pass marks affected postings unto the Revenue Account on the reverse sides.

SOLUTION 5

5a.

1. Departmental Tender Board:

This is a Tender Board that award contracts within a department. The board has the power to award any contract of N250,000 but not up to N500,000.

The Federal Ministry of Finance circular No.15775 of 27/06/01 abrogated the Departmental Tenders Board and replaced it with another which states that contract of works, services and purchases of up to N100,000 may be approved by the Permanent Secretary/Chief Executive of the ministry without an open tender.

2. Ministerial Tender Board.

It is the Tender Board vested with the power to award contracts of between N500, 000-N5, 000,000.

3. Council of Ministers/ Federal Executive Council.

The Board can award any contract from N5, 000,000 and above.

b. (i) Composition of each Tender Board;

Departmental Tender Board is made up of 7 members;

- i. Director (other than the Department's Director as Chairman).
- ii. One Deputy Director.
- iii. One Assistant Director.
- iv. Chief Accountant of the Department.
- v. Three (3) other members.

ii. Ministerial Tenders Board Composition.

- All Directors of the Ministry with Permanent Secretary (Chairman).

iii. Council of Ministers (Federal Executive Council)

- All Ministers with the President as Chairman.

- c.) "Contingencies Clause".
This States that if the Contractor has taken reasonable care in executing the work and an unexpected situation develops, the contractee should bail out the contractor by making money available or review upward the contract sum otherwise the contractor will bear the cost.
- d.)
- i. Amount to be paid based on the Contract Valuation Certificate and the certificate number.
 - ii. Name or Title of the project.
 - iii. Contract Number.
 - iv. Authority for payment
 - v. Name of the contractor
 - vi. Vote of Charge
 - vii. Contract amount

EXAMINER'S COMMENT

The question tests candidates' knowledge and understanding of Tender Board as well as some clauses therein, and information on payment vouchers for contract awarded through Tender.

Only few candidates attempt it and performance was on the average.

Their commonest pit-fall was their lack of grasp of the provisions of the act.

Candidates are advised to take seriously to every aspect of the syllabus by working hard for future examinations. They are also enjoined to make use of the Study Text and past questions as provided in the insight.

SOLUTION 6

a. Outflows from operating Activities

1. Salaries and Wages
2. Social Benefits
3. Overhead Cost
4. Grants and Contributions
6. Transfer to other Government Entities
7. Finance Cost
8. Cash payment to suppliers for good and services
9. Cash payment for claims, annuities and other policy benefits
10. Cash payments of local property taxes or income taxes in relation to operating activities

11. Cash payments from discontinued operations
12. Cash payments in relations to litigation settlements.

b. Inflows from Investing Activities

1. Proceeds from sales of PPE
2. Proceeds from sales of investment property
3. Proceeds from sale of intangible Assets
4. Proceeds from sale of investment
5. Dividends Received
6. Cash receipts from sales of equity or debt instruments of other entities and interest in joint ventures (other than advances and loans made by a public financial institution)
7. Cash receipts from future contracts, forward contracts, option contracts and swap contracts except when the contracts are held for dealing or trading purposes.
8. Cash receipts from repayment of advances and loans to other parties apart from public financial institution.

c.

- i. Cash flow statement is described under IPSAS 2
- ii. Summary of the Standard;
 - a. Requires the presentation of information about historical changes in a public sector entity's cash and cash equivalent using cash flow statement.
 - b. The Standard describes how to classify cash flows during the period to: operating, investing and financing activities.

EXAMINER'S COMMENT

The question tests candidates' knowledge and understanding of compositions of the activities of Cash Flow statement as well as the relevant IPSAS and summary of the standard.

Many of the candidates attempted the question. The performance was above average common pit-fall was the inability of many candidates in inflow and outflow from the operating and investing activities.

Candidates are advised to be acquainted with the 32 International Public Sector Accounting Standards (IPSAS) that are currently issued because of the emerging global relevance of them.

Candidates should be more exposed by reading the Study Text.

THE ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA**ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
MARCH 2022 EXAMINATIONS (PART II)****QUANTITATIVE ANALYSIS****PLEASE READ THESE INSTRUCTIONS BEFORE COMMENCEMENT OF THE PAPER****EXAMINATION INSTRUCTIONS**

1. All solutions should be in ink. Any solution in pencil will not be marked.
2. Read all instructions on each part of the paper carefully before answering the questions.
3. Ensure that you do not answer more than the number of questions required for **Section B (The Essay Section)**.
4. Check your pockets, purse, mathematical set, etc to ensure that you do not have prohibited items such as telephone handset, electronic storage device, wrist watches, programmable devices or any form of written material with you in the hall. You will be stopped from continuing with the examination and liable to further disciplinary actions including cancellation of examination result if caught.
5. Do not enter the hall with anything written on your docket.
6. Insert your examination number in the space provided above.

WEDNESDAY, 30 MARCH, 2022**DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO**

**ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA
ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
PART II EXAMINATIONS – MARCH 2022**

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 number of people infected by a deadly virus in a locality comprises 5 divisions: A, B, C, D & E are presented in a pie chart. If 150 infected people are from division B with an angular representation of 60° on the pie chart, then the population of infected people in the locality is
 - A. 600
 - B. 750
 - C. 900
 - D. 1,050
 - E. 1,200

2. Which of the following is normally used to draw a frequency polygon?
 - A. Ogive
 - B. Histogram
 - C. Bar graph
 - D. Lorenz curve
 - E. Z- chart

3. Which of the following sampling techniques allows fair representation of various categories without biases?
 - A. Systematic Sampling
 - B. Quota Sampling
 - C. Stratified Sampling
 - D. Cluster Sampling
 - E. Simple Random Sampling

4. The authority of a particular local government area distributes cash relief packages to some aged individuals residing in 5 wards of the council during a lockdown. The following pieces of information were gathered from the council's accountant and presented in the table below:

Ward	A	B	C	D	E
Number of aged individuals	30	20	25	20	35
Amount given per person(₦'000)	10	12	11	12	7

What is the mean amount spent by the authority on one aged person?

- A. ₦8, 666.67
B. ₦ 10,000
C. ₦ 11,000
D. ₦ 12,000
E. ₦ 25,000
5. Given that the variance of a set of scores is 81 and the coefficient of variation is 2.25%, find the mean
- A. 1
B. 2
C. 3
D. 4
E. 5
6. The numbers of chartered accountants among the graduates of accounting programme from 6 different universities in a particular year are given as follows: 15, 12, 10, 11, 13, and 17. What is the mean deviation of this data?
- A. 0
B. 1
C. 2
D. 3
E. 4
7. Which of the following is **NOT** a basic step in formulating a linear programming problem?
- A. Identify the objective function
B. Identify the slack variables
C. Identify the constraints
D. Identify the decision variables
E. Identify the linearity of the objective function and constraints

8. The following pieces of information are obtained from 5 pairs of data set (x, y) :
 $\sum x = 50$, $\sum y = 100$, $\sum x^2 = 502$, $\sum y^2 = 1854$ and $\sum xy = 1001$. If the fitted simple linear regression equation is $y = a + bx$, then the estimated value of a is
- 0
 - 0.5
 - 15
 - 20
 - 25
9. Which of the following is **NOT** true of Least Squares Method in Time series analysis?
- It can be used for forecasting
 - It is free from subjective error
 - Extreme values are not lost
 - Effect of cyclical fluctuations is completely removed if it is equal to the average period of cycles
 - It is good for linear trend
10. If the price of milk in 2009 was ₦250 and the price in 2015 was ₦350, using 2009 as the base year, the price relative index is
- 100%
 - 110%
 - 120%
 - 130%
 - 140 %
11. Which of the following statements best describes mutually exclusive outcomes of events A and B ?
- A and B are dependent events
 - A and B are independent events
 - The occurrence of event A excludes the possibility of event B from happening
 - Events A and B happen at the same time
 - Occurrence of an event A has a significant effect on event B
12. Which of the following does **NOT** necessitate the use of Z-test in statistical hypothesis testing?
- n is equal to or greater than 30.
 - sampling distribution is normally distributed
 - $n < 30$
 - sampling distribution is approximately normal
 - standard deviation of the population is known or unknown

13. Find the range of values of x which satisfy the inequality $\frac{2x+1}{x+3} < \frac{2}{3}$.
- A. $x < \frac{3}{5}$
- B. $x > \frac{3}{5}$
- C. $x < -\frac{3}{4}$
- D. $x < \frac{3}{4}$
- E. $x > \frac{3}{4}$
14. If $x - 2y = 4$ and $x + 2y = 6$, then $3x$ is
- A. 5
- B. 10
- C. 15
- D. 20
- E. 30
15. Suppose the total monthly revenue (Le'00,000) of FAFAWA Limited. for a commodity is described by the function $R(x) = 125,000,000(0.2)^x$, where x (in Le'0,000) is the total amount spent on overheads. If the total revenue of the company for the month of April is Le200,000, then the amount spent on overheads is
- A. Le 10,000
- B. Le 12,500
- C. Le 20,000
- D. Le 40,000
- E. Le 62,500
16. Which of the following does **NOT** depict break-even point of a firm?
- A. Total revenue is equal to total cost
- B. Difference between revenue and cost is zero
- C. Profit function is equal zero
- D. Sales level is equal to profit level
- E. $q = \frac{\text{Fixed Cost}}{\text{Selling price} - \text{average variable cost}}$

17. Find the simple interest on ₦450 for 9 months at 3.5% per annum
- A. ₦9.81
 - B. ₦ 11.81
 - C. ₦ 13.81
 - D. ₦ 14.81
 - E. ₦ 15.81
18. The present worth of an investment is L\$500,000. If it is estimated to grow at the rate of 20% per annum, then its worth in the 6th year is
- A. L\$600,000
 - B. L\$1,100,000
 - C. L\$1,500,000
 - D. L\$1,244,160
 - E. L\$1,492,992
19. The following are the main stages involved in Operations Research, **EXCEPT**
- A. Identification of problems and objectives
 - B. Construction of a model
 - C. Identification of variables
 - D. Documentation of result
 - E. Implementation of result
20. The feasible region houses the
- A. Initial Solution
 - B. Slack Solution
 - C. Feasible Solution
 - D. Linear Solution
 - E. Problem Solution
21. Find the minimum value of Z in the following linear programming problem:
 Minimise: $Z = 40a + 50b$
- Subject to* $3a + 5b \geq 70$
 $a + b \geq 20$
 $a, b \geq 0$
- A. 1500
 - B. 950
 - C. 850
 - D. 800
 - E. 700

22. How many corner points are there in a graphical solution of an unbounded feasible region of a minimisation linear programming problem with three linear constraints?
- A. 6
 - B. 5
 - C. 4
 - D. 3
 - E. 2
23. The annual demand for a commodity is 128,245 units and the cost of an order is Le34. If the annual holding cost per commodity is Le6.00, the average stock for the commodity (to the nearest whole number) is
- A. 108
 - B. 275
 - C. 317
 - D. 603
 - E. 620
24. In a typical inventory control problem, $Q = 3,000$, $d = 150,000$, $c = \text{Le } 400$ and $h = \text{Le } 60$ (where all the symbols bear their usual meanings). What is the total annual cost?
- A. Le 80,000
 - B. Le 90,000
 - C. Le 100,000
 - D. Le 110,000
 - E. Le 120,000
25. Which of the following is **NOT** a reason for holding stock?
- A. It enables production processes to flow smoothly and efficiently
 - B. It acts as a buffer for variations in demand new usage
 - C. It ensures that the store is filled up at all times
 - D. It absorbs variations in production and demand
 - E. It takes advantage of bulk purchasing discount
26. The maximum time that any non-critical activity may overrun without impacting on the critical path is called
- A. Float
 - B. Free Float
 - C. Critical
 - D. Slack
 - E. Duration

27. The table below shows the Earliest Finish Times (EFT), Latest Finish Times (LFT), Earliest Start Times (EST), Latest Start Times (LST) and durations of a project:

Activity	EFT	LFT	EST	LST	Duration
P	3	3	0	0	3
Q	8	8	3	3	5
R	8	8	3	3	2
S	14	15	8	8	6
T	16	16	8	8	8
U	16	16	14	15	1
V	22	22	14	15	5
W	22	22	16	16	6

Identify the critical path of the project

- A. P, Q, R, T, U, V, W
 B. P, Q, T, W
 C. P, Q, R, S, T, W
 D. Q, R, S, T, W
 E. Q, T, W
28. A component used in an electronic circuit camera has different failure rates because the component life time is limited. The cumulative percentages of failures and months after replacement are given in the table below:

Months after replacement	1	2	3	4
Cumulative percentage of failures	20	55	85	100

What is the monthly average life of the component?

- A. 1.20
 B. 2.40
 C. 4.00
 D. 5.40
 E. 7.85
29. Calculate the present value of an annuity of Le60,000 for 12 years at 8.5% compounded annually
- A. Le400,872.35
 B. Le420,682.35
 C. Le430,682.35
 D. Le440,682.35
 E. Le450,682.35

30. Which of the following is **NOT** a method of obtaining solution of a transportation problem?
- A. Least Cost Method
 - B. Vogel's Approximation Method
 - C. NWCM
 - D. Simplex Method
 - E. Stepping Stone Method

SECTION A: PART II

SHORT-ANSWER QUESTION

(20 MARKS)

ATTEMPT ALL QUESTIONS

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

1. The type of correlation that exists between two variables when an increase in one variable is associated with a decrease in the other variable is called
2. The deposits (₦ '000) of a certain group of customers in a microfinance bank on a particular day are 13, 19, 16, 15, 14, 26 and 16. The average of the mean and the median deposits is
3. The probability of rejecting the null hypothesis when it is true is
4. The coefficient of skewness is for a symmetrical or normal distribution while it is for an Asymmetrical distribution.
5. In a competitive market, the supply price is $P_1 = 3 + \frac{1}{4}q$ and demand price is $P_2 = 15 - \frac{3}{4}q$. Determine the market price at equilibrium.
6. An arrangement whereby a fixed amount of money is paid in exchange for regular amounts to be received at fixed interval for a specific period is called
7. An activity which does not link into the completion overall activities of the project is called.....
8. To solve a Linear Programming problem, using simplex method, the two variables that are used to convert an INEQUALITY constraint to an EQUALITY constraint are and
9. A solution in which there are at most m zero values in a linear programming problem that has n variables and m constraints ($m < n$). is known as the

10. An inventory model in which all factors are known with certainty is called
11. The type of data involving the record of the number of passengers on a train is called
12. The total monthly revenue of Layink enterprise (in Naira) is given by the equation $R = 300,000(0.5)^{0.7x}$, where x (#000) is the amount spent on overheads. What is the maximum revenue?
13. The variables involved in any Operations Research technique can be grouped into and
14. The process of eliminating the trend from the observed series is called
15. The aim of the marginal function is to measure the extra amount of resources it takes to produce
16. If every item is replaced during a single stoppage whether it has failed or not, then the process is called.....
17. In transportation problem analysis, the condition that arises when the number of filled (occupied) cells is less than the number of rows (**m**) plus the number of columns (**n**) minus one, is known as
18. The probabilities of candidate **A** and candidate **B** passing an interview are respectively 0.6 and 0.75. The probability that only one will pass the interview is
19. If two coins and a die are tossed together, then the number of elements in the sample space is
20. The simulation method developed on the basis of the principle of experiments, which makes use of sampling and probability distribution theories, is called

SECTION B: ATTEMPT ANY FOUR QUESTIONS IN THIS SECTION (50 MARKS)

QUESTION 1

The following table shows the cost per bag and number of bags of five types of food stuff supplied by a food vendor to a private school with boarding facility for two consecutive months in year 2019:

Food stuff	June		July	
	Price (per bag) (₦'00)	Quantity (No of bags)	Price (per bag) (₦'00)	Quantity (No of bags)
Rice	120	10	125	12
Beans	155	5	160	6
Garri	80	10	85	11
Flour	110	6	105	7
Yam flour	135	9	130	10

By using June as the base month, calculate the

- a. Simple Aggregate Price Index (2¹/₂ Marks)
 - b. Simple Aggregate Quantity Index (2¹/₂ Marks)
 - c. Marshall Edgeworth's Index (7 ¹/₂ Marks)
- (Total 12¹/₂ Marks)**

QUESTION 2

- a. The following data represent scores of 50 students in a Statistics test:

73 73 94 71 60 79 75 66 74 81
 58 68 73 58 84 77 75 57 69 68
 75 77 80 73 62 73 74 77 68 49
 72 54 68 66 100 84 70 62 73 69
 66 52 76 69 76 67 78 62 65 75

- i. Prepare the frequency distribution table with the first class having a lower class of 40 and a class width of 10 (4 Marks)
- ii. Draw the histogram for this data set and use it to estimate the mode (4¹/₂ Marks)

- b. The following table shows the monthly profits of 100 randomly selected small scale enterprises in some West African cities in thousands of Leone:

Profit (inLe'000)	Number of Enterprises
150 - 169	8
170 - 189	19
190 - 209	34
210 - 229	24
230 - 249	10
250 - 269	5

Construct the ogive for the data

(4 Marks)
(Total 12¹/₂ Marks)

QUESTION 3

The estimated average cost function of a manufacturing company for a commodity is

$$AC = q^2 - 15q - \frac{810,000}{q}$$

and the demand function for the commodity is

$$P = \frac{4}{3}q^2 - 30q - 5,400$$

, where q denotes the quantity produced and sold.

Calculate:

- The marginal revenue, the marginal cost and hence, the production level that maximises the company's profit (6¹/₂ Marks)
 - The maximum profit (3 Marks)
 - The price elasticity of demand at the production level that maximises profit and comment on your result in (c) (3 Marks)
- (Total 12¹/₂ Marks)

QUESTION 4

A manufacturing company has the annual demand of 120,000 units, the handling and phoning costs each time the order is made amount to ₦100 with the unit price of ₦150 together with the storage cost including (insurance premium) of 20 ½ % of unit price.

Determine the

- Optimum units to keep per time (7¹/₂ Marks)
 - Total cost of ordering (5 Marks)
- (Total 12¹/₂ Marks)

QUESTION 5

The palliative loan, due to the Covid-19 pandemic, is being given to small scale traders by GJG bank in Lagos and Abuja. The level of the loan and the number of traders in each branch are summarised in the table below:

Loan Amount (N'000)	No of traders	
	Lagos	Abuja
14 less than 18	11	19
18 less than 22	37	30
22 less than 26	69	25
26 less than 30	77	41
30 less than 34	56	35

You are required to:

- a. Compute the mean and standard deviation of the loan given to the traders in Lagos and Abuja. (10 Marks)
- b. Estimate the coefficients of variation for the two cities. (2 Marks)
- c. Comment on the relative dispersion between the distributions based on your answers in (b). (¹/₂ Mark)
(Total 12¹/₂ Marks)

QUESTION 6

- a. A pharmaceutical company has decided to make a chart to know the minimum amount of fats, carbohydrates, and proteins which a man needs on a daily basis to fulfil his requirement for medical awareness. The choice is to be made from four different types of foods: P, Q, R and S. The yields per unit for different types of foods are given as follows:

Type of food	Yield per unit			Cost per unit (Le)
	Fats	Carbohydrates	Proteins	
P	2	13	12	147
Q	5	5	6	130
R	8	7	12	162
S	16	13	7	130
Minimum requirement	2600	430	1800	

You are required to formulate the given problem as a standard Linear Programming Problem. (6 Marks)

- b. A manufacturer produces three types of plastic fixtures 1, 2 and 3. In order to obtain a maximum profit (Z), he decided to formulate the problem as a linear programming problem as follows:

$$\begin{aligned} \text{Maximise :} & \quad Z = 11x_1 + 16x_2 + 12x_3 \\ \text{Subject to:} & \quad x_1 + 5x_2 + 2x_3 \leq 8,000 \\ & \quad 8x_1 + 2x_2 + 3x_3 \leq 3,800 \\ & \quad 4x_1 + 6x_2 + 7x_3 \leq 4,200 \\ & \quad x_1, x_2, x_3 \geq 0 \end{aligned}$$

You are required to:

- i. Set up the initial simplex tableau for the problem. (5 Marks)
- ii. Identify the entering variable, leaving variable and the pivot
(1¹/₂ Marks)
(Total 12¹/₂ Marks)

FORMULAE

$$\text{Sample variance, } s^2 = \frac{\sum (x - \bar{x})^2}{n-1}$$

Economic Order Quantity

$$Q = \sqrt{\frac{2cd}{n}}$$

$$Z_{\text{cal}} = \frac{\bar{x} - \mu}{\frac{\sigma}{\sqrt{n}}}$$

Slope of a regression equation

$$b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

$$\text{Elasticity of demand, } e = \left(-\frac{p}{q}\right) \left(\frac{dq}{dp}\right)$$

The 95% confidence interval for μ

$$= \bar{x} \pm t_{\alpha, n-1} \frac{s}{\sqrt{n}}$$

The trend equation, $y = a + bt$, where $t = x_i - x_m$

$$b = \frac{\sum ty}{\sum t^2} \cdot a = \bar{y} - bx_m, \quad x_m = \text{median of } x \text{ values}$$

$$\text{SARPI} = \frac{\sum \left(\frac{P_n}{P_o} \times 100 \right)}{N}$$

$$\text{SAPI} = \frac{\sum P_{ni}}{\sum P_{oi}} \times 100$$

$$t = \frac{p}{\sqrt{\frac{pq}{n}}}$$

EOQ with stock-out

$$Q = \sqrt{\frac{2cd}{h}} \times \sqrt{\frac{h+c_s}{c_s}}$$

$$LPI = \frac{\sum p_1 q_o}{\sum p_o q_o} \times 100$$

$$Z = \frac{p - \hat{p}}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$$

$$Q_i = L_{Q_i} + \left(\frac{\frac{iN}{4} - \sum f_{Q_i}}{f_{Q_i}} \right) c$$

$$D_i = L_{D_i} + \left(\frac{\frac{iN}{10} - \sum f_{D_i}}{f_{D_i}} \right) c$$

$$P_i = L_{P_i} + \left(\frac{\frac{iN}{100} - \sum f_{P_i}}{f_{P_i}} \right) c$$

Spearman's rank correlation coefficient

$$r = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

EOQ with gradual replenishment

$$Q = \sqrt{\frac{2cd}{h \left(1 - \frac{d}{r} \right)}}$$

$$\text{Length of Inventory cycle} = \frac{Q}{d}$$

$$\text{Number of production runs} = \frac{d}{Q}$$

Production cost = *Ordering cost* + *Holdering cost*

$$\text{Mode} = L_{mo} + \left(\frac{\Delta_1}{\Delta_1 + \Delta_2} \right) c$$

MULTIPLE- CHOICE (MCQ) SOLUTION

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

WORKINGS (MCQ)

1. Let x be the population of infected people

$$\frac{60^\circ}{360^\circ} \times x = 150$$

$$x = \frac{150 \times 360^\circ}{60^\circ}$$

$$x = 900 \quad \text{(C)}$$

4. $mean = \frac{\sum fx}{\sum f}$

$$mean = \frac{(30 \times 10) + (20 \times 12) + (25 \times 11) + (20 \times 12) + (35 \times 7)}{30 + 20 + 25 + 20 + 35}$$

$$mean = \frac{(30 \times 10) + 240 + 275 + 240 + 245}{130}$$

$$mean = \frac{1300}{130} = 10$$

The mean amount is ₦ 10,000 (B)

5. $Correlation\ of\ variation = \frac{Standard\ deviation}{mean}$

$$= \frac{\sqrt{variance}}{mean}$$

$$2.25 = \frac{\sqrt{81}}{mean}$$

$$2.25 = \frac{9}{mean}$$

$$mean = \frac{9}{2.25} = 4 \quad \text{(A)}$$

6. $\bar{x} = \frac{\sum x}{n} = \frac{15 + 12 + 10 + 11 + 13 + 17}{6} = \frac{78}{6} = 13$

$$Mean\ deviation, MD = \frac{\sum |x - \bar{x}|}{n}$$

$$MD = \frac{|15 - 13| + |12 - 13| + |10 - 13| + |11 - 13| + |13 - 13| + |17 - 13|}{6}$$

$$MD = \frac{2 + 1 + 3 + 2 + 0 + 4}{6} = \frac{12}{6} = 2 \quad \text{(C)}$$

$$8. \quad a = \frac{\sum y}{n} - b \frac{\sum x}{n}$$

$$\text{where } b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

$$b = \frac{5(1001) - (50)(100)}{5(502) - (50)^2} = \frac{5005 - 5000}{2510 - 2500} = \frac{5}{10} = 0.5$$

$$\Rightarrow a = \frac{100}{5} - 0.5 \left(\frac{50}{5} \right) = 20 - 5 = 15 \quad (C)$$

10.

$$P_o = \text{baseyear}$$

$$\text{Price relative index} = \frac{P_n}{P_o} \times 100 = \frac{350}{250} \times 100 = 140 \% \quad (E)$$

13.

$$\begin{aligned} \frac{2x+1}{x+3} &< \frac{2}{3} \\ &= 3(2x+1) < 2(x+3) \end{aligned}$$

$$6x+3 < 2x+6$$

$$4x < 3$$

$$\therefore x < \frac{3}{4} \quad (D)$$

14.

$$x - 2y = 4$$

$$x + 2y = 6$$

$$2x = 10$$

$$x = 5$$

$$\text{Hence, } 3x = 3 \times 5 = 15 \quad (C)$$

15. $125,000,000(0.2)^x = 200,000$

$$(0.2)^x = \frac{200,000}{125,000,000}$$

$$(0.2)^x = 0.0016$$

$$(0.2)^x = (0.2)^4$$

$$\Rightarrow x = 4$$

The total amount spent on overhead is ~~₦~~ 4,000 (D)

16. $TC = TR$ (for break even)

$$TC = FC + VC$$

$$FC + VC = TR$$

$$FC = TR - VC$$

$$FC = q \cdot SP - q \cdot AVC$$

$$FC = q (SP - AVC)$$

Therefore $q = \frac{FC}{SP - AVC}$ depicts Break-even point.

Hence, option D is the correct option.

17. $9 \text{ months} = \frac{9}{12} \text{ yr} = 0.75 \text{ yr}$

$$SI = \frac{PRT}{100} = \frac{450 \times 0.75 \times 3.5}{100} = N11.81 \quad (B)$$

18. This is a geometric progression i.e GP, where

$$a = 500,000$$

$$r = 1+20\% = 1+0.2 = 1.2$$

$$n = 6$$

$$T_n = ar^{n-1}$$

$$T_6 = 500,000(1.2)^{6-1}$$

$$T_6 = 500,000(1.2)^5 = \text{N}1,244,160 \quad (D)$$

21. By solving the simultaneous equations

$$3a + 5b = 70 \dots \dots \dots (i)$$

$$a + b = 20 \dots \dots \dots (ii)$$

multiply eqn(ii) by 3 gives

$$3a + 3b = 60 \dots \dots \dots (iii)$$

subtract eqn(iii) from eqn(i)

$$2b = 10$$

$$b = 5$$

substitute for b in eqn (ii)

$$a + 5 = 20$$

$$a = 15$$

$$Z = 40a + 50b$$

$$40(15) + 50(5)$$

$$600 + 250 = 850 \quad (C)$$

23. Average stock = $\frac{Q}{2}$

where $Q = \sqrt{\frac{2C_o D}{C_h}}$

$$Q = \sqrt{\frac{2 \times 34 \times 128,245}{6}}$$

$$Q = \sqrt{\frac{8,720,660}{6}}$$

$$Q = \sqrt{1,453,443.33}$$

$$Q = 1,205.588$$

$$\text{Average stock} = \frac{1,205.588}{2} = 602.79$$

$$\text{Average stock} \approx 603 \quad (D)$$

24. Total annual cost = $\frac{cd}{Q} + \frac{Qh}{2}$

$$\text{Total annual cost} = \frac{400 \times 15,000}{3,000} + \frac{3,000 \times 60}{2}$$

$$\text{Total annual cost} = 20,000 + 90,000$$

$$\text{Total annual cost} = \text{Le}110,000 \quad (D)$$

27. Total float = LFT - EST - Duration

Activity	EFT	LFT	EST	LST	Duration	Total float
P	3	3	0	0	3	0
Q	8	8	3	3	5	0
R	8	8	3	3	2	3
S	14	15	8	8	6	1
T	16	16	8	8	8	0
U	16	16	14	15	1	1
V	22	22	14	15	5	3
W	22	22	16	16	6	0

The critical activities are activities with total float of zero, which are P, Q, T, W (C)

28.

Month after replacement	Cumulative Percentage of Failure	Percentage of Failure
1	20%	20% = 0.20
2	55%	35% = 0.35
3	85%	30% = 0.30
4	100%	15% = 0.15

$$\text{Monthly average life} = (1 \times 0.20) + (2 \times 0.35) + (3 \times 0.30) + (4 \times 0.15)$$

$$\text{Monthly average life} = 0.20 + 0.70 + 0.90 + 0.60$$

$$\text{Monthly average life} = 2.40 \quad (\text{B})$$

29.
$$P = \frac{A [1 - (1+r)^{-n}]}{r}$$

$$P = \frac{60,0000 [1 - (1+0.085)^{-12}]}{0.085}$$

$$P = \frac{60,0000 [1 - (1.085)^{-12}]}{0.085}$$

$$P = \text{N} 440,682.35 \quad (\text{D})$$

EXAMINER'S COMMENT

MCQ

All the 30 questions set cover syllabus reasonably well. Majority of the candidates performed fairly well in this part of the paper.

SHORT- ANSWER QUESTION (SAQ) (SOLUTION)

1. Negative correlation
2. ₦ 16,500
3. Significance level
4. Zero, positive/negative (in that order)
5. 6
6. Annuity
7. Dandler
8. Slack, Surplus (either way) Variables
9. Basic Solution
10. Deterministic model
11. Discrete
12. ₦300,000
13. Controllable, uncontrollable (either way)
14. Detrending
15. One more unit/ extra one unit/ Additional unit/ a unit more
16. Group replacement/ Mass replacement
17. Degeneracy
18. 0.45 Accept 0.5
19. 24
20. Monte Carlo Simulation method

WORKINGS (SAQ)

$$2. \quad \text{mean} = \frac{13+19+16+15+14+26+16}{7} = \frac{119}{7}$$

$$\text{mean} = 17$$

Arranging the data in ascending order

13, 14, 15, 16, 16, 19, 26

$$\text{median position} = \left(\frac{n+1}{2}\right)\text{th} = \frac{7+1}{2}\text{th} = 4\text{th}$$

$$\text{median} = 16$$

$$\text{Average} = \frac{\text{mean} + \text{median}}{2} = \frac{17+16}{2} = \frac{33}{2} = 16.5$$

$$\text{Average} = \text{N}16,500$$

5. Demand price = Supply price

$$15 - 0.75q = 3 + 0.25q$$

$$15 - 3 = (0.75 + 0.25)q$$

$$q = 12.$$

$$\text{Hence } P = 3 + 0.25(12) = 6$$

OR

At equilibrium, $P_1 = P_2$

$$= 3 + \frac{1}{4}q = 15 - \frac{3}{4}q$$

$$= \frac{1}{4}q + \frac{3}{4}q = 15 - 3$$

$$q = 12$$

Hence, market price at equilibrium,

$$P = 3 + \frac{1}{4}(12) = 3 + 3 = 6$$

12. $300,000(0.5)^{0.7x}$, maximum revenue occurs when nothing is spent on overheads that is;

$$x = 0; R = 300,000(0.5)^{0.6(0)}$$

$$R = \text{₦}300,000$$

18. $P(A) = 0.6$, $P(A') = 1 - 0.6 = 0.4$
 $P(B) = 0.75$, $P(B') = 1 - 0.75 = 0.25$
 $P(\text{only one of them will pass}) = P(A \text{ only pass}) + P(B \text{ only pass})$

$$P(\text{only one of them will pass}) = P(A \cap B') + P(A' \cap B)$$

$$P(\text{only one of them will pass}) = P(A)P(B') + P(A')P(B)$$

$$P(\text{only one of them will pass}) = (0.6 \times 0.25) + (0.4 \times 0.75)$$

$$P(\text{only one of them will pass}) = 0.15 + 0.3$$

$$P(\text{only one of them will pass}) = 0.45$$

19.

	1	2	3	4	5	6
HH	HH 1	HH 2	HH 3	HH 4	HH 5	HH 6
HT	HT 1	HT 2	HT 3	HT 4	HT 5	HT 6
TH	TH 1	TH 2	TH 3	TH 4	TH 5	TH 6
TT	TT 1	TT 2	TT 3	TT 4	TT 5	TT 6

$$\Rightarrow n(s) = 24$$

EXAMINER'S COMMENT

SAQ

The 20 questions set in this part cover very important parts of the syllabus. Generally, candidates' performance was a little bit below the average score.

SOLUTION 1

- a. Using the month of June as the base month,

$$\text{Simple Aggregate Price Index, SAPI} = \frac{\sum P_{July}}{\sum P_{June}} \times \frac{100}{1}$$

$$\text{SAPI} = \frac{125 + 160 + 85 + 105 + 130}{120 + 155 + 80 + 110 + 135} \times \frac{100}{1}$$

$$\text{SAPI} = \frac{605}{600} \times \frac{100}{1}$$

$$\text{SAPI} = 100.83\%$$

- b. Using the month of June as the base month,

$$\text{Simple Aggregate Quantity Index, SAQI} = \frac{\sum q_{July}}{\sum q_{June}} \times \frac{100}{1}$$

$$\text{SAQI} = \frac{12 + 6 + 11 + 7 + 10}{10 + 5 + 10 + 6 + 9} \times \frac{100}{1}$$

$$\text{SAQI} = \frac{46}{40} \times \frac{100}{1}$$

$$\text{SAQI} = 115\%$$

c. Using the month of June as the base month,

p_0	q_0	p_1	q_1	p_0q_0	p_0q_1	p_1q_0	p_1q_1
120	10	125	12	1,200	1,440	1,250	1,500
155	5	160	6	775	930	800	960
80	10	85	11	800	880	850	935
110	6	105	7	660	770	630	735
135	9	130	10	1,215	1,350	1,170	1,300
				$\sum p_0q_0 =$	$\sum p_0q_1 =$	$\sum p_1q_0 =$	$\sum p_1q_1 =$
				4,650	5,370	4,700	5,430

$$\text{Marshall Edgeworth's Index} = \frac{\sum P_1(q_0 + q_1)}{\sum P_0(q_0 + q_1)} \times \frac{100}{1} = \frac{\sum P_1q_0 + \sum P_1q_1}{\sum P_0q_0 + \sum P_0q_1} \times \frac{100}{1}$$

$$\text{Marshall Edgeworth's Index} = \frac{4,700 + 5,430}{4,650 + 5,370} \times \frac{100}{1}$$

$$\text{Marshall Edgeworth's Index} = \frac{10,130}{10,020} \times \frac{100}{1}$$

$$\text{Marshall Edgeworth's Index} = 101.1\%$$

EXAMINER'S COMMENT

This question is on Index Numbers. It tests candidates' knowledge of Price and Quantity indexes.

It is a popular question as about 94% of all the candidates attempted the question. About 97% of these candidates obtained marks in excess of the average score. The part (c) of the question is on Marshall Edgeworth's Index. About 55% of the candidates scored above average.

The only pitfall identified was in the inability of the candidates to differentiate p_0 from p_1 and q_0 from q_1 .

SOLUTION 2

a.i.

Class interval	Frequency	Class boundary
40 - 49	1	39.5 - 49.5
50 - 59	5	49.5 - 59.5
60 - 69	16	59.5 - 69.5
70 - 79	22	69.5 - 79.5
80 - 89	4	79.5 - 89.5
90 - 99	1	89.5 - 99.5
100 - 109	1	99.5 - 109.5

b.i.

Class boundary	F	CF
149.5 - 169.5	8	8
169.5 - 189.5	19	27
189.5 - 209.5	34	61
209.5 - 229.5	24	85
229.5 - 249.5	10	95
249.5 - 269.5	5	100

EXAMINER'S COMMENT

This question tests candidates' knowledge of Histogram and Ogive constructions. About 97% of the candidates attempted this question out of which about 65% scored above average.

The major pitfall of the candidates in this question was their inability to form the required classes with the given constraint: lower class of 40 and a class width of 10.

SOLUTION 3

a.
$$P = \frac{4}{3}q^2 - 30q - 5,400$$

Revenue = price \times quantity

$$R = P \times q$$

$$R = \left(\frac{4}{3}q^2 - 30q - 5400 \right) q$$

$$R = \frac{4}{3}q^3 - 30q^2 - 5400q$$

$$\text{Marginal Revenue, } MR = \frac{dP}{dq}$$

$$MR = \frac{dP}{dq} = 4q^2 - 60q - 5400$$

$$AC = q^2 - 15q - \frac{810,000}{q}$$

$$\text{But, } AC = \frac{C}{q}$$

$$\therefore C = AC \times q$$

$$C = \left(q^2 - 15q - \frac{810,000}{q} \right) q$$

$$C = q^3 - 15q^2 - 810,000$$

$$\text{Marginal Cost, } MC = \frac{dC}{dq}$$

$$MC = \frac{dC}{dq} = 3q^2 - 30q$$

For maximum profit, $MR = MC$

$$\Rightarrow 4q^2 - 60q - 5,400 = 3q^2 - 30q$$

$$\Rightarrow 4q^2 - 60q - 5,400 - 3q^2 + 30q = 0$$

$$\therefore q^2 - 30q - 5,400 = 0$$

Solving by factorization

$$-5,400q^2 \Rightarrow -90q, + 60q$$

$$q^2 - 90q + 60q - 5,400 = 0$$

$$q(q - 90) + 60(q - 90) = 0$$

$$\Rightarrow (q - 90)(q + 60) = 0$$

$$\therefore q = 90 \quad \text{or} \quad q = -60$$

Since q cannot be negative

\therefore The production level that maximizes the profit is $q = 90$

b. Profit function, $\Pi = R - C$

$$\Rightarrow \Pi = \frac{4}{3}q^3 - 30q^2 - 5,400q - (q^3 - 15q^2 - 810,000)$$

$$\Rightarrow \Pi = \frac{4}{3}q^3 - 30q^2 - 5,400q - q^3 + 15q^2 + 810,000$$

$$\Rightarrow \Pi = \frac{1}{3}q^3 - 15q^2 - 5,400q + 810,000$$

At $q = 90$,

$$\Rightarrow \Pi = \frac{1}{3}(90)^3 - 15(90)^2 - 5,400(90) + 810,000$$

$$\Rightarrow \Pi = 243,000 - 121,500 - 486,000 + 810,000$$

$$\therefore \Pi = \text{N}445,500$$

c. Price elasticity of demand, $e_d = -\frac{1}{\frac{dP}{dq}} \cdot \frac{P}{q}$

$$P = \frac{4}{3}q^2 - 30q - 5,400$$

$$\Rightarrow \frac{dP}{dq} = \frac{8}{3}q - 30$$

$$\Rightarrow e_d = -\frac{1}{\frac{8}{3}q - 30} \cdot \frac{\frac{4}{3}q^2 - 30q - 5,400}{q}$$

$$\Rightarrow e_d = -\frac{\left(\frac{4}{3}q - 30 - \frac{5,400}{q}\right)}{\frac{8}{3}q - 30}$$

At $q = 90$,

$$\Rightarrow e_d = -\frac{\left(\frac{4}{3}(90) - 30 - \frac{5,400}{90}\right)}{\frac{8}{3}(90) - 30}$$

$$\Rightarrow e_d = -\frac{(120 - 30 - 60)}{240 - 30}$$

$$\Rightarrow e_d = -\frac{30}{210}$$

$$\Rightarrow e_d = -0.14$$

Since $|e_d| = |-0.14| = 0.14 < 1$

This implies an inelastic demand i.e an increase in price will cause an increase in revenue

EXAMINER'S COMMENT

Candidates' knowledge of the basic rule of differentiation bordering on marginals is tested. Surprisingly, about 37% of candidates attempted the question with about 40% scoring marks above average. Majority of the candidates did not understand the concept of Elasticity of demand and the Profit Function part of the question.

SOLUTION 4

a.

$$D = 120,000 \text{ units}, C = N100, H = 0.205 \times 150 = 30.75$$

$$EOQ = \sqrt{\frac{2DC}{H}} = \sqrt{\frac{2 \times 120,000 \times 100}{30.75}}$$

$$= \sqrt{\frac{24,000,000}{30.75}}$$

$$= \sqrt{780,487.8049}$$

$$= 883.45$$

$$= 884 \text{ units.}$$

b.

$$TC = PD + \frac{QH}{2} + \frac{DC}{Q}$$

$$= (150 \times 120,000) + \frac{883.45 \times 30.75}{2} + \frac{120,000 \times 100}{883.45}$$

$$= 18,000,000 + 13,583.04 + 13,583.11$$

$$= N18,027,166.15$$

EXAMINER'S COMMENT

Inventory Control is tested in the question. Candidates are expected to calculate the Economic Order Quantity in order to calculate the optimum units to keep per time and total cost of ordering. Some of the candidates that attempted the question could not calculate the correct total cost of ordering.

SOLUTION 5

a. For Lagos city:

Loan Amount (Col1)	Mid-point (x) (Col2)	Frequency (f) (Col3)	fx (Col4)	$x - \bar{x}$ (Col5)	$(x - \bar{x})^2$ (Col6)	$f(x - \bar{x})^2$ (Col7)
14 < 18	16	11	176	-10.08	101.6064	1,117.6704
18 < 22	20	37	740	-6.08	36.9664	1,367.7568
22 < 26	24	69	1,656	-2.08	4.3264	298.5216
26 < 30	28	77	2,156	1.92	3.6864	283.8528
30 < 34	32	56	1,792	5.92	35.0464	1,962.5984
		250	6,520			5,030.4000

$$\text{Since Mean } (\bar{x}) = \frac{\sum fx}{\sum f},$$

where $\sum fx = 6,520$ (Col4) and $\sum f = 250$ (Col3).

$$\text{Therefore, } \bar{x} = \frac{6,520}{250}$$

$$\bar{x} = 26.08$$

Hence, the mean loan amount for Lagos = N 26.08 × 1000 = N 26,080

$$\text{Since Standard Deviation } (\sigma) = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}}$$

where $\sum f(x - \bar{x})^2 = 5,030.40$ (Col7) and $\sum f = 250$ (Col3).

$$\text{Therefore, } \sigma = \sqrt{\frac{5,030.40}{250}}$$

$$\sigma = \sqrt{20.1216}$$

$$\sigma = 4.4857$$

Hence, the standard deviation loan amount for Lagos = N 4.4857 × 1000 = N 4,485.7

For Abuja city:

Loan Amount (Col1)	Mid-point (x) (Col2)	Frequency (f) (Col3)	fx (Col4)	$x - \bar{x}$ (Col5)	$(x - \bar{x})^2$ (Col6)	$f(x - \bar{x})^2$ (Col7)
14 < 18	16	19	304	-9.15	83.7225	1,590.7275
18 < 22	20	30	600	-5.15	26.5225	795.6750
22 < 26	24	25	600	-1.15	1.3225	33.0625
26 < 30	28	41	1,148	2.85	8.1225	333.0225
30 < 34	32	35	1,120	6.85	46.9225	1,642.2875
		150	3,772			4,394.775

Since Mean (\bar{x}) = $\frac{\sum fx}{\sum f}$,

where $\sum fx = 3,772$ (Col4) and $\sum f = 150$ (Col3).

Therefore, $\bar{x} = \frac{3,772}{150}$

$\bar{x} = 25.1467$

Hence, the mean loan amount for Lagos = N 25.1467 × 1000 = N 25,146.7

Since Standard Deviation (σ) = $\sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}}$

where $\sum f(x - \bar{x})^2 = 4,394.775$ (Col7) and $\sum f = 150$ (Col3).

Therefore, $\sigma = \sqrt{\frac{4,394.775}{150}}$

$\sigma = \sqrt{29.2985}$

$\sigma = 5.4128$

Hence, the standard deviation loan amount for Abuja = N 5.4128 × 1000 = N 5,412.8

- b. Since Coefficient of variation $\text{Coefficient of Variation (CV)} = \frac{\text{Standard Deviation}}{\text{Mean}}$

For Lagos city, Standard Deviation = 4.4857 and Mean = 26.08.

$$\text{CV} = \frac{4.4857}{26.08} \times 100\%$$

$$\text{CV} = 17.20\%$$

For Abuja city, Standard Deviation = 5.4128 and Mean = 25.1467.

$$\text{CV} = \frac{5.4128}{25.1467} \times 100\%$$

$$\text{CV} = 21.52\%$$

- c. The results obtained for the coefficients of variation in Lagos and Abuja in (b) show that the relative dispersion between the distributions is not too wide because, there is no significant difference between the means of the distributions.

EXAMINER'S COMMENT

This is an application of both measures of Central Tendency and Variation. Candidates are expected to know how to calculate the Mean, the Standard Deviation. These measures will enable them to calculate the coefficient of variation.

I noticed that the solution required for the question is too long. All the candidates that attempted the question had their work marked with full marks for either Lagos or Abuja but not both. About 65% of the candidates attempted the question with 55% of them scoring a little above average. Some candidates did not know how to calculate the Coefficient of variation.

SOLUTION 6

a. Let x_1, x_2, x_3, x_4 be the decision variables. That is, the number of units of food types P, Q, R and S respectively.

The main objective is to minimize the cost.

Therefore, the objective function is

$$\text{Minimize } Z = Le (147x_1 + 130x_2 + 162x_3 + 130x_4)$$

Constraints are on the fulfillment of daily requirements of the various constituents.

The standard Linear Programming Problem is formulated as follows:

$$\text{Minimize } Le (147x_1 + 130x_2 + 162x_3 + 130x_4)$$

Subject to

$$\text{Fats requirement: } 2x_1 + 5x_2 + 8x_3 + 16x_4 \geq 2600$$

$$\text{Carbohydrates requirement: } 13x_1 + 5x_2 + 7x_3 + 13x_4 \geq 430$$

$$\text{Protein requirement: } 12x_1 + 6x_2 + 12x_3 + 7x_4 \geq 1800$$

$$\text{Non-negativity requirement: } x_1, x_2, x_3, x_4 \geq 0$$

b. (i) To set up the initial simplex tableau, we reformulate the problem by introducing the slack variables s_1, s_2 and s_3 as follows:

$$\text{Maximize Profit} = 11x_1 + 16x_2 + 12x_3 + 0s_1 + 0s_2 + 0s_3$$

$$\text{Subject to } x_1 + 5x_2 + 2x_3 + s_1 = 8000$$

$$8x_1 + 2x_2 + 3x_3 + s_2 = 3800$$

$$4x_1 + 6x_2 + 7x_3 + s_3 = 4200$$

$$x_1, x_2, x_3, s_1, s_2, s_3 > 0$$

The initial simplex table can therefore be set up as shown below:

x_1	x_2	x_3	s_1	s_2	s_3	B	R	Basic Variables
1	5	2	1	0	0	8000	1600	s_1
8	2	3	0	1	0	3800	1900	s_2
4	6	7	0	0	1	4200	700	s_3
-11	-16	-12	0	0	0			

- (ii) From the initial simplex tableau set up in (i) above, the
 Entering variable is x_2
 Leaving variable is s_3
 Pivot is 6

EXAMINER'S COMMENT

Linear Programming is the subject matter of this question bordering on formulating the given problem as a standard programming problem. The second part of the question deals with setting up an initial tableau based on simplex method.

About 50% of the candidates attempted the question with 35% of them scoring above average.

Majority of the candidates that attempted the question were unable to identify both the entering and leaving variables.

THE ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA



**ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA
MARCH 2022 EXAMINATIONS (PART II)**

INFORMATION TECHNOLOGY

PLEASE READ THESE INSTRUCTIONS BEFORE COMMENCEMENT OF THE PAPER

EXAMINATION INSTRUCTIONS

1. All solutions should be in ink. Any solution in pencil will not be marked.
2. Read all instructions on each part of the paper carefully before answering the questions.
3. Ensure that you do not answer more than the number of questions required for **Section B (The Essay Section)**.
4. Check your pockets, purse, mathematical set, etc, to ensure that you do not have prohibited items such as telephone handset, electronic storage device, wrist watches, programmable devices or any form of written material on you in the examination hall. You will be stopped from continuing with the examination and liable to further disciplinary actions including cancellation of examination result if caught.
5. Do not enter the hall with anything written on your docket.
6. Insert your examination number in the space provided above.

TUESDAY, 29 MARCH, 2022

DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO

ASSOCIATION OF ACCOUNTANCY BODIES IN WEST AFRICA

ACCOUNTING TECHNICIANS SCHEME, WEST AFRICA

PART II EXAMINATIONS – MARCH 2022

INFORMATION TECHNOLOGY

Time Allowed: 3 hours

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

ATTEMPT ALL QUESTIONS IN THIS SECTION

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

1. Combination of elements, which are integrated to each other by means of their inputs and outputs is known as
 - A. System
 - B. Management
 - C. Database
 - D. Record
 - E. File

2. A measure of the degree or extent of the dependence of the subsystems on one another is called
 - A. Tight
 - B. Coupling
 - C. Decoupling
 - D. Double
 - E. Twice

3. Which of the following is **NOT** a basic element of control in a business system?
 - A. Planning
 - B. Collecting facts
 - C. Comparison
 - D. Corrective Action
 - E. Leading

4. Which of the following is **NOT** a feature of an information?
- A. It must be detailed
 - B. It must be imprecise
 - C. It must be accurate
 - D. It must be easily understood by the recipients
 - E. It must be timely
5. The smallest unit of data in a Computer System is
- A. Bit
 - B. Byte
 - C. Word
 - D. Nibble
 - E. Character
6. Which of the following is **NOT** a direct input device?
- A. Barcode
 - B. Optical Mark Reader (OMR)
 - C. Optical Character Reader (OCR)
 - D. Touch screen
 - E. Keyboard
7. Which of the following is **NOT** a function that can be performed by a mouse?
- A. Hovering
 - B. Dragging
 - C. Clicking
 - D. Picking
 - E. Selecting
8. Which of the following is **NOT** an advantage of Flat Panel Display?
- A. They are crude
 - B. They are lightweight
 - C. They are compact
 - D. They provide better resolution than CRT
 - E. They are modern

9. Which of the following is **NOT** a classification of printers?
- A. Character Printer
 - B. Plot Printer
 - C. Page Printer
 - D. Ink-Jet Printer
 - E. Line Printer
10. The Keyboard consists of the following keys, **EXCEPT**
- A. Alphabetical Keys
 - B. Numerical Keys
 - C. Control Keys
 - D. Pointing Keys
 - E. Special Character Keys
11. Which of the following is **NOT** the main component of an Operating System?
- A. A supervisor
 - B. A command language translator
 - C. An input/output control system
 - D. A librarian
 - E. An Analyst
12. Another name for User's code is
- A. Object code
 - B. Machine code
 - C. Source code
 - D. Intermediate code
 - E. Binary code
13. A program which converts a user's code written in high level language into a machine code is called
- A. Assembler
 - B. Compiler
 - C. Debugger
 - D. Moduler
 - E. File Manager

14. Which of the following is **NOT** considered when acquiring an application package?
- A. Purchase price of the package
 - B. Type of hardware and Operating System
 - C. After sales maintenance
 - D. Access to user's code
 - E. Technology version of the package
15. Which of the following **CANNOT** be performed by word processing packages?
- A. Text manipulation
 - B. Mail merging
 - C. Spell checking
 - D. Create bar chart
 - E. Create Tables
16. Which of the following is **NOT** a different type of file organisation?
- A. Serial
 - B. Sequential
 - C. Indexed Sequential
 - D. Random
 - E. Spiral
17. Which of the following is **NOT** a type of Computer processing technique?
- A. Batch
 - B. Real time
 - C. Multiprocessing
 - D. Time Sharing
 - E. Distributed time
18. Centralised processing method provides the following, **EXCEPT**
- A. All terminals and other devices are connected to a Server
 - B. Better control over the processing
 - C. More experienced IT staff
 - D. Economics of scale that is cheaper to run
 - E. Departmental secrecy

19. Which of the following is **NOT** a challenge of decentralised processing method?
- A. Less communication cost associated with distribution of information
 - B. Complexity of coordinating data among the departments
 - C. Increase in administrative cost
 - D. Increase in machinery/hardware costs
 - E. Greater difficulty in implementing effective control
20. Which of the following is **NOT** a challenge of network?
- A. Access to databases
 - B. Failure of the server
 - C. Cable break may stop the entire network
 - D. Maintenance cost may be prohibitive
 - E. Need for compatibility of equipment in the network
21. A good password should include
- A. Character alone
 - B. Number alone
 - C. Special character and Number
 - D. Character and Special character
 - E. Character, Number and Special character
22. Which of the following is **NOT** a wireless media?
- A. Bluetooth
 - B. Infrared
 - C. Radiowaves
 - D. Microwaves
 - E. Guided media
23. Which of the following is **NOT** a social media platform?
- A. Facebook
 - B. Instagram
 - C. Whatsapp
 - D. LinkedIn
 - E. Netflix

24. The acronym SMTP means
- A. Simple Message Transfer Protocol
 - B. Special Message Transfer Protocol
 - C. Simple Mail Transfer Protocol
 - D. Special Mail Transfer Protocol
 - E. Soft Message Transfer Protocol
25. PaaS is an acronym for
- A. Parallel as a Site
 - B. Protocol as a Site
 - C. Platform as a Service
 - D. Parallel as a Service
 - E. Platform as a site
26. Who is the right person to write the feasibility study report?
- A. Administrative Officer
 - B. Project Manager
 - C. Programmer
 - D. Data Processing Manager
 - E. System Analyst
27. A detailed document which sets out what the client expects and what is expected of the software system which is being developed is
- A. Feasibility study report
 - B. Executive summary
 - C. System specification
 - D. Evaluation report
 - E. Terms of reference
28. Which of the following is **NOT** a type of feasibility study?
- A. Operational feasibility study
 - B. Evaluation feasibility study
 - C. Economic feasibility study
 - D. Technical feasibility study
 - E. Social feasibility study

29. Expenses associated with the maintenance and administration of a new system is
- A. One-off cost
 - B. Operating cost
 - C. Direct cost
 - D. Fixed cost
 - E. Variable cost
30. A practice in which a company hires another company or an individual to perform tasks, handle operations or provide services that are either usually executed or had previously been done by the company's own employees for a fee is
- A. Hiring
 - B. Servicing
 - C. Managing
 - D. Outsourcing
 - E. Crowdsourcing

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. Recorded facts and events about activities occurring in an environment is called
2. A combination or collection of people, hardware, software, communication networks and data resources that collect, transform and provide information to managers at all levels in all functions to allow timely and effective decision making in an organisation is known as
3. The technology used in the 2nd generation computers is
4. The Processor is the combination of ALU and

5. A small and very fast computer memory designed to speed up the transfer of data and instructions to a processor and stores frequently used computer programs, applications and data is called
6. A physical electronic card that has an embedded integrated chip that acts as a security token and it's used to control access to a resource is known as
7. There are two types of editors, namely text editor and
8. A software that builds, manages and allow easy storage and retrieval of data is called
9. In program flowchart symbols, the rectangle shaped box depicts
10. A technology that allows two or more users in different locations to negotiate business deals by using computer networks to transmit audio and video data is known as
11. The time interval between the moment the command is given to transfer data from disk to main storage and the moment the transfer is completed is known as
12. The frequency with which records are added or deleted from a file is called
13. The third layer of OSI model is known as
14. The process of extracting or getting information, files and documents from the internet for use is called
15. A network security system designed to prevent unauthorised access to or from a private network based on predetermined security rules is called
16. The act in which someone works for an organisation from home and communicates with the main office and customers by phone, computer and email is known as
17. A network that operates in a confined geographical area usually within a kilometer is called

18. A network is the arrangement with which Computer systems or network devices are connected to each other.
19. A standard network protocol used for the transfer of Computer files between a client and server on a Computer network is called
20. The practice of fitting the setup of the computer and the workspace to fit the users and the user’s work needs in order to minimise physical stress on the computer users is known as

SECTION B: ATTEMPT ANY FOUR QUESTIONS (50 Marks)

QUESTION 1

- a. What is an Information System? **(2 Marks)**
- b. Describe **THREE** types of Decision Structures that exists in an organization **(7½ Marks)**
- c. State **THREE** features of fifth generation computers **(3 Marks)**
(Total 12½ Marks)

QUESTION 2

- a. Define
- i. Direct Input device **(2 Marks)**
- ii. Indirect Input device **(2 Marks)**
- b. List **FIVE** examples of an input device **(2½ Marks)**
- c. State **TWO** benefits of Display equipment **(2 Marks)**
- d. State **FOUR** challenges of Display equipment **(4 Marks)**
(Total 12½ Marks)

QUESTION 3

- a. Define Operating System **(1½ Marks)**
- b. State **FIVE** basic functions of an Operating System **(5 Marks)**
- c. State **THREE** examples of Operating Systems **(3 Marks)**
- d. State **THREE** advantages of Interpreters over Compilers **(3 Marks)**
(Total 12½ Marks)

QUESTION 4

- 4ai. What is Batch processing? (2½ Marks)
 - 4a.ii. State **TWO** other processing techniques (2 Marks)
 - b. State **FOUR** advantages of Batch processing (4 Marks)
 - c. State **FOUR** disadvantages of Batch processing (4 Marks)
- (Total 12½ Marks)

QUESTION 5

- a. What is a Computer network? (2½ Marks)
 - b. Briefly describe each of the following
 - i. Hub/Switch (2 Marks)
 - ii. Bridges (2 Marks)
 - iii. Routers (2 Marks)
 - iv. Gateway (2 Marks)
 - v. Repeaters (2 Marks)
- (Total 12½ Marks)

QUESTION 6

- a. What is prototyping? (2½ Marks)
 - b. Enumerate **TWO** benefits of prototyping (2 Marks)
 - c. Enumerate **THREE** challenges of prototyping (3 Marks)
 - d. State **FIVE** reasons for computer forensics (5 Marks)
- (Total 12½ Marks)

MULTIPLE CHOICE QUESTIONS (MCQ)

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

EXAMINER'S COMMENTS

This consists of thirty multiple choice questions with five solution options for each question. The questions are all within the content of the syllabus and the performance is fair.

SHORT ANSWER QUESTIONS

1. Data
2. Information system (IS)/ Management Information System (MIS)
3. Transistor
4. Control Unit (CU)
5. Cache memory
6. Smart card
7. Linkage editor
8. Database Management System (DBMS)
9. Process symbol
10. Video conferencing
11. Access time or response time
12. Volatility
13. Network layer
14. Downloading
15. Firewall
16. Telecommuting
17. Local Area Network (LAN)
18. Topology
19. File Transfer Protocol (FTP)
20. Ergonomics

EXAMINER'S COMMENTS

This section consists of twenty questions demanding for short answers. The performance is generally below average.

SECTION B

SOLUTION 1

- a. **Information System** is a combination or collection of people, hardware, software, communication networks and data resources that collect, transform and provide information to managers at all levels in all functions to allow timely and effective decision making in an organisation.
- b. **Types of Decision Structures that exists in an organization are:**
- i. **Highly Structured Decisions:** They are repetitive routine and understood well enough that they can be delegated to lower level employees and infact such decisions can be automated. For example, the decision to grant credit to established customers requires the following:
 - Personal Identification Number (PIN)
 - Customer credit limit; and
 - Current balance
 - ii. **Semi-Structured Decisions** are characterized by incomplete rules for making the decision. There is need for subjective assessment and judgements to supplement formal data analysis. Such decisions can be made using Computer Based Decision Aids such as Neural systems, Decision Support Systems (DSS), Executive Support System (ESS) etc. For example, setting a marketing budget for a new product requires:
 - The marketing status of the other products
 - The level of advertisement and
 - Other subjective decisions
 - iii. **Unstructured Decisions** are non-recurring and non-routine. Examples include:
 - Choosing a cover for a magazine
 - Hiring senior management staff
 - The choice of basic research project to undertake

In this case, no framework or model exists to solve such problems. Instead, they require considerable judgement and intuition.

Nevertheless, they can be supported by Computer Based Decision aids that facilitate gathering information from diverse sources.

c. Features of fifth generation computers are:

1. Use of ULSI (Ultra Large Scale Integration) technology
2. It consume less power and generate less heat
3. Development of artificial intelligence
4. Speed: remarkable improvement of speed, accuracy and reliability
5. Development of Natural language processing
6. Advancement in Parallel Processing
7. Advancement in Superconductor technology
8. More user-friendly interfaces with multimedia features
9. Availability of very powerful and compact computers at cheaper prices
10. Ruggedness and very reliable
11. Voice and touch sensitive input and voice output – Voice Recognition
12. Intelligent capabilities as evidenced in electronic system.
13. Robotics
14. Neural Network
15. Expert Systems
16. Less costly
17. Portable
18. Smaller in size
19. User friendly
20. Generate less heat
21. High response
22. More reliable.

EXAMINER'S REPORT

This question tests the candidates' knowledge on Information Systems, types of decision structures and the general features of the fifth generation hardware of the Computer System.

Over 60% of the candidates attempted this question and the performance is below average. 45% of the candidates scored below 50% of the allotted marks.

The major pitfall is lack of adequate knowledge on decision structures of the organisation.

Candidates are advised to prepare for further examinations using ICAN study pack and other standard relevant texts.

SOLUTION 2

ai. DIRECT INPUT DEVICES:

These are **devices** that read data from a source that is provided and transfer it directly to the computer system. The devices interface with computer system without intermediary device, that is, they accept data in machine readable form. It requires less human interaction in order to get data into the computer. They can also be called Direct Data Entry (DDE)

ii. INDIRECT INPUT DEVICES:

These are the devices that can send data into the computer for processing through intermediary devices. It requires human interaction with the device in order to get or send data into the computer.

b. Examples of input devices include:

- i. Keyboard
- ii. Mouse
- iii. Touch screen
- iv. Tracker ball
- v. Joy stick
- vi. Graphic Tablet
- vii. Scanner
- viii. Digital camera
- ix. Microphone
- x. Video digitizer
- xi. Light pen
- xii. Webcam
- xiii. Magnetic Stripe Reader
- xiv. Chi and PIN Reader
- xv. Bar code Reader
- xvi. Optical Mark Reader
- xvii. Optical Character Reader
- xviii. Magnetic Ink Character Recognition
- xix. Card Reader
- xx. Harddrive/disk/diskette/tape/flashdrive

- c. **A display equipment is also known as monitor or visual display unit Benefits of display equipment include:**
- i. It gives easy access to vast amount of data
 - ii. It does not encourage paper wastage
 - iii. It allows users to see what they have typed in and how the system is responding
 - iv. It produces very bright images
 - v. It produces soft copy
- d. **Challenges of display equipment:**
- i. Computer output cannot be removed from the screen
 - ii. One cannot output with a pencil or pen
 - iii. One must be physically present at the display screen site to see the output it provides
 - iv. The amount of output that can be handled will depend on the size of the screen
 - v. Radiation from display equipment can cause health hazard to the user such as eye problem, fatigue, burning sensation and headache.

EXAMINER'S COMMENT

This question tests candidates' knowledge on input and display devices.

This question is very popular among students as over 80% of the candidates' attempted the question and the performance is excellent as over 70% of the candidates scored over 65% of the allotted marks.

SOLUTION 3

a. OPERATING SYSTEM (OS)

This is a program that acts as an interface between the user and the hardware and allows the user to run other application packages. It provides the users with features that make it easier for him or her to code, test, execute, debug and maintain his or her programs while efficiently managing the hardware. It offers the ease of users of the hardware with minimum human intervention.

Operating system must be resident in the main memory prior to the commencement of any processing operation. It manages the computer resources, application programs and the computer network in the best possible way.

b. FUNCTIONS OF OPERATING SYSTEMS

- (1) Control of communications between the computer system and operator, other computer systems within the network
- (2) Keeping operation log of all the processing activities
- (3) Control of application software which are online
- (4) Control of multi programming
- (5) Allocating memory and loading programs
- (6) Job scheduling and loading in a multi programming environment
- (7) Control of peripheral devices
- (8) Error correction and reporting
- (9) Resource sharing
- (10) It controls the input and output of data between the computer (CPU) and the peripheral input and output devices (like keyboard and monitor)
- (11) It connects the application software to the hardware, making it possible for the user to use the application software to control the hardware to process jobs.
- (12) It allows the application software to operate in the computer.
- (13) It tests the main components of the computer whenever it is powered on. This is the post operation or power on self-test.
- (14) It prepares the main memory for the loading of application programs. This process is known as booting the computer.

c. Examples of operating system include:

- i. WINDOWS 95, 98, 2000, XP, 7, 8
- ii. Window Vista
- iii. UNIX
- iv. Apple Mac OS (Formerly OS X)
- v. Chrome OS
- vi. Google Android OS
- vii. XENIX
- viii. Novell's Netware
- ix. OS/2
- x. WINDOW NT

d. Advantages of interpreter over compiler include:

- i. It is faster and easier to use
- ii. Less Random Access Memory space is required than compiler hence it is memory efficient
- iii. It stops the compilation if any error occurs therefore debugging is easier
- iv. It produces superior messages that are very easy to trace
- v. It is useful for small program writing
- vi. It is very cheap
- vii. It is suitable for interactive work which can allow programmer to test program online in segment

EXAMINER'S REPORT

This question tests the candidates' understanding on operating system and the language translator.

This question is also very popular among the candidates as over 70% of the candidates attempted this question and the performance is very good as over 70% of the candidates scored over 50% of the allotted marks.

SOLUTION 4

ai. BATCH PROCESSING:

This is a processing technique by which items to be processed must be coded and collected into groups or batches prior to processing. A batch consists of a convenient number of records or a collection of records relating to a given period e.g. daily, weekly, and monthly and so on or after a specified number is attained to justify updating of a master file. The result of processing a particular item of data will not be known until the result of the batches is known. Batch processing is suitable for accounting and business applications such as payroll accounts, stock control, invoicing, and purchases e.t.c. in which master files are updated with new transactions periodically and output is produced according to predetermined processing cycle.

aii. Other processing techniques include:

- i. Centralised processing
- ii. Decentralised processing
- iii. Distributed processing
- iv. Online processing
- v. Remote job entry (RJE)
- vi. Real time processing
- vii. Time sharing or interactive processing
- viii. Multi processing
- ix. Multi tasking
- x. Multi programming

b. ADVANTAGES OF BATCH PROCESSING

- i. It is efficient
- ii. It is cost effective
- iii. It is good for companies that will not require immediate result for further processing
- iv. The output can be identified through the batch number
- v. Processing can be carried out very fast without user interactions
- vi. Processing can be done off line
- vii. Proper documentation of transaction data can be done easily
- viii. Independent review can be carried out
- ix. System breakdown will have less impact on processing
- x. Specific time can be scheduled for processing

c. DISADVANTAGES OF BATCH PROCESSING

- i. Due to the gap between data capture and information generation renders this mode of processing unacceptable in organization that requires immediate result or information to influence other operations or decisions.
- ii. Errors detected after batch processing may take some additional time to correct.
- iii. Debugging may be problematic
- iv. It is not suitable for organization that will require immediate result for further action
- v. It requires some degree of delay
- vi. Data processing staff may be working under pressure due to accumulation of data

EXAMINER'S REPORT

This question tests candidates' understanding on Batch processing.

This question is also very popular among the candidates as over 85% of the candidates attempted the question and the performance is good as over 65% of the candidates' scored over 50% of the allotted marks.

SOLUTION 5

a. COMPUTER NETWORK

A computer network is defined as the interconnection of many computer systems with data communication devices in order to share resources such as hardware and software. Networking reduces duplication of computer resources thus enabling the scarce resources to be shared among the computer systems. Therefore it allows the sharing of files, applications, software products, printers, disk space, modem, faxes, CD-ROM drives and e-mail facilities.

b. Hub/Switch:

i. A network hub is a common connection point for devices in a network. Hubs are devices commonly used to connect segments of a LAN. The hub contains multiple ports. When a packet arrives at one port, it is copied to the other ports so that all segments of the LAN can see all packets. It is a device that broadcast any signal or communication that enters it to all devices on the network.

ii. Bridge:

It is a device for connecting LANs (Local Area Networks) with similar logical topologies so that they form a single logical network. It allows the segmentation of a large network into a smaller and more efficient network. It connects two networks such as LAN to the internet or WAN (Wide Area Network)

iii. Router:

It is a network device for connecting two or more networks of LAN (Local Area Network), it routes or transfers data packets across the LANs or MANs in a Wide Area Network or internet. It sends any signal that enters it to the next available router or system on the network.

iv. Gateway:

It is a device for connecting two networks with dis-similar protocol together so that they can communicate with each other. It converts protocols from one computer network to protocols used in the other network.

v. Repeater:

It is a device for connecting different LANs (Local Area Networks), it regenerates, amplifies, empowers or recreate and cleans corrupted digital signals and forward them to their destination computers without data loss.

EXAMINER'S REPORT

This question tests candidates' knowledge on general Computer Network and the terminal equipment.

Over 60% of the candidates attempted the question but the performance is very poor as below 40% of the candidates scored 30% of the allotted marks.

The major pitfall is the poor descriptive knowledge of the candidates about the terminal equipment.

Candidates are advised to use the ICAN study pack very effectively for further examinations.

SOLUTION 6

a. PROTOTYPING

Prototyping is an approach to develop a small or pilot version of a system called a prototype of an entire system or a part of it. It is an act of using 4th generation language (4th) development tool to quickly produce a simulation of the output required from a proposed or completed system.

b. BENEFITS OF PROTOTYPING

- i. Early visibility of the **prototype** gives users an idea of what the final system looks like
- ii. Encourages active participation among users and producer
- iii. Enables a higher output for user

- iv. Cost effective (Development costs reduced)
- v. Increases system development speed
- vi. Assists to identify any problems with the efficacy of earlier design, requirements analysis and coding activities
- vii. Helps to refine the potential risks associated with the delivery of the system being developed
- viii. Various aspects can be tested and quicker feedback can be got from the user
- ix. Helps to deliver the product in quality easily
- x. User interaction is available during development cycle of prototype

c. CHALLENGES OF PROTOTYPING

- i. Producer might produce a system inadequate for overall organization needs
- ii. User can get too involved whereas the program cannot be to a high standard
- iii. Structure of system can be damaged since many changes could be made
- iv. Producer might get too attached to it (might cause legal involvement)
- v. Not suitable for large applications
- vi. Over long periods, can cause loss in consumer interest and subsequent cancellation due to a lack of market for the product (for commercial products)

d. REASONS FOR COMPUTER FORENSIC EVIDENCE OR INVESTIGATION

There is wide range of computer misuses or crimes that can be committed that will require forensic evidence, some of which are:

- i. In legal cases, computer forensic techniques are frequently used to analyse computer systems belonging to defendants (in criminal cases) or litigants (in civil cases)
- ii. To recover data in the event of hardware or software failures
- iii. To analyse a computer after a break-in e.g to determine how the attackers gain access and what the attackers did

- iv. To gather evidence against an employee that an organisation wishes to terminate
- v. To gain information about how computer systems work for the purpose of debugging, performance optimisation and so on.

EXAMINER'S COMMENT

This question tests candidates' understanding on computer prototyping and reasons for the use of computer forensics investigation.

Less than 30% of the candidates attempted this question and the performance is very poor as less than 40% of the candidates scored less than 30% of the allotted marks.

The major pitfall is the lack of knowledge on prototyping as compared to the knowledge on System Development Life Cycle (SDLC) and other System Development techniques.

Students are advised to pay more attention to Systems Development because it is a major topic in the syllabus, students should use ICAN study pack and other standard textbooks for further examinations.