



**THE INSTITUTE OF CHARTERED
ACCOUNTANTS OF NIGERIA**

PATHFINDER

**NOVEMBER 2016 DIET
FOUNDATION LEVEL EXAMINATIONS**

Question Papers

Suggested Solutions

Marking Guides

Plus

Examiner's Reports

FOREWARD

This issue of the **PATHFINDER** is published principally, in response to a growing demand for an aid to:

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

The answers provided in this publication do not exhaust all possible alternative approaches to solving these questions. Efforts had been made to use the methods, which will save much of the scarce examination time. Also, in order to facilitate teaching, questions may be edited so that some principles or their application may be more clearly demonstrated.

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

NOTES

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

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THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – NOVEMBER 2016

FINANCIAL ACCOUNTING

Time Allowed: 3 hours

SECTION A: MULTIPLE - CHOICE QUESTIONS (20 MARKS)

INSTRUCTION: YOU ARE REQUIRED TO ANSWER 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. Accounting standards are mainly about all of the following **EXCEPT**
 - A. Accrual
 - B. Disclosure
 - C. Recognition
 - D. Measurement
 - E. Presentation
2. A statement that list the assets and liabilities of an entity at a particular date is called
 - A. Statement of changes in equity
 - B. Statement of profit or loss and other comprehensive income
 - C. Statement of cash flows
 - D. Statement of financial position
 - E. Statement of changes in property, plant and equipment
3. The qualitative characteristics that enhances the usefulness of financial information include the following **EXCEPT**
 - A. Comparability
 - B. Predictability
 - C. Timeliness
 - D. Understandability
 - E. Verifiability
4. An entity has trade receivables worth ₦10,000,000 at the beginning of its financial year and ₦8,500,000 at the end of its financial year. If it has a policy of making a general allowance of 2% for doubtful receivables, what is the value of the allowance treated in the statement of profit or loss in the current financial year?
 - A. ₦200,000 debit
 - B. ₦170,000 debit
 - C. ₦170,000 credit
 - D. ₦30,000 debit
 - E. ₦30,000 credit

5. If the cost of sales is ₦95,000, opening and closing inventories are ₦12,500 and ₦30,000 respectively. What is the value of the purchases?
- A. ₦42,500
 - B. ₦77,500
 - C. ₦107,500
 - D. ₦112,500
 - E. ₦125,000
6. Which of the following is an incorrect entry?
- A. A reduction in an asset is a debit
 - B. A reduction in an expense is a credit
 - C. A reduction in income is a debit
 - D. An increase in liability is a credit
 - E. An increase in drawings is a debit
7. A trade receivable balance of ₦9,000 wrongly posted to the credit side of the trial balance will have the effect of
- A. Overstating the debit side by ₦4,500
 - B. Overstating the debit side by ₦9,000
 - C. Understating the debit side by ₦9,000
 - D. Overstating the debit side by ₦18,000
 - E. Understating the debit side by ₦18,000
8. A document used to request for payment from the customer for goods delivered is called
- A. Credit note
 - B. Delivery note
 - C. Goods dispatched note
 - D. Sales invoice
 - E. Sales order
9. Which of the following does **NOT** belong to the same group in asset classification?
- A. Computer software
 - B. Copyrights
 - C. Licences and franchises
 - D. Patents
 - E. Plant
10. An amount owed by a customer that the business believes might prove difficult to collect but still hope to collect is
- A. Bad debt
 - B. Doubtful debt
 - C. Discount allowed
 - D. Payable
 - E. Receivable

11. All of these errors do **NOT** affect the balancing of the trial balance **EXCEPT**
- A. Compensating error
 - B. Error of original entry
 - C. Error of omission
 - D. Error of principle
 - E. Transposition error
12. When a buyer returns damaged goods to the seller, the buyer receives
- A. Pro-forma
 - B. Credit note
 - C. Debit note
 - D. Consignment note
 - E. Goods received note
13. Accumulated profits of a partner in a partnership is recorded in
- A. Capital account
 - B. Current account
 - C. Drawings account
 - D. Goodwill account
 - E. Loan account
14. Smart who is a debtor and creditor of John enterprises agreed to have only **ONE** balance outstanding. By which of the following methods could this be effected?
- A. Journal entry
 - B. Suspense Account entry
 - C. Double entry
 - D. Adjustment entry
 - E. Contra entry
15. On January 1, 2014 a motor car was bought at a cost of ₦500,000 and depreciated at 20% per annum by the diminishing balance method. On January 1, 2016, it was sold for ₦300,000. The gain or loss on disposal was
- A. ~~₦~~320,000 gain
 - B. ~~₦~~300,000 loss
 - C. ~~₦~~200,000 loss
 - D. ~~₦~~200,000 gain
 - E. ~~₦~~20,000 loss
16. Which of the following should be included in the corrected cash book in the general ledger while preparing bank reconciliation statement for a business enterprise?
- A. Bank charges and commission
 - B. Cheques issued, presented and cashed
 - C. Bank deposits
 - D. Cash payments made by the enterprise
 - E. Opening bank overdraft

17. The double entry for recording depreciation is
- A. Dr. Allowance for depreciation account
Cr. Profit or loss
 - B. Dr. Property, plant and equipment
Cr. Profit or loss
 - C. Dr. Depreciation account
Cr. Allowance for depreciation account
 - D. Dr. Property, plant & equipment
Cr. Allowance for depreciation account
 - E. Dr. Allowance for Depreciation Account
Cr. Non Current Assets Account
18. A business enterprise paid insurance premium of ₦13,500 for 15 months ended March 31, 2015. It prepares account to December, 31.
What is the prepaid insurance as at December 31, 2014?
- A. ₦13,500
 - B. ₦10,800
 - C. ₦3,380
 - D. ₦2,700
 - E. ₦900
19. In grouping business activities for the purpose of preparing statement of cash flows, which of the following items is **NOT** an investing activity?
- A. Purchase of property, plant & equipment
 - B. Proceeds from sales of equipment
 - C. Interest received
 - D. Repayment of loan notes
 - E. Dividend received
20. Which of the following measures of inventory is acceptable for financial reporting?
- A. Last in First out
 - B. Simple average cost
 - C. Next in first out
 - D. First in, first out
 - E. Replacement cost

SECTION B:**(80 MARKS)****INSTRUCTION: YOU ARE REQUIRED TO ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION****QUESTION 1**

Wazobia sets up a trading business on October 1, 2014 buying and selling goods. The following transactions took place in 2015.

January 1, 2015	The following balances are brought forward from the previous period:		
			₦
	Cash at bank	-	210,000
	Inventory	-	75,000
	Trade receivables	-	65,000
	Capital	-	350,000
February 3, 2015	Wazobia introduced an additional capital of ₦150,000 into the business and paid the money into the business account.		
March 7, 2015	The business purchased an item of furniture and fittings for ₦55,000 and paid by cheque.		
April 8, 2015	Purchased inventory for ₦45,000, paid ₦30,000 by cheque and the balance outstanding.		
May 11, 2015	Sold inventory for ₦95,000. Received ₦60,000 through cheque and the balance yet to be paid for.		
June 14, 2015	Wazobia drew ₦12,500 from the business bank account for his personal use.		
July 15, 2015	Purchased additional inventory for ₦150,000, ₦100,000 was paid through cheque and the balance is outstanding.		
August 18, 2015	Brought forward trade receivable were collected through the bank account.		
September 21, 2015	Sales were made for ₦120,000 and full payment received.		
October 24, 2015	Purchased printing and stationery amounting to ₦22,500 and paid by cheque.		
November 27, 2015	Ovia, a friend of Wazobia sold a motor vehicle worth ₦200,000 on credit to him for his business use. Payment to be made in 2 years time.		
December 31, 2015	Closing inventory is ₦125,000.		

Required:

- a. Post all transactions to the appropriate ledger accounts. (14 Marks)

- b. Close off each account and extract a trial balance. (6 Marks)
(Total 20 Marks)

QUESTION 2

There are different methods through which a business might make payments to suppliers and receive payments from customers.

- a. State **SIX** different methods by which a business can make payment to suppliers or receive payment from customers. (6 Marks)
- b. Explain the following:
- i. Receivables control account (3 Marks)
 - ii. Payables control account (3 Marks)
- c. The following information are extracts from the records of Ojie Limited for the period ended September 30, 2016.
- (i) The balance on the receivables control account was ₦1,134,400 and the total of the balances extracted from the receivables ledgers amounted to ₦1,020,800.
 - (ii) The balance on the payables control account was ₦570,500 and the total of the balances extracted from the payables ledger amounted to ₦455,380.
 - (iii) A cash account total of ₦65,760 was posted to the payables control account as ₦56,760.
 - (iv) No entry had been made in the receivables control account in respect of the transfer of a debit of ₦112,000 from a customer's account in the receivables ledger to his account in the payables ledger.
 - (v) An item of goods worth ₦115,000 was sold to a customer, had been entered once in the sales day book but posted to his account twice.
 - (vi) A supplier's ledger account has not been adjusted for ₦11,000 for cash discount granted to Ojie Ltd.
 - (vii) A credit balance of ₦62,320 had been omitted from the list of balances in the payables ledger.
 - (viii) Sales returns by a customer totaling ₦73,400 have not been recorded in the receivables control account, but are included in the customer's account balance.
 - (ix) Credit sale of ₦43,200 to a customer has not been recorded in the customer's account in the receivables ledger, but is included in the control account balance.
 - (x) The purchases day book was overcast by ₦54,800.

Required:

Reconcile the control accounts with the total balances extracted from the customers' and suppliers' ledgers. (8 Marks)

(Total 20 Marks)

QUESTION 3

- a. The trial balance of Ohio Plc failed to agree. The total of the credit column exceeded the total of the debit column by ₦20,500. On investigation, the following errors were discovered:
- (i) The cost of motor vehicle repairs of ₦55,000 recorded in the cash book but was not reflected in the motor vehicle repairs account.
 - (ii) A credit sale of goods for ₦64,000 was recorded correctly in the sales day book but posted as ₦46,000 to the customer's personal account.
 - (iii) A rental income of ₦42,000 was correctly recorded in the cash book but omitted from the rental income account.
 - (iv) The receivables control account has a debit entry of ₦54,000 for a transaction instead of ₦90,000.
 - (v) The return inwards account was overcast by ₦45,000.
 - (vi) Discount of ₦23,000 received from a supplier was correctly recorded in his account but omitted from the other account.
 - (vii) A purchase invoice of ₦34,500 was correctly recorded in the cash book but the other account was not captured.
 - (viii) Cost of stationery of ₦13,000 in cash was correctly recorded in the printing and stationery account but not reflected in the other account.

Required:

Prepare the journal entries and the suspense account to effect corrections as appropriate. (Journal narrations are not required). (8 Marks)

- b. The following information is extracted from the books of Royal Limited

At January 1, 2015 **₦'000**

Cost:

Furniture and equipment	209,214
Land & Buildings	607,842
Plant & Machinery	1,251,688
Property, Plant & Equipment (PPE) under construction	553,704

Accumulate Depreciation

Land & buildings	46,720
Plant & machinery	279,160
Furniture and equipment	95,852

Additions during the year:

Land and buildings	38,668
Plant & machinery	92,520
Furniture & equipment	18,420
PPE under construction	304,984

At January 1, 2015	₦'000
Disposals:	
Land and buildings	1,188
Plant & machinery	32,208
Furniture & equipment	15,482
Associated depreciation on disposals:	
Land and buildings	178
Plant & machinery	22,068
Furniture & equipment	<u>14,244</u>

Notes

- (i) The depreciation rates extracted from the books of the company are as follows:

Land and buildings	2%
Plant and machinery	15%
Furniture & equipment	25%

- (ii) The completed PPE under construction during the year that are transferred to the various PPE items are as follows:

	₦'000
Land and buildings	55,504
Plant & machinery	227,436
Furniture & equipment	28,948

Required:

Prepare a schedule of property, plant and equipment to be included in the notes to the financial statements of Royal Ltd for the year ended December 31, 2015.

(12 Marks)

(Total 20 Marks)

QUESTION 4

Sunny Agaga Enterprises had commissioned you to prepare the accounts of his business for the year ended December 31, 2015. He kept the records of business takings and payments only. Cash had been paid into a bank account and cheques thereon drawn for both business and private purposes.

The information obtained was:

	₦'000
Cash paid into bank	15,200
Private payments out of bank	2,600
Payments to suppliers out of bank	12,200
Cash sales	25,000
Payments to suppliers by cash	3,800
Payments by cheque:	
Wages	4,960
General expenses	500

The assets and liabilities at the beginning and end of the period were as follows:

	January 1, 2015	December 31, 2015
	₦'000	₦'000
Inventory	2,000	1,500
Bank balance	800	1,200
Cash in hand	40	40
Trade receivables	1,400	2,000
Trade payables	2,740	2,000

You are required to prepare:

- Cash book (6½ Marks)
 - Trade payables control account (2½ Marks)
 - Trade receivables control account (2 Marks)
 - Statement of profit or loss for the year ended December 31, 2015. (5 Marks)
 - Statement of financial position as at December 31, 2015 (4 Marks)
- (Total 20 Marks)**

QUESTION 5

The Financial Statements below relate to Abuja Limited

Abuja Limited				
Statements of Financial Position as at December 31				
	2015		2014	
	₦	₦	₦	₦
Assets				
Non-current assets:				
Land		200,000		190,000
Buildings	400,000		400,000	
Accumulated depreciation – buildings	(42,000)	358,000	(22,000)	378,000
Equipment	386,000		136,000	
Accumulated depreciation – equipment	(56,000)	330,000	(20,000)	116,000
Total non-current assets:		<u>888,000</u>		<u>684,000</u>
Current assets				
Inventories		131,000		7,000
Trade receivables		136,000		52,000
Prepayments		8,000		12,000
Cash		108,000		74,000
Total current assets		<u>383,000</u>		<u>145,000</u>
Total assets		<u>1,271,000</u>		<u>829,000</u>

	2015		2014	
	₦	₦	₦	₦
Current liabilities:				
Trade payables		46,000		80,000
Tax payable		58,000		37,000
Interest payable		15,000		20,000
Accruals		<u>20,000</u>		<u>0</u>
Total current liabilities		<u>139,000</u>		<u>137,000</u>
Non-current liabilities:				
Bonds payable		<u>280,000</u>		<u>300,000</u>
Total liabilities		<u>419,000</u>		<u>437,000</u>
Equity:				
Share capital- Ordinary shares of ₦1 each		440,000		120,000
Retained earnings		<u>412,000</u>		<u>272,000</u>
Total equity		<u>852,000</u>		<u>392,000</u>
Total liabilities and equity		<u>1,271,000</u>		<u>829,000</u>

Abuja Limited
Statement of Profit or Loss and Other Comprehensive Income
for the year ended December 31, 2015

	₦	₦
Revenue		1,780,000
Cost of goods sold	930,000	
Other operating expenses	442,000	
Interest expense	24,000	
Loss on sale of equipment	<u>4,000</u>	<u>1,400,000</u>
Profit before tax		380,000
Income tax		<u>130,000</u>
Profit for the year		<u><u>250,000</u></u>

Additional information

- (i) Operating expenses include depreciation expense of ₦66,000 and charges from prepaid expenses of ₦4,000
- (ii) Land was sold at its carrying amount for cash
- (iii) Cash dividends of ₦110,000 were declared and paid in 2015
- (iv) Equipment with a cost of ₦332,000 was purchased for cash. Equipment with a cost of ₦82,000 and a carrying amount of ₦72,000 was sold for ₦68,000 cash.
- (v) Bonds of ₦20,000 were redeemed at their face value for cash.
- (vi) 260,000 ordinary shares of ₦1 each were issued for cash. 60,000 ordinary shares of ₦1 each were issued in exchange for land.

Required:

Prepare the statement of cash flow for Abuja Limited for the year ended December 31, 2015.
(Total 20 Marks)

QUESTION 6

The following were the assets and liabilities of the Young Shall Grow Club as at April 30, 2015;

	₦'000
Furniture and fittings (net)	16,340
Inventory of refreshment	4,460
Land	51,600
Subscription received in advance	4,900
Payables for drinks supplied	6,780

The receipts and payments account for the year to 30 April 2016 shows the following;

Receipts and Payments Account			
	₦'000		₦'000
Balance on 30/4/2015	7,466	Repairs and maintenance	3,218
Donations received	500	Salaries and wages	6,309
Rent of hall	5,600	Gifts and donations	600
Members' subscription	24,000	Dance expenses	950
Sale of brochure	1,740	Refreshment supplies	19,415
Sale of dance tickets	3,400	Banners expenses	10,000
Sale of refreshment	10,200	Balance c/f	12,414
	<u>52,906</u>		<u>52,906</u>

- i. Wages of ₦556,000 were due but unpaid at the accounting year-end
 - ii. Inventories of drinks at April 30, 2016 were ₦14,210,000
 - iii. Depreciation expenses on furniture and fittings was ₦1,900,000
 - iv. Subscription due but not paid at 30 April 2016 was ₦1,900,000
- Show all working

You are required:

To prepare the club's income and expenditure account for the year ended April 30, 2016 and the statement of financial position as at that date.

(Total 20 Marks)

SOLUTIONS

SECTION A

PART I – MULTIPLE CHOICE QUESTIONS

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

TUTORIAL

Question 4

<u>Allowance for Doubtful Receivables Account</u>	₦
Balance b/f (2% x N10,000,000)	200,000
Balance c/d (2% x N8,500,000)	<u>170,000</u>
Decrease in Allowance (Credited to SOPL)	<u>30,000</u>

Question 8

<u>Determination of Purchases Value</u>	₦
Cost of sales	95,000
Add: Closing inventories	30,000
Less: Opening inventories	<u>(12,500)</u>
Value of Purchases	<u>112,500</u>

Question 15

Determination of Gain or Loss on Disposal of Motor car

Date	Details	Amount ₦
01/01/2014	Cost	500,000
31/12/2014	Depreciation Charged at 20% x 500,000	<u>(100,000)</u>
31/12/2014	Carrying Amount	400,000
31/12/2015	Depreciation Charged at 20% x 400,000	<u>(80,000)</u>
31/12/2015	Carrying Amount	320,000
01/01/2016	Sales Proceeds	<u>300,000</u>
	Loss on Disposal (SOPL)	<u>20,000</u>

Question 18

Insurance Account

	₦
Insurance paid during the period	13,500
Amount charged to SOPL ($\frac{12}{15} \times 13,500$)	<u>10,800</u>
Prepaid Insurance carried forward ($\frac{3}{15} \times 13,500$)	<u>2,700</u>

SECTION B

SOLUTION 1

WAZOBIA Capital Account

Date		₦	Date		₦
31-12-15	Balance c/d	<u>500,000</u>	01-01-15	Balance b/f	350,000
		<u>500,000</u>	03-02-15	Bank	<u>150,000</u>
					<u>500,000</u>
			01-01-16	Balance b/d	500,000

Cash Book

Date		₦	Date		₦
01-01-15	Balance b/f	210,000	07-03-15	Furniture & Fittings	55,000
03-02-15	Capital	150,000	08-04-15	Purchases	30,000
11-05-15	Sales	60,000	14-06-15	Drawings	12,500
18-08-15	Trade Receivables	65,000	15-07-15	Purchases	100,000
21-09-15	Sales	120,000	24-10-15	Printing & Stationery	22,500
		<u>605,000</u>	31-12-15	Balance c/d	<u>385,000</u>
					<u>605,000</u>
01-01-16	Balance b/d	385,000			

Furniture & Fittings Account

Date		₦	Date		₦
07-03-15	Bank	<u>55,000</u>	31-12-15	Balance c/d	<u>55,000</u>
01-01-16	Balance b/d	55,000			

Other Payables - Ovia's Account

Date		₦	Date		₦
31-12-15	Balance c/d	<u>200,000</u>	27-11-15	Motor Vehicle	<u>200,000</u>
			01-01-16	Balance b/d	200,000

Printing and Stationery Account

Date		₦	Date		₦
24-10-15	Bank	<u>22,500</u>	31-12-15	Balance c/d	<u>22,500</u>
01-01-16	Balance b/d	22,500			

Purchases Account

Date		₦	Date		₦
08-04-15	Bank	30,000			
08-04-15	Trade Payables	15,000			
15-07-15	Bank	100,000			
15-07-15	Trade Payables	<u>50,000</u>	31-12-15	Balance c/d	<u>195,000</u>
		<u>195,000</u>			<u>195,000</u>
01-01-16	Balance b/d	195,000			

Trade Payables Account

Date		₦	Date		₦
31-12-15	Balance c/d	<u>65,000</u>	08-04-15	Purchases	15,000
		<u>65,000</u>	15-07-15	Purchases	<u>50,000</u>
					<u>65,000</u>
			01-01-16	Balance b/d	65,000

Motor Vehicles Account

Date		₦	Date		₦
27-11-15	Other payables - Ovia	<u>200,000</u>	31-12-15	Balance c/d	<u>200,000</u>
01-01-16	Balance b/d	200,000			

Drawings Account

Date		₦	Date		₦
14-06-15	Bank	<u>12,500</u>	31-12-15	Balance c/d	<u>12,500</u>
01-01-16	Balance b/d	12,500			

Revenue Account

Date		₦	Date		₦
31-12-15	Balance c/d	<u>215,000</u>	11-05-15	Bank	60,000
		<u>215,000</u>	11-05-15	Trade Receivables	35,000
			21-09-15	Bank	<u>120,000</u>
					<u>215,000</u>
			01-01-16	Balance b/d	215,000

Trade Receivables Account

Date		₦	Date		₦
01-01-15	Balance b/f	65,000	18-08-15	Bank	65,000
11-05-15	Sales	<u>35,000</u>	31-12-15	Balance c/d	<u>35,000</u>
		<u>100,000</u>			<u>100,000</u>
01-01-16	Balance b/d	35,000			

Inventory Account

Date		₦	Date		₦
01-01-15	Balance b/f	<u>75,000</u>	31-12-15	Balance c/d	<u>75,000</u>
01-01-16	Balance b/d	75,000			

<u>WAZOBIA</u>		
TRIAL BALANCE AS AT DECEMBER 31, 2015		
	DR	CR
	₦	₦
Trade Receivables and Payables	35,000	65,000
Inventory at January 1, 2015	75,000	
Cash at Bank	385,000	
Capital		500,000
Furniture and Fittings	55,000	
Printing and Stationery	22,500	
Purchases and Revenue	195,000	215,000
Drawings	12,500	
Motor Vehicles	200,000	
Other Payables – Ovia		200,000
	980,000	980,000

Tutorial Notes:

Inventory at December 31, 2015 valued at ₦125,000 was not to be included in the trial balance.

MARKING GUIDE

	Mark	Mark
Capital account – 3 correct entries at $\frac{1}{3}$ per tick	1	
Cash book – 11 ticks at $\frac{1}{3}$ per tick	$3\frac{2}{3}$	
Furniture & fittings account – 2 correct entries at $\frac{1}{3}$ per tick	$\frac{2}{3}$	
Other payables account – 2 correct entries at $\frac{1}{3}$ per tick	$\frac{2}{3}$	
Printing and stationery account – 2 correct entries at $\frac{1}{3}$ per tick	$\frac{2}{3}$	
Purchases account – 5 correct entries at $\frac{1}{3}$ per tick	$1\frac{2}{3}$	
Trade payables account – 3 correct entries at $\frac{1}{3}$ per tick	1	
Motor vehicles account – 2 correct entries at $\frac{1}{3}$ per ticks	$\frac{2}{3}$	
Drawings account – 2 correct entries at $\frac{1}{3}$ per tick	$\frac{2}{3}$	
Revenue account – 4 correct entries at $\frac{1}{3}$ per tick	$1\frac{1}{3}$	
Trade receivables account – 4 correct entries at $\frac{1}{3}$ per tick	$1\frac{1}{3}$	
Inventory account – 2 correct entries at $\frac{1}{3}$ per tick	$\frac{2}{3}$	14
Trial balance – available entries 13		
- Obtainable 12 correct entries at $\frac{1}{2}$ mark per tick		<u>6</u>
Total		<u>20</u>

EXAMINER'S REPORT

The question examines candidates' ability to apply the double entry principle and prepare the trial balance.

Over 90% of the candidates attempted the question and their performance was average. However, some candidates committed these errors:

- Posting transactions to the wrong side of the ledger.
- Posting transactions to wrong ledgers.

The double entry principle is fundamental to book keeping; hence, candidates are advised to spend ample time to learn this principle and work through many examples.

SOLUTION 2

a) Methods by which a business can make payment to suppliers or receive payment from customers are:

1. Cash
2. Cheques
3. Bank Transfers
4. Mobile Payments
5. Electronic Fund Transfer, e.g POS
6. Standing Order
7. Direct Debits
8. Bankers Draft
9. Debit Card
10. Credit Card

b)

- i. **Receivables Control Account:** The receivables control account is used to record the value of transactions in total with credit customers. The balance on the receivables control account; a debit balance, is the amount owed the business by all customers.

Receivables control account is double entry system that is used to prove that transactions have been recorded correctly in the accounts. At the end of the accounting period the total balance on the receivables control account is compared with all the receivables ledger balances. The balances in the two sets of accounts must be equal but if they differ, the reasons for the differences must be investigated and corrections made. This process is referred to as receivables control account reconciliation.

- ii. **Payables Control Account:** The payables control account is used to record the value of transactions in total for credit purchases. The balances on the payables control account; a credit balance, is the amount owed by a business to trade suppliers at the end of the period.

The payables control account balances are compared with the balances in the payables ledgers. The balance in the payables control account might differ from the total of the accounts in the payables ledgers. In this case, the business must look for the differences between them and effect corrections.

c. i. Receivables Control Account			
	₦		₦
Balance b/d	1,134,400	Contra transfer from	
		Payable account	112,000
		Sales return	73,400
		Bal c/d	<u>949,000</u>
	<u>1,134,400</u>		<u>1,134,400</u>
Balance b/d	949,000		

Reconciliation of Receivables Control Account and Receivables Ledger Balance

	₦
Receivables ledger balance (debit)	1,020,800
Sales to customer wrongly posted twice	(115,000)
Credit sales omitted	<u>43,200</u>
Balance as per receivable control account	<u>949,000</u>

ii. Payable Control Account			
	₦		₦
Cash error (65760- 56760)	9,000	Balance c/d	570,500
Purchases day book overcast	54,800		
Corrected balance c/d	<u>506,700</u>		
	<u>570,500</u>		<u>570,500</u>
		Corrected balance b/d	506,700

Reconciliation of Payables Control Account and Payable Ledger Balance

	₦
Payables ledger balances (credit)	455,380
Adjust for:	
Cash discount granted to Ojie Ltd	(11,000)
Omitted credit balance	<u>62,320</u>
Balance per payable ledger control account	<u>506,700</u>

MARKING GUIDE

	Marks	Marks
a. Methods for making payments – 6 points at 1 mark		6
b. Receivables control account:		
- Definition	1	
- Purpose	1	
- Need for reconciliation	<u>1</u>	3
Payables control account		
- Definition	1	
- Purpose	1	
- Need for reconciliation	<u>1</u>	3
C Preparation of receivable control account – 3 correct entries at ½ mark	1½	
Preparation of payable control account – 4 correct entries at ½ mark	2	
Reconciliation with payable ledgers – 4 correct entries at ½ mark	2	<u>8</u>
		<u>20</u>

EXAMINER'S REPORT

The question requires candidates to list the means of payments for transactions and it also tests candidates' knowledge on the receivables and payables control accounts and reconciliation with their respective ledger account balances.

Over 70% of the candidates attempted the question but their performance was below average, though they did well in Part (a) of the question.

The candidates' pitfalls include:

- i. Inability to define and state the features of receivables and payables control accounts.
- ii. Not being able to distinguish between transactions to be adjusted in control accounts and those to be adjusted in their respective reconciliation accounts.
- iii. Posting transactions to the wrong side of control accounts.

Candidates are advised to study the basic principles on this subject matter in the ICAN Study Text and practise past examinations questions on the topic.

SOLUTION 3

(a)

OHIO PLC
Journal Entries for Correction of Errors

Particulars	DR	CR
	₦	₦
Motor Vehicle Repairs Account	55,000	
Suspense Account		55,000
Trade Receivable Account	18,000	
Suspense Account		18,000
Suspense Account	42,000	
Rental Income Account		42,000
Trade Receivable Account	36,000	
Suspense Account		36,000
Suspense Account	45,000	
Returns Inward Account		45,000
Suspense Account	23,000	
Discount Received Account		23,000
Purchases Account	34,500	
Suspense Account		34,500
Suspense Account	13,000	
Cash Account		13,000

Suspense Account

	₦		₦
Balance b/f	20,500	Motor Vehicle Repairs	55,000
Returns Inward	45,000	Trade Receivables	18,000
Discount Received	23,000	Receivable Control	36,000
Cash	13,000	Purchases	34,500
Rental Income	42,000		
	<u>143,500</u>		<u>143,500</u>

(b)

ROYAL LIMITED
Schedule of Property, Plant and Equipment for the year ended December 31, 2015

	Land & Building	Plant & Machinery	Furniture & Equipment	PPE Under Construction	Total
Cost:	₦'000	₦'000	₦'000	₦'000	₦'000
Bal. at 01/01/2015	607,842	1,251,688	209,214	553,704	2,622,448
Additions	38,668	92,520	18,420	304,984	454,592
Disposal	(1,188)	(32,208)	(15,482)	-	(48,878)
Reclassification	<u>55,504</u>	<u>227,436</u>	<u>28,948</u>	<u>(311,888)</u>	<u>-</u>
Bal. at 31/12/2015	<u>700,826</u>	<u>1,539,436</u>	<u>241,100</u>	<u>546,800</u>	<u>3,028,162</u>
Acc. Depreciation:					
Bal. at 01/01/2015	46,720	279,160	95,852	-	421,732
Current year charge	14,017	230,915	60,275	-	305,207
Disposal	<u>(178)</u>	<u>(22,068)</u>	<u>(14,244)</u>	<u>-</u>	<u>(36,490)</u>
Bal. at 31/12/2015	<u>60,559</u>	<u>488,007</u>	<u>141,883</u>	<u>-</u>	<u>690,449</u>
Carrying Amount:					
Bal. at 31/12/2015	<u>640,267</u>	<u>1,051,429</u>	<u>99,217</u>	<u>546,800</u>	<u>2,337,713</u>
Bal. at 01/01/2015	<u>972,528</u>	<u>561,122</u>	<u>113,362</u>	<u>553,704</u>	<u>2,200,716</u>

MARKING GUIDE

	Marks	Marks
A Journal entries – 16 correct entries at ¼ marks each	4	
Suspense account – 8 correct entries at ½ mark each	<u>4</u>	8
B Schedule of PPE: Available 49 correct entries		
Obtainable 48 correct entries at ¼ mark each		<u>12</u>
Total		<u>20</u>

EXAMINER'S REPORT

Section (a) of the question tests candidates' ability to correct errors using journal entries and preparing suspense account. Section (b) examines candidates' ability to prepare the schedule for Property, Plant and Equipment.

About 80% of the candidates attempted the question but their performance was below average.

The following pitfalls were noted.

- i. Preparing ledger accounts instead of journals;
- ii. Debiting transactions that ought to be credited to the journals and vice-versa.
- iii. Some entries in the journals were transferred to the wrong side of the suspense account
- iv. Candidates used wrong format for the presentation of the Property, Plant and Equipment schedule.

Candidates are advised to study the procedures and format set out in their Study Text for better performance in future examinations of the Institute.

SOLUTION 4

(a)

SUNNY AGAGA ENTERPRISES**Cashbook**

Particulars	Cash	Bank	Particulars	Cash	Bank
	₦'000	₦'000		₦'000	₦'000
Balance b/f	40	800	Bank (contra)	15,200	
Cash (contra)		15,200	Private payment – Drawings		2,600
Sales	25,000		Payment to suppliers	3,800	12,200
Received from Customers (Bal. Fig)		5,460	Wages		4,960
			General expenses		500
			Cash Drawings (Bal. Fig)	6,000	
			Balance c/d	40	1,200
	25,040	21,460		25,040	21,460
Balance b/d	40	1,200			

(b)

Trade Payables Control Account

	₦'000		₦'000
Cash paid to suppliers	3,800	Balance b/f	2,740
Cheque paid to suppliers	12,200	Credit Purchases (Bal. Fig)	15,260
Balance c/d	2,000		
	18,000		18,000
		Balance b/d	2,000

(c)

Trade Receivables Control Account

	₦'000		₦'000
Balance b/f	1,400	Cheque received from customers	5,460
Credit sales (Bal. Fig)	6,060	Balance c/d	2,000
	7,460		7,460
Balance b/d	2,000		

(d)

SUNNY AGAGA ENTERPRISES

Statement of Profit or Loss for the year ended December 31, 2015

	₦'000	₦'000
Revenue (25,000 + 6060)		31,060
Cost of sales:		
Opening Inventory	2,000	
Purchases	<u>15,260</u>	
Cost of goods available for sales	17,260	
Closing Inventory	<u>(1,500)</u>	
	15,760	
Wages	<u>4,960</u>	
Cost of goods sold		(20,720)
Gross profit		10,340
Less: general expenses		<u>(500)</u>
Net profit for the period		<u>9,840</u>

SUNNY AGAGA ENTERPRISES

Statement of Financial Position as at December 31, 2015

<u>Current Assets:</u>	₦'000
Inventory	1,500
Trade receivables	2,000
Bank balance	1,200
Cash in hand	<u>40</u>
Total Assets	<u>4,740</u>
<u>Equity and Liabilities:</u>	
Equity:	
Capital at start	1,500
Profit for the period	9,840
Drawings (6,000 + 2,600)	<u>(8,600)</u>
Total Equity	2,740
<u>Current Liabilities</u>	
Trade Payables	<u>2,000</u>
Total Equity and Liabilities	<u>4,740</u>

Working Notes

Wk 1: Opening Statement of Affairs as at January 1, 2015

<u>Assets:</u>	<u>₦'000</u>
Inventory	2,000
Trade Receivables	1,400
Bank balance	800
Cash in hand	<u>40</u>
Total Assets	4,240
<u>Liabilities:</u>	
Trade Payables	<u>(2,740)</u>
Capital as at January 1, 2015	<u><u>1,500</u></u>

MARKING GUIDE

	Marks	Marks
Cash book – 13 correct entries at ½ mark each		6½
Trade payable control – 5 ticks correct entries at ½ mark each		2½
Trade receivable control – 4 correct entries at ½ mark each		2
Statement of profit or loss – title	½	
- 9 correct entries at ½ mark each	<u>4½</u>	5
Statement of financial position – 8 correct entries at ½ mark each		
		<u>4</u>
Total		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' ability to convert records of single entry into double entry and prepare basic financial statements from the results obtained.

Over 90% of the candidates attempted the question, but their performance was below average.

The following weaknesses were observed:

- Candidates lack of understanding of the application of the principle of double entry.
- Not being able to differentiate between cash items that should be recorded in bank or cash column of the cash book.
- Inability to determine what the balancing figures in each ledger account represents for purpose of preparing final accounts.

Candidates are advised to learn the double entry principles thoroughly and practice examples to get good understanding of the application of the principles. The study text and ICAN pathfinders set out detailed procedures on this principle.

SOLUTION 5

ABUJA LIMITED STATEMENT OF CASHFLOW FOR THE YEAR ENDED DECEMBER 31, 2015 – DIRECT METHOD

	NOTE	₦'000	₦'000
Cash flow from operating activities			
Cash received from customers	1		1,696
Cash paid to suppliers	2		(1,088)
Salaries & other expenses paid	3		<u>(352)</u>
Cash flow from operating activities before tax			256
Tax paid			<u>(109)</u>
			147
<u>Cash generated from investing activities:</u>			
Purchase of Equipment		(332)	
Proceeds from disposal of Land		50	
Proceeds from disposal of Equipment		<u>68</u>	
Net Cashflows from Investing Activities			(214)
<u>Cash generated from financing Activities:</u>			
Proceeds from issue of ordinary shares		260	
Repayment of Bond Payables		(20)	
Dividend paid		(110)	
Interest paid		<u>(29)</u>	
Net Cashflows from Financing Activities			<u>101</u>
Net increase in cash and cash equivalent for the year			34
Cash and cash equivalent at the beginning			<u>74</u>
Cash and cash equivalent at the end of the year			<u>108</u>

	₦'000
<u>NOTES</u>	
1. Cash received from customers	1,780
Increase in receivables (136 – 52)	<u>(84)</u>
	<u>1,696</u>
2. Cash paid to suppliers	
Purchases	1,054
Decrease in payables	<u>34</u>
	<u>1,088</u>
Purchases = cost of sales + closing inventory less opening inventory ₦'000 (930 + 131 – 7)	1,054
3. Salaries & expenses paid	
Other expenses	442
Depreciation	(66)
Decrease in prepayments	(4)
Increase in accruals	<u>(20)</u>
	<u>352</u>

Abuja Limited
Statement of Cashflows for the year ended December 31, 2015
– INDIRECT METHOD

<u>Cash generated from operating activities</u>	Notes	₦'000	₦'000
Profit before interest & tax			380
<u>Add back items not involving movement of cash:</u>			
Interest expense		24	
Loss on disposal of equipment		4	
Depreciation charge		<u>66</u>	
			<u>94</u>
			474
<u>Movement in working capital:</u>			
Increase in Inventories (131,000 - 7,000)		(124)	
Increase in Trade Receivables (136,000 - 52,000)		(84)	
Decrease in Prepayment (12,000 - 8,000)		4	
Decrease in Trade Payables (80,000 - 46,000)		(34)	
Increase in Accruals (20,000 - 0)		<u>20</u>	
			(218)
Taxation Paid	1		<u>(109)</u>
Net Cashflows from Operating Activities			147
<u>Cash generated from investing activities:</u>			
Purchase of Equipment	2	(332)	
Proceeds from disposal of Land	4	50	
Proceeds from disposal of Equipment		<u>68</u>	
Net Cashflows from Investing Activities			(214)
<u>Cash generated from financing Activities:</u>			
Proceeds from issue of ordinary shares		260	
Repayment of Bond Payables		(20)	
Dividend paid		(29)	
Interest paid	6	<u>(110)</u>	
Net Cashflows from Financing Activities			<u>101</u>
Net increase in cash and cash equivalent for the year			34
Cash and cash equivalent at the beginning			<u>74</u>
Cash and cash equivalent at the end of the year			<u>108</u>

NOTE: Candidates can use either DIRECT or INDIRECT method for their solution since the examiner did not indicate the method that should be used.

1.

Tax Payable Account			
	₦		₦
Cash Paid (Bal. Fig)	109,000	Balance b/f	37,000
Balance c/d	<u>58,000</u>	SOPL	<u>130,000</u>
	<u>167,000</u>		<u>167,000</u>

2.

<u>Working Notes</u> Equipment Account			
	₦		₦
Balance b/f	136,000	Disposal	82,000
Addition – Cash	<u>332,000</u>	Balance c/d	<u>386,000</u>
	<u>468,000</u>		<u>468,000</u>

3.

Ordinary Share Capital Account			
	₦		₦
		Balance b/f	120,000
		New Issue by Cash	260,000
Balance c/d	<u>440,000</u>	Land Purchased thru Shares	<u>60,000</u>
	<u>440,000</u>		<u>440,000</u>

4.

Land Account			
	₦		₦
Balance b/f	190,000	Disposal by Cash (Bal. Fig)	50,000
Ordinary Share Capital	<u>60,000</u>	Balance c/d	<u>200,000</u>
	<u>250,000</u>		<u>250,000</u>

5.

Disposal of Equipment Account			
	₦		₦
Cost	82,000	Accumulated Depreciation	10,000
		Cash	68,000
		Loss on disposal	<u>4,000</u>
	<u>82,000</u>		<u>82,000</u>

6.

Interest Payable Account			
	₦		₦
Cash Paid (Bal. Fig)	29,000	Balance b/f	20,000
Balance c/d	<u>15,000</u>	SOPL	<u>24,000</u>
	<u>44,000</u>		<u>44,000</u>

MARKING GUIDE

	Marks	Marks
Statement of cashflow – 26 correct entries at $\frac{1}{2}$ mark each		13
Workings – 21 correct entries at $\frac{1}{3}$ mark each		<u>7</u>
Total		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' ability to prepare statement of cashflows using the direct or indirect methods.

Only about 20% of the candidates attempted the question and their performance was below average.

Candidates' failure could be adduced to the following reasons:

- Inability of the candidates to present the cashflow statement in accordance with the format stipulated by IAS 7.
- Inability of the candidates to distinguish line items that should be included under the main classifications of cash generated from operating, investing and financing activities.

Candidates are advised to study the format and the rules for classification under major headings prescribed in IAS 7.

SOLUTION 6

The Young Shall Grow Club

Income and Expenditure account for the year ended April 30, 2016

<u>Income:</u>	₦'000	₦'000
Subscriptions (Wk 1)		30,800
Donations Received		500
Rent of hall		5,600
Sale of brochure		1,740
Sales of dance tickets		3,400
Gross profit from refreshment (Wk 3)		<u>7,315</u>
		49,355
Expenditure:		
Repairs and maintenance	3,218	
Salaries and Wages(Wk 2)	6,865	
Gifts and donations	600	
Dance expenses	950	
Banners expenses	10,000	
Depreciation of Furniture	<u>1,900</u>	
		<u>(23,533)</u>
Surplus		<u>25,822</u>

The Young Shall Grow Club

Statement of Financial Position as at April 30, 2016

Non-Current Assets	₦'000	₦'000
Land		51,600
Furniture and fittings (16,340 - 1,900)		<u>14,440</u>
		66,040
Current Assets		
Inventory of drinks	14,210	
Subscription outstanding	1,900	
Cash and Bank balances	<u>12,414</u>	
Total Current Assets		<u>28,524</u>
Total Assets		<u>94,564</u>
Equity and Liabilities:		
Accumulated Funds (Wk 3)		68,186
Surplus		<u>25,822</u>
Total Equity		94,008
Current Liabilities:		
Wages owing	<u>556</u>	
Total Current Liabilities		<u>556</u>
Total Equity and Liabilities		<u>94,564</u>

Subscription Account

N'000

Wk 2:

₹'000

Wk 3: Club's Refreshment Trading Account for the year ended April 30, 2016

Wk 4:

N'000

	N'000		N'000
Receipts & Payment	19,415	Balance b/f	6,780
		Purchases (bal. fig)	<u>12,635</u>
	<u>19,415</u>		19,415

Wk 5: Determination of Opening Accumulated Fund as at May 1, 2015

Assets:	₦'000	₦'000
Land		51,600
Furniture and fittings		16,340
Inventory of refreshment		4,460
Bank balance		<u>7,466</u>
Total Assets		79,866
Liabilities:		
Payables for drinks supplied	6,780	
Subscription received in advance	<u>4,900</u>	
Total Liabilities		<u>(11,680)</u>
Accumulated Fund as at May 1, 2015		<u>68,186</u>

MARKING GUIDE

	Marks	Marks
Income and expenditure account – 16 correct entries at ½ mark each		8
Statement of financial position – 12 correct entries at ½ mark each		6
Workings 24 correct entries at ¼ mark each		<u>6</u>
Total		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' ability to prepare the final accounts of a not-for-profit organisation.

Many of the candidates attempted the question, but their performance was poor.

Commonest pitfalls include:

- Candidates poor application of the double entry principle.
- Candidates inability to determine the subscription to be reported in the income and expenditure account.
- Not been able to present correctly subscriptions received in advance and due from members in the statement of financial position.

Candidates are advised to pay attention to the double entry principle and its application in order to enhance their performance in future examinations.

4. Calculate the number of units to be sold to achieve a profit of ₦249,900
- A. 2072
 - B. 2670
 - C. 2672
 - D. 2673
 - E. 2872
5. The sum of direct labour cost and manufacturing overhead is known as
- A. Total cost
 - B. Prime cost
 - C. Overhead cost
 - D. Total variable cost
 - E. Conversion cost
6. Which of the following combination is Prime Cost?
- A. Direct Material + Work –In-Progress + Direct Labour + Direct Expenses
 - B. Direct Material + Direct Labour + Manufacturing Overheads
 - C. Direct Materials + Direct Labour + Direct Expenses
 - D. Direct Materials + Direct Labour + Manufacturing Overhead + Expenses
 - E. Direct Materials + Direct Labour + Direct Expenses + Work–In–Progress
7. Working capital is calculated as
- A. Total Assets Less Total Liabilities
 - B. Current Assets Less Total Liabilities
 - C. Current Assets Less Current Liabilities
 - D. Current Assets Less Fixed Liabilities
 - E. Non-Current Assets Less Current Liabilities
8. Costs that have been incurred in the past and irrelevant to current decisions are referred to as
- A. Relevant costs
 - B. Historical costs
 - C. Irrelevant costs
 - D. Future costs
 - E. Sunk costs
9. Which of the following is **NOT** a service organisation?
- A. Pharmaceutical company
 - B. Health care
 - C. Hotels and tourism
 - D. Training and Education
 - E. Entertainment

10. The point at which joint products are separated in the production process is called
- A. By-product
 - B. Apportioning stage
 - C. Split-off point
 - D. Unit basis
 - E. Separation stage
11. The following are attributes of a good information **EXCEPT**
- A. Must be relevant
 - B. Must be in coded language
 - C. Must be simple and understandable
 - D. Must be reliable
 - E. Must be timely
12. The intentional overestimation of expenses and/or under estimation of revenue in a budget is
- A. Budget slack
 - B. Sub-optimisation
 - C. Budget targets
 - D. Incremental budgeting
 - E. Budget setting
13. Feedback control system involves a/an taking a measurement and adjustment is then made to the system in response to the result of the measurement.
- A. Input
 - B. Comparator
 - C. Sensor
 - D. Output
 - E. Effector
14. Which of the following is **NOT** an input device for a General Purpose Digital Computer System?
- A. Voice data entry
 - B. Magnetic Ink Character Reader
 - C. Optical Mark Reader
 - D. Optical Mark Recognition
 - E. Optical Character Recognition
15. Which of the following is **NOT** a function of a Computer Operating System?
- A. Controls the operation of all other software
 - B. Controls all operations within the computer itself
 - C. Controls the operations of all the other hardware connected to the computer system
 - D. Provides system security
 - E. Controls the computer processor only

16. Which of the following is **NOT** a role of Information Systems?
- A. Planning and decision making
 - B. Controlling
 - C. Recording transactions
 - D. Performance measurement
 - E. Integrity
17. Which of the following is **NOT** a feature of Local Area Network (LAN)?
- A. Data transfer speeds are high
 - B. Typically owned, controlled and managed by one person or a single organisation
 - C. Connected by telephone wires only
 - D. Low cost maintenance
 - E. Relatively low data transmission error
18. Which of the following is **NOT** a Web Browser Software?
- A. Operating System
 - B. Internet Explorer
 - C. Mozilla Firefox
 - D. Google Chrome
 - E. Opera
19. The following are storage media for computer systems **EXCEPT**
- A. Magnetic tape
 - B. Hard disk
 - C. Soft disk
 - D. Optical disk
 - E. Solid state storage disk
20. The following are the metrics for measuring the successes of a system **EXCEPT**
- A. System efficiency
 - B. System effectiveness
 - C. High cost of operation
 - D. Usability
 - E. System performance

SECTION B:**(80 MARKS)**

INSTRUCTION: YOU ARE REQUIRED TO ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION

QUESTION 1

XY Limited buys a particular product from Lagos and sells to customers in Ile-Ife. For the six months ended December 31, 2015, the company recorded the following transactions. There was an opening balance of 5,000 units valued at ₦70 each.

Date	Quantity bought (units)	Cost per unit (₦)
July	5,000	74
September	4,500	77
November	7,500	79

Date	Quantity sold (units)	Selling Price per unit (₦)
August	7,000	100
October	5,000	110
December	8,000	115

You are required to:

- a. Record the above transactions on a store ledger card using each of the following methods:
 - i. FIFO
 - ii. Weighted Average (18 Marks)
 - b. Determine the gross profit for the period using the weighted Average method (2 Marks)
- (Total 20 Marks)**

QUESTION 2

Pacific Ocean Printers was contracted to produce 10,000 copies of a book by Knowledge Publishers Limited for ₦1 million only. The job, which was given Job No. A50, started on October 27, 2014. As at the end of 2014, the following costs had been charged to the job by Pacific Ocean Printers.

	₦
Direct materials	200,000
Direct labour	50,000
Production overhead	75,000

In January 2015, Pacific Ocean Printers completed the job incurring the following additional cost:

- January 12, – Material requisition MR 155: 1800 units at ₦100 per unit
- January 14 – 16, – Labour time ticket No 314: 260 hours at ₦140 per hour.
- January 19, – Material requisitions MR 155: 400 units at ₦300 per unit.
- January 20 – 24, – Labour time ticket no 324: 300 hours at ₦80 per hour.

It is the policy of Pacific Ocean Printers to absorb 150% of direct labour cost as production overhead. Selling and Administrative expenses was ₦54,000.

Required:

- Prepare a job cost sheet for the job to reflect the transaction for 2014 and 2015 (10 Marks)
 - Assuming there was no other job in progress at the end of 2014, how much should Pacific Ocean Printers reflect in its books as work-in-progress at the end of 2014? (2½ Marks)
 - What is the expected profit on Job A50 by Pacific Ocean Printers, if any? (2½ Marks)
 - List **FIVE** information on a typical job cost sheet (5 Marks)
- (Total 20 Marks)**

QUESTION 3

From the books of ABC Limited, the following data were extracted during Year 2015.

Month	Sales ₦'000	Purchases ₦'000	Wages ₦'000	Expenses ₦'000
July	100,000	87,000	10,000	4,200
August	95,000	74,000	10,000	1,550
September	80,000	60,000	10,000	3,850
October	114,000	90,000	10,000	5,460
November	127,000	63,000	10,000	6,000
December	148,000	95,000	10,000	1,830

The following additional information is provided:

- Cash balance on September 30, was ₦50 million.
- A machine costing ₦42 million to be installed in September is expected to be paid for in twelve equal installments starting from September 2015.
- 40% of sales is on credit and credit sales are to be settled one month after sale.
- No delay in the payment of wages to avoid industrial action.
- 2million ordinary shares of ₦3.50 each are to be sold in October when half of the money will be collected, the remaining parts to be received in two months' time.
- 75% of the purchases will be paid for immediately and the balance paid in two equal monthly installments.
- Dividends for half year ending June 2015 amounting to ₦8.75 million to be paid to shareholders in November 2015.
- Other costs are to be paid as they are incurred.

The company is to pay its tax for year 2014 amounting to ₦3.84 million in three equal monthly installments in the last quarter of year 2015.

Required:

Prepare a cash budget for the months of October – December, 2015.

(Total 20 Marks)

QUESTION 4

Computer hardware system has evolved from huge systems to portable ones.

Required:

- a. Define computer hardware and enumerate **FOUR** of its components.
(6 Marks)
- b. List and describe briefly **FOUR** types of digital computer systems.
(8 Marks)
- c. The keyboard and mouse are **TWO** important input devices to computer systems. List and describe briefly **THREE** other input devices.
(6 Marks)

(Total 20 Marks)

QUESTION 5

- a. Describe briefly the following data processing methods:
- i. Batch Processing
 - ii. Real-time processing
 - iii. Distributed Processing (6 Marks)
- b. State **TWO** advantages and **TWO** disadvantages of each of the data processing methods in (a) above. (12 Marks)
- c. Define Database and Database Management System (DBMS). (2 Marks)
- (Total 20 Marks)**

QUESTION 6

- a. i. List **SIX** examples of network protocols. (6 Marks)
- ii. List **FOUR** facilities provided by Database Management System (DBMS). (4 Marks)
- b. Gocome Limited produces three types of products Go, Co & Me. The following data were extracted from the company's record for month 1:

	Go N/unit	Co N/unit	Me N/unit
Selling price	50	55	60
Direct Material Cost	5	7	8
Direct labour	8	7	7
Direct Expenses	2	5	3
Production Overhead – Variable	2	3	4
Production Overhead - Fixed	5	5	5
Selling and Distribution-Variable	2	4	4
Selling and Distribution-Fixed	8	8	8
Administrative Expenses	10	10	10
Sales Demand for month 2 (Unit/millions)	2	3	2
Machine capacity (Unit/millions)	3	2	5

Required

- i. Determine the mix of production to achieve the highest profitability. (5 Marks)
 - ii. Calculate the total value of net profit for each product. (5 Marks)
- (Total 20 Marks)**

SOLUTIONS

MCQ SOLUTION

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

WORKINGS

$$3. \quad \text{Number of units to Break-even} = \frac{\text{Fixed Cost}}{\text{Contribution /unit}}$$

$$\text{Contribution} = \text{Sales Price} - \text{Marginal Cost}$$

$$= \text{N}1,000 - \text{N}650 = \text{N}350$$

$$\text{Number of units to Break-even} = \frac{\text{N}685,300}{\text{N}350} = 1,958 \text{units}$$

4. Number of units to be sold to achieve a target profit of ₦249,900

$$\begin{aligned} &= \frac{\text{Fixed Cost} + \text{Target Profit}}{\text{Contribution /unit}} \\ &= \frac{\text{₦685,300} + \text{₦249,900}}{\text{₦350}} \\ &= \frac{\text{₦935,200}}{\text{₦350}} = 2,672 \text{ units} \end{aligned}$$

EXAMINER'S REPORT

This section comprises of twenty questions of one-mark each. The questions cover a sizeable proportion of the syllabus.

The questions were attempted by virtually all the candidates who presented themselves for this examination.

Performance was fair as about half of the candidates scored 50% and above.

In future, performance would be better if candidates could expand their coverage of the syllabus.

SOLUTION 1:**XY LTD****(ai) FIFO method- store ledger card**

Date	Receipts			Issues			Balance		
	Unit	Unit cost ₦	Total ₦	Unit	Unit cost ₦	Total ₦	Unit	Unit cost ₦	Total ₦
July	-	-	-	-	-	-	5000	70	350, 000
July	5000	74	370, 000	-	-	-	10, 000	-	720, 000
August	-	-	-	7,000	-	498,000	3000	74	222, 000
Sept.	4500	77	346, 500	-	-	-	7500	-	568, 500
Oct.	-	-	-	5000	-	376,000	2500	77	192, 500
Nov.	7500	79	592, 500	-	-	-	10, 000	-	785, 000
Dec.	-	-	-	8000	-	627,000	2000	-	158, 000

Workings

$$\begin{aligned}
 1^{\text{st}} \text{ issue- 7000 units} &= 5000 \text{ units @ } \cancel{\text{₦70}} = 350, 000 \\
 &2000 \text{ units @ } \cancel{\text{₦74}} = \underline{448, 000} \\
 &\underline{498, 000}
 \end{aligned}$$

$$\begin{aligned}
 2^{\text{nd}} \text{ issue- 5000 units} &= 3000 \text{ units @ } \cancel{\text{₦74}} = 222, 000 \\
 &2000 \text{ units @ } \cancel{\text{₦77}} = \underline{154, 000} \\
 &\underline{376, 000}
 \end{aligned}$$

$$\begin{aligned}
 3^{\text{rd}} \text{ issue - 8000 units} &= 2500 \text{ units @ } \cancel{\text{₦77}} = 192, 500 \\
 &5,500 \text{ units @ } \cancel{\text{₦79}} = \underline{434, 500} \\
 &\underline{627, 000}
 \end{aligned}$$

(ii) WEIGHTED AVERAGE METHOD

Date	Receipts			Issues			Balance		
	Unit	Unit cost ₦	Total ₦	Unit	Unit cost ₦	Total ₦	Unit	Unit cost ₦	Total ₦
1ST July	-	-	-	-	-	-	5000	70	350,000
July	5000	74	370,000	-	-	-	10,000	72	720,000
August	-	-	-	7,000	72	504,000	3000	72	216,000
Sept.	4500	77	346,500	-	-	-	7500	75	562,500
Oct.	-	-	-	5000	75	375,000	2500	77	187,500
Nov.	7500	79	592,500	-	-	-	10, 000	78	780,000
Dec.	-	-	-	8000	78	624,000	2000	78	156,000

(b) Determination of gross profit

Total sales for the period	-	₦
August-7000units x ₦ 100/unit	-	700,000
October-5000units x ₦ 110/unit	-	550,000
December- 8000units x ₦ 115/unit	-	<u>920,000</u>
		<u>2,170,000</u>

Cost of goods sold using Weighted Average method

	₦
August- 7000 units X N72/unit	504, 000
October- 5000 units X N75/unit	375, 000
September- 8000 units X N78/unit	<u>624, 000</u>
	<u>1, 503, 000</u>

Gross profit	=	Sales – cost of goods sold
	=	₦2, 170, 000 – ₦1, 503, 000
	=	<u>₦667,000</u>

MARKING GUIDE

1(a) Store Ledger Card – FIFO METHOD

Total Receipts	1½	
Total Issues	1½	
Balance Figures	3½	
Workings	<u>1</u>	7½

Store Ledger Card – Weighted Average Method

Total Receipts	1½	
Total Issues	1½	
Balance Figures	3½	
Headings	<u>1</u>	7½

1(b) Determination of Gross Profit

Total Sales (Aug, Oct, Dec, Total)	2	
Cost of Goods Sold (Aug, Oct, Dec, Total)	2	
Gross Profit Calculation	<u>1</u>	
		<u>5</u>
TOTAL		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' understanding of stock valuation using two methods of First In-First-Out (FIFO) and Weighted Average.

About 95% of the candidates attempted the question. Performance was good as about 60% of those who attempted the question scored 50% and above.

Common pitfalls among those who did not do well include:

- i. Bad presentation;
- ii. Inadequate understanding of the subject matter; and
- iii. Poor arithmetic.

For improved performance in future, candidates are advised to:

- i. Appreciate the standard formats of presentation for stock valuation;
- ii. Improve on the quality of their preparation;
- iii. Extend the coverage of the syllabus; and
- iv. Vary use of texts to include the study packs;

SOLUTION 2

Pacific Ocean Printers

a. Job No A50 27th December 2014 - 24th January 2015

		₦	₦
Bal. B/F:			
1 st January 2015	Materials	200,000	
	Direct Labour	50,000	
	Production overhead	<u>75,000</u>	
			325,000
	MR 155	180,000	
	MR 155	120,000	
			300,000
	Labour time ticket 314	36,400	
	Labour time ticket 324	<u>24,000</u>	
			60,400
	Production overhead		
	Ticket 314	54,600	
	Ticket 324	<u>36,000</u>	
			90,600
	Selling and Admin. Expenses		<u>54,000</u>
	TOTAL PRODUCTION COST		<u>830,000</u>

b. Total value of work-in-progress as at 31st December 2014

	₦
Direct Material	200, 000
Direct Labour	50, 000
Production Overhead	<u>75, 000</u>
	<u>325, 000</u>

c. Expected profit calculation:

	₦
Contract price	1, 000, 000
Less total cost on job A50	<u>830, 000</u>
Expected Profit	<u>170,000</u>

d. Information on a typical job cost sheet are:

- i. Name of customer
- ii. Description of the job to be done
- iii. Job order number
- iv. No of units to be produced
- v. Date of commencement of the job
- vi. Date of completion of the job
- vii. Despatch Note Number

- viii. Invoice Number and Date
- ix. Date job was received

MARKING GUIDE

2(a)	Preparation of Job Cost Sheet		
	Material, Direct Labour, Overheads, Total	2½	
	MR 155 + Total	2	
	Labour Time Ticket + Total	2	
	Direct Labour + Total	2	
	Selling & Admin Expenses	½	
	Total Job Cost	<u>1</u>	
			<u>10</u>
2(b)	Total Value of Work in Progress		
	Direct Material	½	
	Direct Labour	½	
	Production Overhead	½	
	Total	<u>1</u>	
			<u>2½</u>
2(c)	Expected Profit Calculation		
	Contract Price	1	
	Total Cost of Job	1	
	Expected Profit	<u>½</u>	
			<u>2½</u>
2(d)	Information on a typical Job Cost Sheet (One mark each for each point)	5	
			<u>20</u>

EXAMINER'S REPORT

This question tests candidates' knowledge of Job Costing requirements.

As low as 25% of the entire candidates attempted this question. From the population of those who attempted the question, only 40% scored 50% and above.

The common shortcomings exhibited by those who performed poorly include:

- i. Poor presentation
- ii. Insufficient understanding of part (b) of the question
- iii. Inability to recognise the minimum information contained on a Job Card

It will help candidates in future examinations if they:

- i. Cover the syllabus more appropriately;
- ii. Improve on time management; and
- iii. Improve on quality of preparation.

SOLUTION 3

ABC Ltd

CASH BUDGET FOR THE PERIOD OCT-DEC 2015

	OCT.	NOV.	DEC.
	₦'000	₦'000	₦'000
CASH RECEIPTS			
Cash sales (60% of sales)	68,400	76,200	88,800
Credit sales (see workings)	32,000	45,600	50,800
Proceeds from issue of shares	<u>3,500</u>	<u>-</u>	<u>3,500</u>
Total Receipts	<u>103,900</u>	<u>121,800</u>	<u>143,100</u>
CASH PAYMENTS			
Purchases of materials (see workings)	84,250	66,000	90,375
Wages	10,000	10,000	10,000
Expenses	5,460	6,000	1,830
Purchase of equipment	3,500	3,500	3,500
Dividend paid	-	8,750	
Tax paid	<u>1,280</u>	<u>1,280</u>	<u>1,280</u>
Total payments	<u>104,490</u>	<u>95,530</u>	<u>106,985</u>
Net cash flow	(590)	26,270	36,115
Opening cash bal. 1 st October	<u>50,000</u>	<u>49,410</u>	<u>75,680</u>
Cash balance at month end	<u>49,410</u>	<u>75,680</u>	<u>111,795</u>

Workings

Analysis of cash receipts from credit sales

Sept.	Oct.	Nov.	Dec.	
₦'000	₦'000	₦'000	₦'000	
48,000	32,000			40% of September sales
		45,600		40% of October sales
			50,800	40% of November sales
	<u>32,000</u>	<u>45,600</u>	<u>50,800</u>	

Analysis of cash paid for purchases

Aug.	Sept.	Oct.	Nov.	Dec.
₦'000	₦'000	₦'000	₦'000	₦'000
(75%) 55,500	(12.5%) 9,250	(12.5%) 9,250		
	(75%) 45,000	(12.5%) 7,500	(12.5%) 7,500	
		(75%) 67,500	(12.5%) 11,250	(12.5%) 11,250
			(75%) 47,250	(12.5%) 7,875
				(75%) 71,250
		<u>84,250</u>	<u>66,000</u>	<u>90,375</u>

MARKING GUIDE

		MARKS
3	Cash Budget Preparation	1½
	Sales Receipts 3 Ticks	1
	Sales of Shares 2 Ticks	1½
	Payment for machines 3 Ticks	1½
	Wages 3 Ticks	1½
	Purchases 3 Ticks	1½
	Tax Payments 3 Ticks	1½
	Dividends 1 Tick	1½
	Expenses 3 Ticks	½
	Opening Balance 1 Tick	1½
	Total Receipts 3 Ticks	1½
	Total Payments 3 Ticks	1½
	Balance c/d 3 Ticks	1½
	Workings 9 Ticks	4½
	<u>40 Ticks</u> x ½Mark	
	TOTAL	<u>20</u>

EXAMINER'S REPORT

This question tests candidates' understanding of the technicalities involved in Cash Budgeting.

About 80% of the entire candidates attempted the question. Performance was fair as about half of the candidates who attempted the question scored 50% and above.

Those candidates who did not do well exhibited the following shortcomings:

- i. Notes to the Budget information were poorly interpreted;
- ii. Formats were poor; and
- iii. Arithmetic was poor.

Candidates will do better in future, if they:

- i. Acquaint themselves with the standard format of presentation;
- ii. Improve on examination techniques; and
- iii. Use good quality texts including the ICAN Study Packs.

SOLUTION 4

- a) Computer hardware is the electronic physical part of the computer system and all the peripheral equipment connected to the central processing unit for input, output, transmission of data and storage.

The components of the hardware are:

- Central Processing Unit (CPU) comprising the Internal Memory and ALU;
- Input devices;
- Output devices;
- External storage devices; and
- Telecommunication devices.

b) Types of Computers

- **Super computer/machine:** larger computer system used by multinational companies. It supports several external storage media. Speed of operation enhanced by multi processing. It is larger than mainframe.
- **Mainframe:** very powerful computer system used by large companies. It serves as server in a network.
- **Mini/midi computer:** Less powerful than the super computer and the mainframe. It is not portable but still being used for extensive calculations.
- **Micro computers**
It is a portable computer system. It is often a standalone system but it can be used as a dummy terminal in a network. It includes:
 - ✓ **Desktop personal computer (pc):** It is a stand-alone system which can be placed on a desk. It has its own processing capability. It is endowed with a keyboard, mouse and screen as input/output devices.
 - ✓ **Laptop:** Same as pc, but it is smaller and portable.

c) Input devices

- **Touch-sensitive screens and touch pad:** This is a system with dedicated sensitive screen.
- **Magnetic Ink Character Recognition (MICR):** This uses special ferro-magnetic ink and special characters.
- **Optical Mark Reader (OMR):** This is used for multiple-choice-question examinations. Predesigned spaces are reshaped with lead-sensitive material.
- **Scanner/Optical Character Recognition (OCR):** This does not use any special ink but has specially designed characters.

- **Voice Synthesis/Voice Data Entry (VDE):** This uses speech synthesis.
- **Barcode and EPOS:** These make use of predesigned bars of various lengths and thickness.
- **Digital Camera:** This gives highest quality input. This inputs digital images of objects
- **Pointing devices** e.g Joystick, light pen etc.

MARKING GUIDE

	MARKS	MARKS
4(a) 1 mark for electronic physical part	1	
1 mark for peripheral	1	
1 mark each for 4 components $1 \times 4 = 4$	<u>4</u>	
		<u>6</u>
4(b) 1 mark each for listing 4 types of digital computers $1 \times 4 = 4$	4	
1 mark each for describing 4 types of digital computers $1 \times 4 = 4$	<u>4</u>	
		<u>8</u>
4(c) 1 mark each for listing 3 input devices $1 \times 3 = 3$	3	
1 mark each for describing 3 input devices $1 \times 3 = 3$	<u>3</u>	
		<u>6</u>
TOTAL		<u>20</u>

EXAMINER'S REPORT

This question tests candidates' knowledge and ability to:

- Define Hardware and its components;
- Recognise types of digital computers; and
- Identify types of input devices

About 95% of the candidates attempted the question. Performance was fair as about half of the candidates who attempted the question scored more than 50% of the marks.

The common inadequacies exhibited by candidates who didn't do well include:

- Mentioning customised names instead of generic names of the components of the hardware; and
- Poor description of named input devices.

Candidates will do better in future if they:

- Master ICAN Study texts;
- Improve on their studying time;
- Practise with past question papers;
- Familiarise themselves with different types of computer system; and
- Endeavour to understand the requirements of a question before attempting to proffer solution.

SOLUTION 5

- a) **Batch Processing:** Is the collection/accumulation of a group of similar transactions over a period of time or predetermined period and then processed at a single time as a whole called a batch.

Real-time Processing: This is the processing of individual transaction as they occur without the need for batching them together. The processing is done immediately

Distributed Processing: This is the use of more than one processor to perform the processing of an individual task.

b) Batch Processing

Advantages

- Relatively easy to develop
- Less processing power is required as it deals with similar updates
- Checks are available as part of the system run
- Less hardware required
- It is cheap to implement.

Disadvantages

- Turnaround time is high
- Management information is often incomplete due to out-of-date data
- Often master file are kept offline, therefore access may not always be available.

Real-time processing

Advantages

- Information is more up to date therefore providing better management information
- Increased ability for data to be online

Disadvantages

- Increase in expenses as the system becomes more complex to run and to develop
- Increased hardware capability which results in increased costs.

Distributed Processing

Advantages

- There is greater flexibility as additional computers can be added to the network when needed.
- The organisation is not dependent on a single computer which can breakdown

Disadvantages

- Control may be very difficult
- With several computers in dispersed locations, lack of coordination of equipment, software and data storage may occur.

- c) Database is a collection of structured data organised so that various programs can access the information while a database management system (DBMS) is the software that manages a database, dealing with all aspects of access to data, file maintenance and data security.

MARKING GUIDE

		MARKS	MARKS
5(a)	Batch Processing		
i			
	1 mark for collection of transaction	1	
	1 mark for processing at a fixed time	<u>1</u>	
ii	Real-time Processing		
	1 mark for individual transaction	1	
	1 mark for immediate processing	<u>1</u>	
iii	Distributed Processing		
	1 mark for use of multiple processor	1	
	1 mark for individual task	<u>1</u>	
			<u>6</u>
5(b)	1 mark each for 2 advantages of Batch Processing (1 x 2 = 2)	2	
	1 mark each for 2 disadvantages of Batch processing (1 x 2 = 2)	2	
	1 mark each for 2 advantages of Real-time processing (1 x 2 = 2)	2	
	1 mark each for 2 disadvantages of Real-time processing (1 x 2 = 2)	2	
	1 mark each for 2 advantages of Distributed Processing (1 x 2 = 2)	2	
	1 mark each for 2 disadvantages of Distributed Processing (1 x 2 = 2)	<u>2</u>	
			<u>12</u>
5(c)	1 mark for collection of structured data	1	
	1 mark for software	1	2
	TOTAL		<u>20</u>

EXAMINER'S REPORT

This question tests candidates' ability to:

- i. Describe Data Processing Methods, their merits and demerits; and**
- ii. Define Database and Database Management System.**

About 95% of the entire candidates attempted the question.

Performance was very good. About 70% of the candidates who attempted the question scored 50% and above.

Those who did not do well exhibited the following common shortcomings:

- i. Inadequate knowledge of the advantages and disadvantages of the Processing Methods; and**
- ii. Wrong definitions of Database and DBMS.**

For improvement in future, candidates are advised to consider the following:

- i. Improved knowledge of the contents of the syllabus; and**
- ii. Effective use of the ICAN Study Text.**

SOLUTION 6

a. i) Examples of Protocols

- Internet Protocol (IP)
- User Datagram Protocol (UDP)
- Transmission Control Protocol (TCP)
- Hypertext Transfer Protocol (HTTP)
- File Transfer Protocol (FTP)
- Simple Object Access Protocol (SOAP)
- Internet Message Access Protocol (IMAP)
- Simple Mail Transfer Protocol (SMTP)
- Post Office Protocols 3 (POP 3)

ii) Facilities provided by DBMS include:

- The ability to add new records and amend or delete existing data in the database;
- The ability to retrieve data for processing or information for decision-making;
- The ability to update the database without requiring modifications to any application programs;
- The ability to present data on the database in different combinations and in different forms; and
- The ability to control access to parts of the database, through the use of passwords.

(b) Gocome Limited

i. Determination of Production Mix

	GO		CO		ME	
	₦	₦	₦	₦	₦	₦
Selling price		50		55		60
Variable cost						
Direct material	5		7		8	
Direct labour	8		7		7	
Direct expenses	2		5		3	
Production overhead	2		3		4	
Selling and distribution	<u>2</u>	<u>(19)</u>	<u>4</u>	<u>(26)</u>	<u>4</u>	<u>(26)</u>
Contribution		<u>31</u>		<u>29</u>		<u>34</u>
Ranking		2		3		1

Production mix		
product	ME	2 million units
product	GO	2 million units
product	CO	2 million units

ii.

	GO	CO	ME
	N/unit	N/unit	N/unit
Contribution	31	29	34
Fixed cost	23	23	23
net profit	8	6	11
Sales	2 million	2 million	2 million
Value of net profit	£16 million	£12 million	£22 million

MARKING GUIDE

		MARKS	MARKS
6(a)i	1 mark each for 6 different Network Protocols $1 \times 6 = 6$	6	
li	1 mark each for 4 facilities provided by DBMS $1 \times 4 = 4$	<u>4</u>	
			10
6(b)i	Calculation of Contribution 3 Ticks $\times \frac{1}{3} = 1$ mark	1	
	Ranking of product 3 Ticks $\times \frac{1}{3} = 1$ mark	1	
	Production mix = 3marks	<u>3</u>	5
li	Calculation of Total Net Profit		
	Each correct entry 6 Ticks $\times \frac{1}{3} = 2$ marks	2	
	Value of Net Profit 3 Ticks $\times 1 = 3$ marks	3	
			5
			20

EXAMINER'S REPORT

The question tests candidates' understanding of Network Protocols and Database Management Systems. It also tests their ability to determine Optimum Production Mix using the Marginal Costing Technique.

About 30% of the candidates attempted the question and performance was poor as only about 30% of these candidates scored 50% and above.

Common shortcomings include:

- confusion of Network Protocol with Network Telecoms Providers, insufficient knowledge of DBMS; and
- the relevance of profit and contribution in decision making.

Candidates are advised to:

- pay attention to the details of the syllabus; and
- do their best to understand the requirements of a question before attempting to answer it.

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – NOVEMBER 2016

QUANTITATIVE TECHNIQUES IN BUSINESS

Time Allowed: 3 hours

SECTION A: MULTIPLE-CHOICE QUESTION (20 MARKS)

INSTRUCTION: YOU ARE REQUIRED TO ANSWER 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. If an initial amount of ₦10,000 grew to ₦24,596 over an 18-year period, calculate the interest rate if the interest was compounded annually.
A. 4.00%
B. 4.90%
C. 4.99%
D. 5.13%
E. 5.99%
2. The Foods and Beverage Manager of a hotel in Lagos bought two cows and three rams for ₦225,000. Immediately after the purchase, he realised he needed to buy more rams. He then bought four rams and one cow for ₦200,000. The same unit rate prevailed in the two purchases. Altogether, the cost of one cow and the cost of one ram are respectively.
A. ₦45,000 and ₦45,000
B. ₦40,000 and ₦40,000
C. ₦60,000 and ₦35,000
D. ₦60,000 and ₦45,000
E. ₦40,000 and ₦35,000
3. Derive the revenue function for the marginal revenue of $78 - 0.0005Q$, if the revenue is ₦90,000 when the quantity (Q) is 1000 units.
A. $R = 78Q - 0.0005Q^2 + ₦15,220$
B. $R = 78Q - 0.00025Q^2 + ₦12,250$
C. $R = 78Q - 0.00025Q^2 - ₦15,220$
D. $R = 78Q - 0.00025Q^2 - ₦12,250$
E. $R = 78Q - 0.0005Q^2 - ₦15,220$

4. A man is planning to buy a business worth ₦1.2million in the nearest future. If he invests ₦600,000 now at 15% simple interest, how long will it take him to buy the business? (Give your answer to the nearest whole number).
- 2 years
 - 3 years
 - 5 years
 - 6 years
 - 7 years
5. What is the present value of ₦1.8m at 16% simple interest rate over 6 years?
- ₦918,360
 - ₦918,367
 - ₦918,370
 - ₦918,380
 - ₦918,386
6. The maximum value of $y = \frac{1}{3}x^3 - 2x^2 - 3$ is
- $-13\frac{2}{3}$
 - 3
 - 0
 - 3
 - 4
7. If the monthly salary of the staff of ABC Plc. is distributed as follows:

Monthly salary (₦'000)	Number of staff
6 and under 12	2
12 and under 18	13
18 and under 24	16
24 and under 30	10
30 and under 36	2
36 and under 42	1

then the median salary is

- ₦20,256
- ₦20,265
- ₦20,526
- ₦20,625
- ₦20,652

Use the following information to answer the next two questions:

The deliveries of coal to a steam power station carried out six times in a year are 40, 60, 31, 20, 30 and 29 tonnes

8. The mean deviation of the six deliveries of the coal is
- A. 25 tonnes
 - B. 20 tonnes
 - C. 15 tonnes
 - D. 10 tonnes
 - E. 5 tonnes
9. The standard deviation of the six deliveries is
- A. 9.6 tonnes
 - B. 10.6 tonnes
 - C. 11.6 tonnes
 - D. 12.6 tonnes
 - E. 13.6 tonnes
10. The mean of seven numbers is 10. If six of the numbers are 2, 4, 8, 14, 16 and 18, find the mode.
- A. 2
 - B. 6
 - C. 8
 - D. 14
 - E. 16
11. The first quartile of a set of data is 24. If the third quartile is 75% more than the first quartile, determine the quartile deviation.
- A. 6
 - B. 9
 - C. 12
 - D. 16
 - E. 18
12. The mean of a certain number of observations is 40, if values 50 and 64 are added to this data, the mean rises to 42. Find the number of items in the original data
- A. 15
 - B. 16
 - C. 17
 - D. 18
 - E. 19

13. A coin is tossed into the air and a card is drawn from a well shuffled pack of cards. The probability that both a tail falls uppermost and an ACE is drawn, is
- A. $\frac{1}{24}$
 - B. $\frac{1}{25}$
 - C. $\frac{1}{26}$
 - D. $\frac{1}{27}$
 - E. $\frac{1}{28}$
14. If there is a 40% chance that business A will fail and business B has a 55% chance of surviving then the probability that only one of the business fails is:
- A. 0.22
 - B. 0.24
 - C. 0.48
 - D. 0.49
 - E. 0.55
15. If the present value of ~~₦~~40,000 in 2years' time is ~~₦~~70,360 at a discount rate of 9%, then the corresponding annuity factor is
- A. 1.975
 - B. 1.957
 - C. 1.795
 - D. 1.759
 - E. 1.597
16. Which **ONE** of the following is **NOT** true about a trend/trend line?
- A. The two commonest methods of calculating a trend line are North-West Corner Method and Moving Averages Method.
 - B. In order to make predictions, the trend must be expressed as a straight line.
 - C. The trend line can be used to calculate the Seasonal Variations.
 - D. The trend line can be used to forecast a trend value for any day in the future
 - E. The trend is an indication of the general movement in a set of data.

17. The following results were obtained for 5 pairs of observations:
 $\sum x = 26$, $\sum y = 32$, $\sum xy = 130$, $\sum x^2 = 158$, $\sum y^2 = 264$.
 If x is the independent variable, determine the regression coefficient (corrected to 2 decimal places).
- 1.60
 - 1.59
 - 1.69
 - 1.60
 - 1.59
18. A company operates for three days each week. If sales data (in units) for the most recent two weeks are given as follows:
- | Sales | Monday | Wednesday | Friday |
|--------|--------|-----------|--------|
| Week 1 | 77 | 82 | 88 |
| Week 2 | 87 | 92 | 97 |
- then the moving average for Monday of week 2 is
- 86
 - 87
 - 88
 - 89
 - 90
19. Which **ONE** of the following statements is **NOT** true about the Stepping Stone Method?
- Empty cells are tested as entry variables to see if replacing an existing basic variable reduces the cost.
 - The initial feasible solution can be found by the Stepping Stone Method.
 - The Stepping Stone Method tests empty cells to see if using them would reduce total cost.
 - Each number allocated in the initial feasible solution is a basic variable.
 - One of the two known methods of testing for optimality is the Stepping Stone Method.
20. The two methods used in determining the replacement time of a gradually failing item are
- Capital outlay and Net cost flow method
 - Individual and mass replacement method
 - Mass replacement policy and Net cost flow method
 - Mass replacement policy and capital outlay method
 - Individual and capital outlay method

SECTION B:**OPEN – ENDED QUESTIONS****(80 MARKS)****INSTRUCTION: YOU ARE REQUIRED TO ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION****QUESTION 1**

- a. Debonde has invested ~~₦~~450,000 in two rental properties. One yields an annual return of 10% of his investment and the other returns 15% per annum on his investment. His total amounts of returns from the two investments are ~~₦~~55,000. How much was invested in each property.

(10 Marks)

- b. i. An Auditing firm plans to give monetary rewards to its four members of staff. John is to get $\frac{13}{30}$ of the total money to be shared; Dele is to get half of John's share and Audu is to collect $\frac{1}{7}$ of the remainder. If Chuku collects the remaining amount of ~~₦~~60,000, calculate the total amount shared.
- ii. The mean arrival rate to a service centre of a Bank is 3 customers per hour. The mean service time is found to be 10 minutes per customer.

(6 Marks)**Find the:**

- Utilisation factor for this service facility **(2 Marks)**
- Number of customers in the queue. **(2 Marks)**

(Total 20 Marks)**QUESTION 2**

- a. The following data gives the amounts (in ~~₦~~'000) spent on feeding forty households in a certain community in April 2015:

32	22	19	18	43	42	40	43	18	21
31	26	22	25	47	40	26	32	34	22
35	38	34	41	36	25	22	45	48	26
28	38	35	19	47	28	26	35	38	35

Use Tally method to construct a frequency distribution table with classes 15 – 19, 20 – 24 and so on.

Hence, compute the class mark, class boundaries and relative cumulative frequency for each class.

(10 Marks)

- b. Sixty men, forty-two women and eighteen children are watching a table tennis competition inside a sports hall. After the competition, it was decided that they should go for snacks and three persons are to be served at a time.

Determine the probability that the first three persons served consists of:

- i. one man, one woman and a child. (3 Marks)
 - ii. men only or women only. (4 Marks)
 - iii. two children and a woman. (3 Marks)
- (Total 20 Marks)**

QUESTION 3

- a. The values of orders in the order book of a company have been analysed and the following grouped frequency table is available:

Outstanding orders by value (R'000)	
Value of orders (R'000)	Number of orders outstanding
5 and up to, but less than 7	16
7 and up to, but less than 9	29
9 and up to, but less than 11	56
11 and up to, but less than 13	47
13 and up to, but less than 15	38

Calculate the variance of numbers of orders outstanding. (10 Marks)

- b. i) The profit after tax (R'm) made by three companies P, Q and R for three years are given in the table below:

Company Year	P (R'm)	Q (R'm)	R (R'm)
2012	25	10	5
2013	15	20	35
2014	30	5	15

You are required to draw a multiple bar chart to present the information for comparison of yearly profits. (6 Marks)

- ii) A company uses 160,000 units of a certain material annually. Each unit costs ₦400. The cost of placing an order is ₦7,500. If the annual cost of holding inventory each year is $12\frac{1}{2}\%$ of the purchase price of a unit, calculate the annual order costs. (4 Marks)

(Total 20 Marks)

QUESTION 4

- a. The marks scored (in percentages) by candidates in a competitive entrance examination in a particular year were normally distributed with mean 55 and standard deviation 5.
- What percentage of the candidates scored between 45 and 50 in the Examination? (8 Marks)
 - If 10,000 candidates sat for the examination, find the number of candidates that scored outside the above given range. (2 Marks)
- b. A roofing sheet manufacturing company's weekly sales of bundles of roofing sheets are recorded as follows:

41	54	63	65	67	58	67	72	83	77
67	98	74	68	55	74	86	66	43	59
77	88	69	46	67	73	61	93	66	76
47	62	78	52	84	71	86	57	87	78
67	71	51	72	85	64	94	75	77	73

Required:

- Use TALLY method to obtain the frequency distribution based on classes 40 and under 50, 50 and under 60, etc. and show the cumulative frequency distribution. (5 Marks)
- Draw the ogive of the distribution and deduce the Quartile deviation of the distribution. (5 Marks)

(Total 20 Marks)

QUESTION 5

- a. In his Will, a man shared his assets among his four children: Shehu, Tara, Etim, and Chukwu as follows;

Shehu's share is double that of Chukwu while Tara's share is 60% more than that of Etim which is 25% more than that of Chukwu. If the man's asset is worth ₦20million, determine Etim's share. (10 Marks)

- b. (i) Two friends Toyin and Bola are planning to go for driving test with a view to obtaining driving license. The probabilities of passing or failing this driving test are calculated as follows: the probability that Toyin passes the driving test is 0.58 while the probability that Bola fails the same test is 0.68. If the events of passing the driving test are independent, determine the probability that

- at least one of them fails the driving test (4 $\frac{1}{2}$ Marks)
- Toyin and Bola pass the driving test (1 $\frac{1}{2}$ Marks)

- (ii) The following table shows the factories' capacities along the rows, the demands by customers along the columns and the cost of transporting one unit of product from each factory to each customer at the left hand corner of each cell.

Customers Factories	A	B	C	Available supplies
P	5	6	4	3,000
Q	6	7	8	5,500
R	2	1	3	3,500
Demands	4,000	5,000	3,000	12,000

You are required to use the Least Cost Method to allocate the products to customers and calculate the initial total transportation cost.

(4 Marks)
(Total 20 Marks)

QUESTION 6

- a. The following table shows the 7-year projected profits and their corresponding probabilities for two proposed products A and B in a company:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Project A: profit (in millions of ₦)	13.2	13.6	12.7	11.8	14.1	13.8	10.9
probability	0.35	0.60	0.28	0.55	0.57	0.44	0.73
Project B: profit (in millions of ₦)	14.2	13.0	10.8	12.8	13.9	13.1	11.9
Probability	0.56	0.71	0.75	0.27	0.45	0.36	0.54

Use the Expected Value Criterion to advise which of the products should be produced. (10 Marks)

- b. XYZ Plc. plans to invest in a new item of equipment costing ₦379,000 in order to modernize its production line. The product is to have a four-year life and the estimated cash profits over the four-year period are as follows:

Year	₦
1	117,000
2	125,000
3	116,000
4	112,000

Calculate the NPV of the project using a discount rate of 10% and advise the company as appropriate. (10 Marks)

(Total 20 Marks)

Formulae

PROBABILITY

$A \cup B = A \text{ or } B$ $A \cap B = A \text{ and } B \text{ (overlap)}.$

$P(B|A) = \text{probability of } B, \text{ given } A$

Rules of Addition

If A and B are mutually exclusive: $P(A \cup B) = P(A) + P(B)$

If A and B are not mutually exclusive: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

Rules for Multiplication

If A and B are independent: $P(A \cap B) = P(A) * P(B)$

If A and B are not independent: $P(A \cap B) = P(A) * P(B|A)$

$E(X) = \sum (\text{probability} * \text{payoff})$

Quadratic Equations

If $aX^2 + bX + c = 0$ is the general quadratic equation, the two solutions (roots) are given by:

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

DESCRIPTIVE STATISTICS

Arithmetic Mean

$$\bar{x} = \frac{\sum x}{n} \quad \bar{x} = \frac{\sum fx}{\sum f} \quad (\text{frequency distribution})$$

Standard Deviation

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} \quad SD = \sqrt{\frac{\sum fx^2}{\sum f} - \bar{x}^2} \quad (\text{frequency distribution})$$

INDEX NUMBERS

Price relative = $100 * P_1/P_0$ Quantity relative = $100 * Q_1/Q_0$

Price:
$$\frac{\sum w * \left(\frac{P_1}{P_0}\right)}{\sum w} \times 100$$

Quantity:
$$\frac{\sum w * \left(\frac{Q_1}{Q_0}\right)}{\sum w} \times 100$$

TIME SERIES:

Additive Model Series = Trend + Seasonal + Random + Cyclical

Multiplicative Model Series = Trend * Seasonal * Random + Cyclical

LINEAR REGRESSION AND CORRELATION

The linear regression equation of Y on X is given by:

$$Y = a + bX \text{ or } Y - \bar{Y} = b[X - \bar{X}]$$

Where

$$b = \frac{\text{Covariance } (XY)}{\text{Variance } (X)} = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

and

$$a = \bar{Y} - b\bar{X}$$

or solve

$$\begin{aligned}\sum Y &= na + b \sum X \\ \sum XY &= a \sum X + b \sum X^2\end{aligned}$$

Coefficient of Correlation

$$r = \frac{\text{Covariance } (XY)}{\sqrt{\text{Var}(X) \cdot \text{Var}(Y)}} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\left\{n \sum X^2 - (\sum X)^2\right\} \left\{n \sum Y^2 - (\sum Y)^2\right\}}}$$

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

FINANCIAL MATHEMATICS

Compound Interest (Values and Sums)

Future Value S, of a sum of X, invested for n periods, compounded at r% interest

$$S = X(1 + r)^n$$

Annuity

Present value of an annuity of ₦1 per annum receivable or payable for n years, commencing in one year, discounted at r% per annum

$$PV = \frac{1}{r} \left[1 - \frac{1}{(1 + r)^n} \right]$$

Perpetuity

Present value of ₦1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at r% per annum.

$$PV = \frac{1}{r}$$

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate

n = number of periods

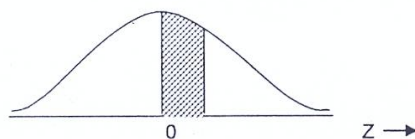
Discount rate (r)

Period

(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15

NORMAL DISTRIBUTION

This table gives the area under the normal curve between the mean and a point Z standard deviations above the mean. The corresponding area for deviations below the mean can be found by symmetry.



$Z = \frac{(x - \mu)}{\sigma}$	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	.0000	.0040	.0080	.0120	.0159	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2518	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4430	.4441
1.6	.4452	.4463	.4474	.4485	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4762	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4865	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4980	.4980	.4981
2.9	.4981	.4982	.4983	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.49865	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990
3.1	.49903	.4991	.4991	.4991	.4992	.4992	.4992	.4992	.4993	.4993
3.2	.49931	.4993	.4994	.4994	.4994	.4994	.4994	.4995	.4995	.4995
3.3	.49952	.4995	.4995	.4996	.4996	.4996	.4996	.4996	.4996	.4997
3.4	.49966	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4998
3.5	.49977									

SOLUTIONS

SUGGESTED SOLUTIONS

SOLUTION - MCQ

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

Workings

$$\begin{aligned} 1. \quad A &= P [1 + r]^n \\ 24,596 &= 10,000 [1 + r]^{18} \\ \text{i.e. } [1 + r]^{18} &= 24,596/10,000 \\ \text{i.e. } [1 + r] &= [2.4596]^{1/18} \\ \text{i.e. } [1 + r] &= 1.05127, \text{ giving} \\ r &= 1.05127 - 1 \\ r &= 0.05127 \times 100\% \\ r &= 5.13 \% \end{aligned} \quad (D)$$

2. Let 1 Cow cost ~~₦~~x and
let 1 Ram cost ~~₦~~y

$$\begin{aligned}
 \therefore 2x + 3y &= 225,000 \text{ -----(i)} \\
 x + 4y &= 200,000 \text{ -----(ii)} \\
 2 \times (ii) \Rightarrow 2x + 8y &= 400,000 \text{ -----(iii)} \\
 (i) - (ii) \Rightarrow -5y &= -175,000 \\
 y &= \frac{-175000}{-5} \\
 y &= 35,000 \\
 \text{Substitute } y &= 35,000 \text{ in equation (2) gives} \\
 x + 4(35,000) &= 200,000 \\
 x + 140,000 &= 200,000 \\
 x &= 200,000 - 140,000 \\
 x &= 60,000
 \end{aligned}$$

Hence, 1 Cow costs ~~₦~~60,000 and 1 Ram costs ~~₦~~35,000. (C)

3. $MR = 78 - 0.0005Q$

$\therefore \text{Revenue, } R = \int MR dQ$

$$= \int (78 - 0.0005Q) dQ$$

$$R = 78Q - \frac{0.0005Q^2}{2} + C \text{ -----(i)}$$

where C is the constant of integration

When $Q = 1,000$, $R = 90,000$

i.e. $90,000 = 78(1,000) - 0.00025(1,000)^2 + C$

$$90,000 = 78,000 - 250 + C$$

$$\therefore C = 90,000 - 78,000 + 250$$

$$C = 12,250$$

Substituting this value into equation (i) gives

$$R = 78Q - 0.00025Q^2 + 12,250 \quad (B)$$

4. $I = \frac{PTR}{100}$

$$A = P + I = P \left[1 + \frac{TR}{100} \right]$$

Substituting gives

$$1,200,000 = 600,000 [1 + (0.15) T]$$

$$1,200,000 = 690,000T$$

$$\text{i.e. } T = \frac{1,200,000}{690,000}$$

$$T = 6.667$$

$$T \cong 7 \text{ years} \quad (\text{E})$$

$$5. \quad A = P + I$$

$$A = P + \frac{PTR}{100}$$

Substituting gives

$$1,800,000 = P \left(1 + \frac{16 \times 6}{100} \right)$$

$$1,800,000 = 1.96P$$

$$P = \frac{1,800,000}{1.96}$$

$$\text{i.e. } P = \text{N}918,367 \quad (\text{B})$$

$$6. \quad y = \frac{1}{3}x^3 - 2x^2 - 3$$

$$\frac{dy}{dx} = x^2 - 4x$$

But at the turning point $\frac{dy}{dx} = 0$

$$\therefore x^2 - 4x = 0$$

giving $x = 0$ or $x = 4$

$$\frac{d^2y}{dx^2} = 2x - 4$$

$$\text{at } x = 0, \frac{d^2y}{dx^2} = 2(0) - 4 = -4$$

which is less than zero, hence $x = 0$ gives maximum y

$$\therefore y = \frac{1}{3}0^3 - 20^2 - 3 = -3 \quad (\text{C})$$

$$7. \quad \text{Median} = L + \left[\frac{\frac{N}{2} - fc}{fm} \right] C$$

where

L = lower class boundary of the median class
 Fc = Cumulative frequency before the median class
 Fm = median class frequency
 N = total number of staff = 44
 C = Class size = 6

$$\begin{aligned} \therefore \text{Median} &= 18,000 + \left(\frac{22 - 15}{16} \right) 6 \\ &= 18,000 + 2,625 \\ &= 20,625 \\ &= \text{N}20,625 \end{aligned} \quad (D)$$

$$8. \quad \text{Mean} = \frac{40 + 60 + 31 + 20 + 30 + 29}{6} = \frac{210}{6} = 35$$

$$\begin{aligned} \text{Mean Deviation} &= \frac{|40 - 35| + |60 - 35| + |31 - 35| + |20 - 35| + |30 - 35| + |29 - 35|}{6} \\ &= \frac{5 + 25 + 4 + 15 + 5 + 6}{6} = 10 \end{aligned} \quad (D)$$

$$\begin{aligned} 9. \quad \text{Standard Deviation (S.D)} &= \sqrt{\frac{5^2 + 25^2 + 4^2 + 15^2 + 5^2 + 6^2}{6}} \\ &= \sqrt{158.66} \\ &= 12.6 \end{aligned} \quad (D)$$

$$\begin{aligned} 10. \quad \text{Mean} &= \frac{\sum x_i}{n} \\ \sum x_i &= 7 \times 10 \\ &= 70 \end{aligned}$$

$$\text{But } 2 + 4 + 8 + 14 + 16 + 18 = 62$$

$$\therefore \text{ the 7}^{\text{th}} \text{ number} = 70 - 62 = 8$$

But number 8 appears most frequent,

$$\therefore \text{ the mode} = 8 \quad (C)$$

$$\begin{aligned}
 11. \quad Q_1 &= 24 \\
 Q_3 &= 175\% \times 24 = 42 \\
 Q_3 - Q_1 &= 42 - 24 = 18 \\
 QD &= \frac{Q_3 - Q_1}{2} = \frac{42 - 24}{2} \\
 &= \frac{18}{2} = 9 \quad (E)
 \end{aligned}$$

12. Let the number of observations be n

$$\begin{aligned}
 \therefore \sum x_i &= 40n \\
 \text{Mean} &= \frac{40n + 50 + 64}{n + 2} \\
 \text{Simplifying gives} &= \frac{40n + 114}{n + 2} = 42 \\
 \text{Simplifying gives} &40n + 114 = 42n + 84 \\
 2n &= 30 \\
 \therefore n &= 15 \quad (A)
 \end{aligned}$$

13. Since both events are independent, then

$$\begin{aligned}
 P(T \text{ and } ACE) &= \frac{1}{2} \times \frac{4}{52} \\
 &= \frac{1}{26} \quad (C)
 \end{aligned}$$

14. P (Only one of the businesses fails)

$$\begin{aligned}
 &= (0.4 \times 0.55) + (0.6 \times 0.45) \\
 &= 0.22 + 0.27 \\
 &= 0.49 \quad (D)
 \end{aligned}$$

15. Annuity factor

$$= \frac{70,360}{4,000} = 1.759 \quad (D)$$

17. Regression Coefficient

$$\begin{aligned}\approx b &= \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2} \\ &= \frac{5 \times 130 - (26)(32)}{5 \times 158 - (26)^2} \\ &= \frac{650 - 832}{790 - 676} \\ &= \frac{-182}{118} \\ &= -1.596 \\ &= -1.60\end{aligned}\quad (A)$$

18. Moving Average for Monday of Week 2

$$\begin{aligned}&= \frac{88 + 87 + 92}{3} \\ &= \frac{267}{3} \\ &= 89\end{aligned}\quad (D)$$

EXAMINER'S REPORT

All the questions in this section are compulsory. The general performance was below average.

About 15% of the candidates scored above 10 out of the 20 marks.

SECTION B

SOLUTION 1

- a. Let x and y represent the amounts invested in the two rental properties

$$x + y = 450,000 \text{ ----- (1)}$$

if the x - amount investment yields an annual return of 10% of her investment and y - amount investment yields an annual return of 15% per year on her investment and if the two amounts yield a total of ~~₦~~55,000, then

$$0.10x + 0.15y = 55,000 \text{ ----- (2)}$$

Solving equations (1) and (2) simultaneously by elimination method, gives the following step:

Multiply equation (2) by (-10) results in

$$-x - 1.5y = 550,000 \text{ ----- (3)}$$

Adding equations (1) and (3) together, gives

$$-0.5y = -100,000$$

$$y = \frac{100,000}{0.5}$$

$$y = \text{₦}200,000$$

Substitute for $y = 200,000$ in equation (1) to obtain:

$$x + 200,000 = 450,000$$

$$x = 450,000 - 200,000$$

$$x = \text{₦}250,000$$

Hence, the amounts invested in the two rental properties are ~~₦~~200,000 and ~~₦~~250,000.

- b. (i) Let the total amount to be shared = x (in Naira)

$$\therefore \text{John's share} = \frac{13x}{30}$$

$$\text{Hence, Dele's Share} = \left\{ \frac{1}{2} \left(\frac{13x}{30} \right) \right\} = \frac{13x}{60}$$

$$\therefore \text{John's share} + \text{Dele's share} = \frac{13x}{30} + \frac{13x}{60} = \frac{39x}{60} = \frac{13x}{20}$$

$$\therefore \text{The remainder} = x - \frac{13x}{20} = \frac{7x}{20}$$

$$\therefore \text{Audu's share} = \frac{1}{7} \left(\frac{7x}{20} \right) = \frac{x}{20}$$

$$\therefore \text{Total money collected by John, Dele and Audu} = \frac{13x}{20} + \frac{x}{20} = \frac{14x}{20} = \frac{7}{10}x$$

$$\therefore \text{The remaining amount} = x - \frac{7}{10}x = \frac{3x}{10}$$

This is chuku's share

$$\text{i.e. } \frac{3x}{10} = 60,000$$

$$\therefore x = \frac{60,000 \times 10}{3} = 200,000$$

$$\therefore \text{Total money shared} = \text{N}200,000$$

ii.

- $\lambda = 3, \mu = \frac{60}{10} = 6$

$$\rho = \frac{3}{6} = 0.5$$

- $$\begin{aligned} \mu_q &= \frac{\rho^2}{1-\rho} \\ &= \frac{0.5^2}{1-0.5} \\ &= \frac{0.25}{0.5} \\ &= 0.5 \\ &\approx 1 \text{ customer} \end{aligned}$$

MARKING GUIDE

		MARKS
(a)	Correct representation of investment by two variables (i.e. x and y)	1
	Correct formulation of first equation (i.e. $x + y = 450,000$)	2
	Correct formulation of second equation (i.e. $0.1x + 0.15y = 55,000$)	2
	Correct multiplication of second equation by -10 (i.e. $-x - 1.5y = -550,000$) to get the third equation	1
	Correct addition of first and third equations together	1
	Correct value of y (i.e. ₦ 200,000)	1
	Correct substitution of $y = 200,000$ into the first equation	1
	Correct value of x (i.e. ₦ 250,000)	1
		10
(b)		
(i)	Correct representation of total amount shared by a variable (i.e. x)	$\frac{1}{2}$
	Correct John's share (i.e. $\frac{13x}{30}$)	$\frac{1}{2}$
	Correct Dele's share (i.e. $\frac{13x}{60}$)	$\frac{1}{2}$
	Correct sum of John's share and Dele's share (i.e. $\frac{13x}{20}$)	$\frac{1}{2}$
	Correct remainder (i.e. $\frac{7x}{20}$)	$\frac{1}{2}$
	Correct Audu's share (i.e. $\frac{x}{20}$)	$\frac{1}{2}$
	Correct total sum of money collected by John, Dele, and Audu (i.e. $\frac{7x}{10}$)	1
	Correct fraction of the remaining amount (i.e. $\frac{3x}{10}$)	$\frac{1}{2}$
	Correct remaining amount which is Chuku's Share (i.e. $\frac{3x}{10} = 60,000$)	$\frac{1}{2}$
	Correct value of x (i.e. $x = 200,000$)	$\frac{1}{2}$
	Correct total money shared (i.e. ₦ 200,000)	$\frac{1}{2}$
		6
ii.	Correct arrival rate (i.e. $\lambda = 3$)	$\frac{1}{2}$
	Correct service rate (i.e. $\mu = 6$)	$\frac{1}{2}$
	Correct utilization factor (i.e. $\frac{\lambda}{\mu} = 0.5$)	1
	Correct formula for number of customers in the queue (i.e. $\frac{\lambda^2}{\mu(\mu - \lambda)}$)	1
	Correct answer for number of customers in the queue (i.e. 1 customer)	1
	Total	<u>4</u> <u>20</u>

EXAMINER'S REPORT

The question tests the candidates' knowledge of business-related problem that leads to simultaneous equations, fractional problem and concept of the queuing theory. About 35% of the candidates attempted the question. About 85% of the candidates scored below 8 out of 20 marks.

The major pitfalls of the candidates are their inability to correctly interpret the question, failure to use the correct formulae for the utilisation factor and the number of customers on the queue.

The candidates are advised to prepare adequately for the examinations by making use of standard textbooks including the ICAN Study Text.

SOLUTION 2

a.

Expenditure on Feeding (₹'000)	Tally	No. of House holds	Class Mark	Class Boundaries	Cumulative Frequency	Relative Cumulative frequency
15-19	IIII	4	17	14.5-19.5	4	10% = 0.1
20-24	HHH	5	22	19.5-24.5	4+5=9	22.5% = 0.225
25-29	HHH- III	8	27	24.5-29.5	9+8=17	42.5% = 0.425
30-34	HHH	5	32	29.5-34.5	17+5=22	55% = 0.55
35-39	HHH III	8	37	34.5-39.5	22+8=30	75% = 0.75
40-44	HHH I	6	42	39.5-44.5	30+6=36	90% = 0.9
45-49	IIII	4	47	44.5-49.5	36+4=40	100% = 1

b. Let M, W and C represent man, woman and child respectively.
Then, the required probabilities are

$$\begin{aligned}
 \text{(i)} \quad P(1M \cap 1W \cap 1C) &= \frac{60}{120} \times \frac{42}{119} \times \frac{18}{118} \\
 &= 0.0269
 \end{aligned}$$

$$\begin{aligned}
 \text{(ii)} \quad P(3M \cup 3W) &= \left(\frac{60}{120} \times \frac{59}{119} \times \frac{58}{118} \right) + \left(\frac{42}{120} \times \frac{41}{119} \times \frac{40}{118} \right) \\
 &= 0.1218 + 0.0409 \\
 &= 0.1627
 \end{aligned}$$

$$\begin{aligned}
 \text{(iii)} \quad P(2C \cap 1W) &= \frac{18}{120} \times \frac{17}{119} \times \frac{42}{118} \\
 &= 0.0076
 \end{aligned}$$

MARKING GUIDE

		MARKS
(a)	Correct expenditure on feeding column (any two correct interval)	1
	Correct tally column (- $\frac{1}{2}$ each error)	3
	Correct frequency column (any two correct frequencies)	1
	Correct mid-point/class mark column (for any two correct values)	1
	Correct class boundaries column (for any two correct)	1
	Correct cumulative frequency column (- $\frac{1}{2}$ each error)	2
	Correct relative cumulative frequency column (any two correct values)	<u>1</u>
		10
(b)		
i.	Correct interpretation of probability (i.e. $P(1M \cap 1W \cap 1C)$)	1
	Correct multiplication of probabilities	1
	Correct answer	<u>1</u>
		3
ii.	Correct interpretation of probability (i.e. $P(3M \cup 3W)$)	1
	Correct multiplication of probabilities for $P(1M \cap 1M \cap 1M)$	1
	Correct multiplication of probabilities for $P(1W \cap 1W \cap 1W)$	1
	Correct answer	<u>1</u>
		4
iii.	Correct interpretation of probability (i.e. $P(2C \cap 1W)$)	1
	Correct multiplication of probabilities	1
	Correct answer	<u>1</u>
		3
	Total	<u>20</u>

EXAMINER'S REPORT

The question tests the candidates' knowledge of constructing frequency distribution table from a set of raw data, computation of class marks, class boundaries, relative cumulative frequencies and the concept of probability rule.

About 98% of the candidates attempted the question with an average score of about 10 out of 20 marks allocated to it.

The major pitfall of the candidates is their inability to interpret correctly the concept of probability tested in the question.

Candidates are advised to prepare adequately for future examination with the help of standard textbooks including ICAN Study Text.

SOLUTION 3

a.

Class Interval	Mid-point value x	F	fx	x^2	fx^2
5 < 7	6	16	96	36	576
7 < 9	8	29	232	64	1,856
9 < 11	10	56	560	100	5,600
11 < 13	12	47	564	144	6,768
13 < 15	14	38	532	196	7,448
		$\Sigma f = 186$	$\Sigma fx = 1,984$		$\Sigma fx^2 = 22,248$

$$\begin{aligned}
 \text{Variance} &= \frac{\Sigma fx^2}{\Sigma f} - \left(\frac{\Sigma fx}{\Sigma f} \right)^2 \\
 &= \frac{22,248}{186} - \left(\frac{1,984}{186} \right)^2 \\
 &= 119.6129 - 113.7778 \\
 &= 5.8351
 \end{aligned}$$

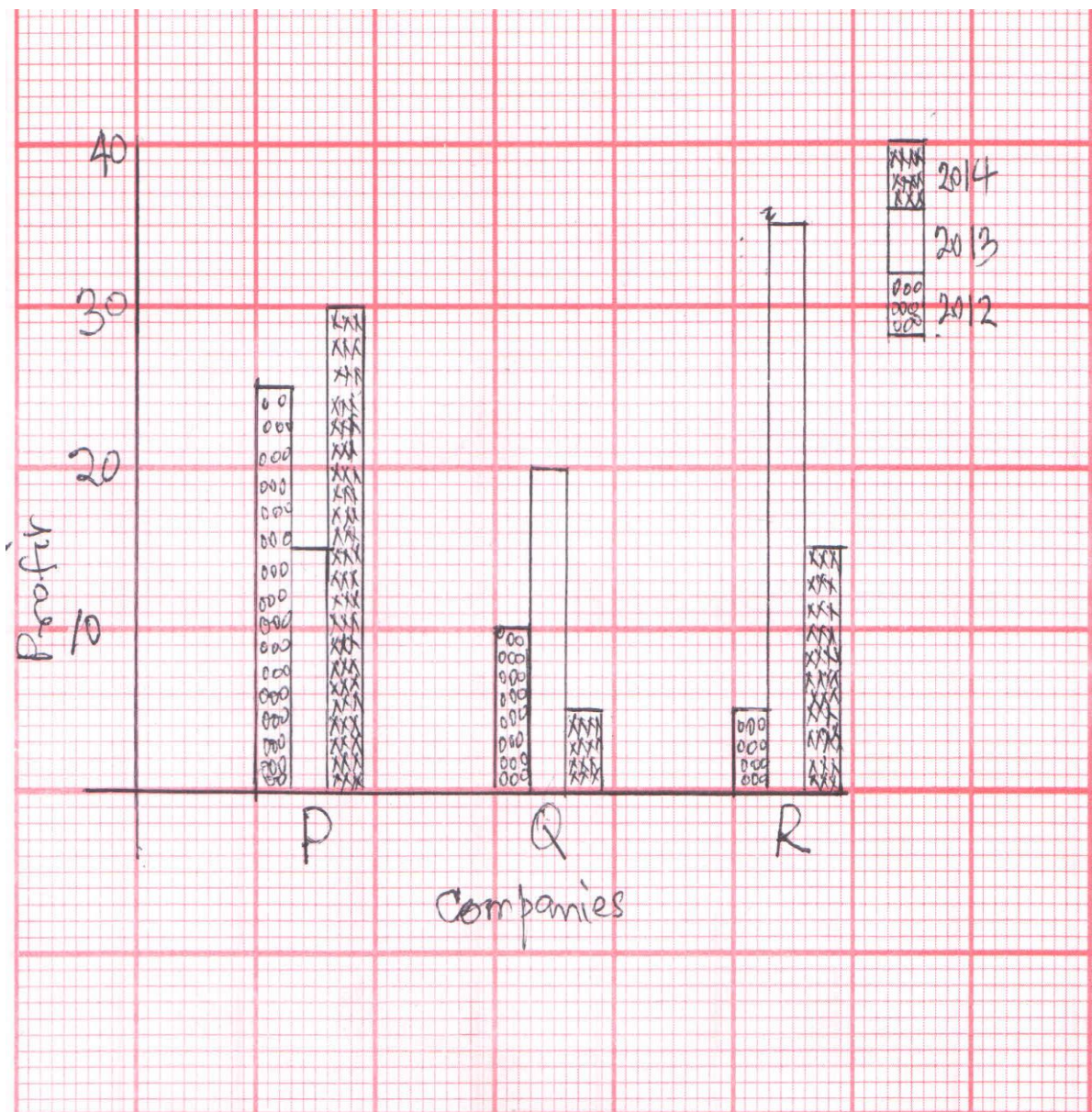
ALITER

Class Interval	f	Mid-point value x	fx	$x - \bar{x}$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
5 < 7	16	6	96	-4.67	21.8089	348.9424
7 < 9	29	8	232	-2.67	7.1289	206.7381
9 < 11	56	10	560	-0.67	0.4489	25.1384
11 < 13	47	12	564	1.33	1.7689	83.1383
13 < 15	38	14	532	3.33	11.0889	421.3782
	$\Sigma f = 186$		$\Sigma fx = 1,984$			$\Sigma f(x - \bar{x})^2 = 1,085.3354$

$$\bar{x} = \frac{\Sigma fx}{\Sigma f} = \frac{1,984}{186} = 10.67$$

$$\begin{aligned}
 \text{Variance} &= \frac{\sum f(x - \bar{x})^2}{\sum f} \\
 &= \frac{1,085.3354}{186} \\
 &= 5.8351
 \end{aligned}$$

b. (i) Multiple Bar Chart



- ii. We need to calculate the EOQ. i.e. Q

$$Q = \sqrt{\frac{2C_0D}{C_h}},$$

where $C_0 = \text{N}7,500 = \text{fixed cost per order}$

$D = 160,000 = \text{annual demand}$

$C_h = \text{the cost of holding one item of inventory per annum}$

$$= 12.5\% \times \text{N}400 = \frac{12.5}{100} \times 400 = \text{N}50$$

$$\therefore Q = \sqrt{\frac{2C_0D}{C_h}} = \sqrt{\frac{2 \times 7,500 \times 160,000}{50}} = 6,928.20$$

$$\begin{aligned} \therefore \text{Annual order costs} &= \frac{D}{Q} \times C_0 = \frac{160,000}{6,928.20} \times 7,500 \\ &= \text{N}173,205.16 \end{aligned}$$

MARKING GUIDE

		MARKS
(a)	Correct midpoint, x column (any correct two values)	1
	Correct $\sum f$	$\frac{1}{2}$
	Correct fx column (any correct two values)	1
	Correct $\sum fx$	$\frac{1}{2}$
	Correct x^2 column (- $\frac{1}{2}$ each error)	$1\frac{1}{2}$
	Correct fx^2 column (- $\frac{1}{2}$ each error)	$2\frac{1}{2}$
	Correct $\sum fx^2$	$\frac{1}{2}$
	Correct substitution into variance formula	$\frac{1}{2}$
	Correct value for $\frac{\sum fx^2}{\sum f} = 119.6129$	$\frac{1}{2}$
	Correct value for $\left(\frac{\sum fx}{\sum f}\right)^2 = 113.7778$	$\frac{1}{2}$
	Correct answer	<u>1</u>
		10
(b)		
i.	Correct labelling of y axis as profit axis	$\frac{1}{2}$
	Correct labelling of x axis as companies axis	$\frac{1}{2}$
	Correct keys for 2012, 2013, 2014	$\frac{1}{2}$
	Correct 3 bars representing company P ($\frac{1}{2}$ mark for each bar)	$1\frac{1}{2}$
	Correct 3 bars representing company Q ($\frac{1}{2}$ mark for each bar)	$1\frac{1}{2}$
	Correct 3 bars representing company R ($\frac{1}{2}$ mark for each bar)	<u>$1\frac{1}{2}$</u>

	MARKS
ii. Correct cost of holding (i.e. 12.5% of ₦400 = ₦50)	½
Correct substitution into EOQ formular (i.e. Q)	½
Correct answer for Q	1
Correct substitution into Annual Order Costs formular	1
Correct answer	<u>1</u>
Total	<u>4</u> <u>20</u>

ALITER

a. Correct $\sum f$	½
Correct midpoint, x column (any correct two values)	1
Correct fx column (any correct two values)	1
Correct $\sum fx$	½
Correct substitution into \bar{x} formular	½
Correct value for \bar{x}	½
Correct $(x - \bar{x})^2$ column (- ½ each error)	1½
Correct $f(x - \bar{x})^2$ column (- ½ each error)	2½
Correct $\sum f(x - \bar{x})^2$ column	½
Correct substitution into variance formular	½
Correct answer for the variance	1
	10

EXAMINER'S REPORT

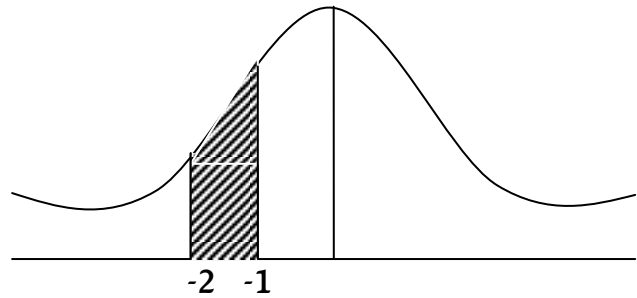
The question tests the candidates' knowledge of Measures of Variation, (i.e. variance), graphical representation of data (i.e. multiple bar chart) and concept of Inventory Control.

About 95% of the candidates attempted the question out of which 40% scored an average mark of 8 out of 20 marks. The major pitfalls of the candidates are their inability to interpret the question correctly and improper labelling of the x and y axes of the multiple bar chart.

Candidates are advised to make use of standard textbooks including the ICAN Study Text when preparing for future examinations.

SOLUTION 4

a. (i) $\frac{45 - 55}{5} = -2$
 $\frac{50 - 55}{5} = -1$



$$\begin{aligned} Pr\{-2 \leq Z \leq -1\} &= Pr\{Z \leq -1\} - Pr\{Z \leq -2\} \\ &= (0.5 - 0.3413) - (0.5 - 0.4772) \\ &= 0.4772 - 0.3413 \\ &= 0.1359 \\ &= 13.59\% \end{aligned}$$

(ii) No of candidates that fall outside the range

$$\begin{aligned} 10,000 \times (100 - 13.59)\% &= 10,000 \times 86.41\% \\ &= 10,000 \times 0.8641 \\ &= 8,641 \end{aligned}$$

b.

(i)

Weekly sales (bundles)	Tally	f	Cumulative frequency
40 and under 50	IIII	4	4
50 and under 60	HHH II	7	11
60 and under 70	HHH HHH IIII	14	25
70 and under 80	HHH HHH HHH	15	40
80 and under 90	HHH II	7	47
90 and under 100	III	3	50

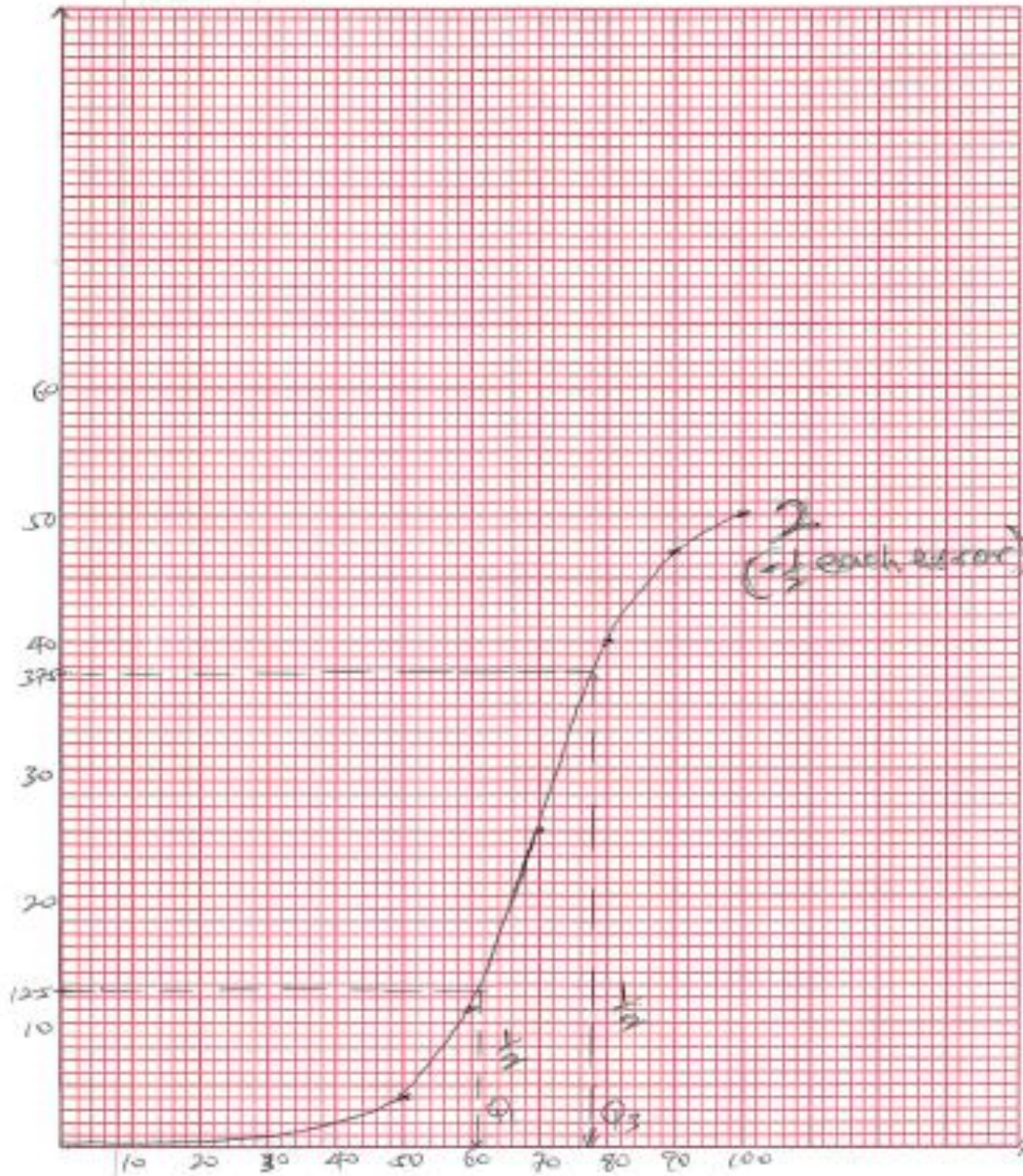
(ii) The cumulative frequencies are now plotted against the upper class limits of the classes and the points are joined with a smooth curve to result in the desired ogive.

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

No of Question.....

Candidate's No.....

Q 46 (ii)
OGIVE



$$\text{Quartile deviation} = \frac{Q_3 - Q_1}{2}$$

$$\text{where } Q_1 \text{ position} = \frac{50}{4} \text{ i.e. } 12.5^{\text{th}}$$

$$Q_3 \text{ position} = \frac{3 \times 50}{4} \text{ i.e. } 37.5^{\text{th}}$$

From the ogive, the lower Quartile number of bundles, $Q_1 = 61$

The upper quartile number of bundles, $Q_3 = 78$

$$\therefore \text{Quartile deviation} = \frac{Q_3 - Q_1}{2} = \frac{78 - 61}{2} = 8.5 \approx 9 \text{ bundles}$$

MARKING GUIDE

		MARKS
(a)		
i.	Correct Z-score for 45 (i.e. $Z = -2$)	1
	Correct Z-score for 50 (i.e. $Z = -1$)	1
	Correct Normal Curve indicating the area between $Z = -2$ and $Z = -1$ or $P(-Z \leq -1$ and $P(Z \leq -2)$	1
	Correct Normal table value for $Z = 2$ (i.e. 0.4772)	1
	Correct Normal table value for $Z = 1$ (i.e. 0.3413)	1
	Correct expression for $(0.5 - 0.3413) - (0.5 - 0.4772)$	1
	Correct answer (i.e. 0.1359)	1
	Correct answer expressed in percentage	<u>1</u>
		8
ii.	Correct percentage of candidates that fall outside the given range	$\frac{1}{2}$
	Correct multiplication of the percentage by 10,000	$\frac{1}{2}$
	Correct answer	1
		2
(b)		
i.	Correct weekly sales column (any two correct)	1
	Correct tally column (- $\frac{1}{2}$ mark each error)	2
	Correct frequency column (any two correct)	1
	Correct cumulative frequency column (any two correct)	<u>1</u>
		5
ii.	Correct plotting of Ogive (- $\frac{1}{2}$ mark each error)	1 $\frac{1}{2}$
	Correct location of Q_1 on the graph	$\frac{1}{2}$
	Correct location of Q_3 on the graph	$\frac{1}{2}$
	Correct Q_1 position or Q_3 position ($\frac{1}{2}$ mark for any of the two)	$\frac{1}{2}$
	Correct Q_1 value	$\frac{1}{2}$
	Correct Q_3 value	$\frac{1}{2}$
	Correct substitution into quartile deviation formular	$\frac{1}{2}$
	Correct answer	<u>$\frac{1}{2}$</u>
		5
	Total	<u><u>20</u></u>

EXAMINER'S REPORT

The question tests the candidates' knowledge of Normal Distribution using the Tally Method to construct frequency distribution table and the deduction of quartiles from the plotted cumulative frequency curve (Ogive).

About 80% of the candidates attempted the question out of which about 20% scored an average mark of 7 out of 20 marks allotted.

The major pitfalls of the candidates are their inability to interpret the Normal Distribution problem and checking of the standard normal distribution table provided. Their inability to estimate the quartiles from the ogive is another pitfall.

Candidates are advised to use standard textbooks including the ICAN Study Text as a guide in preparing for future examinations.

SOLUTION 5

(a) Let x represent Chukwu's share

$$\text{Then Shehu's share} = 2x,$$

$$\text{Etim's share} = 1.25x$$

$$\text{Tara's share} = (1.6)(1.25x) = 2x$$

$$\therefore x + 2x + 1.25x + 2x = \text{N}20\text{m}$$

$$6.25x = \text{N}20\text{m}$$

$$x = \text{N}3.2\text{m}$$

$$\therefore \text{Etim's share} = (1.25)(\text{N}3.2\text{m})$$

$$= \text{N}4\text{m}$$

(b)

$$(i) \quad P(\text{Toyin passing}) = 0.58, \therefore P(\text{Toyin Failing}) = 1 - 0.58 = 0.42$$

$$P(\text{Bola failing}) = 0.68, \therefore P(\text{Bola Passing}) = 1 - 0.68 = 0.32$$

- $P(\text{at least one of them fails})$

$$= P(\text{one of them fails or both fail})$$

$$= P(\text{one of them fails}) + P(\text{both fail})$$

$P(\text{one of them fails})$

$$= \{P(\text{Toyin fails}) \times P(\text{Bola passes})\} + \{P(\text{Toyin passes}) \times P(\text{Bola fails})\}$$

$$= (0.42 \times 0.32) + (0.58 \times 0.68)$$

$$= 0.1344 + 0.3944$$

$$= 0.5288$$

$P(\text{both fail})$

$$= P(\text{Toyin fails and Bola fails})$$

$$= P(\text{Toyin fails}) \times P(\text{Bola fails})$$

$$= 0.42 \times 0.68$$

$$= 0.2856$$

$$\therefore P(\text{at least one of them fails})$$

$$= 0.5288 + 0.2856$$

$$= 0.8144$$

ALITER (b)(i)

$$\begin{aligned}
 &= P \text{ (at least one of them fails)} \\
 &= 1 - P \text{ (both pass)} \\
 &= 1 - \{P(T) \times P(B)\} \\
 &= 1 - (0.58)(0.32) \\
 &= 1 - 0.1856 \\
 &= 0.8144
 \end{aligned}$$

$$\begin{aligned}
 - P \text{ (Toyin and Bola pass the driving test)} \\
 &= 0.58 \times 0.32 \\
 &= 0.1856
 \end{aligned}$$

(ii)

Customers Factories	A	B	C	Available supplies
P	5 3000	6 3000	4 3000	3000 0
Q	6 4000	7 1500	8 1500	5500 1500 0
R	2 3500	1 3500	3 3500	3500 0
Demands	4000 0	5000 1500 0	3000 0	12000

$$\begin{aligned}
 \therefore \text{Initial total transportation cost} \\
 &= (4 \times 3000) + (6 \times 4000) + (7 \times 1500) + (1 \times 3500) \\
 &= \text{N}50,000
 \end{aligned}$$

MARKING GUIDE

	MARKS
(a)	
i. Correct representation of Chuku's share by a variable (i.e. x)	1
Correct Shehu's share (i.e. 2x)	$\frac{1}{2}$
Correct Etim's share (i.e. 1.25x)	$\frac{1}{2}$
Correct Tara's Share (i.e. 2x)	2
Correct equation of the sum of shares and N20m	2
Correct simplification of the equation	1
Correct value for x	1
Correct value for Etim's shares	<u>2</u>
	10

		MARKS
(b)		
i.	Correct Probability of Toyin failing driving test {i.e. $P(T^1)$ }	$\frac{1}{2}$
	Correct Probability of Bola passing driving test {i.e. $P(B)$ }	$\frac{1}{2}$
	Correct interpretation of the Probability {i.e. $P(TB^1) + P(T^1B) + P(B^1T^1)$ }	<u>1</u>
	Correct multiplication of $P(T)$ by $P(B^1)$	$\frac{1}{2}$
	Correct multiplication of $P(T^1)$ by $P(B)$	$\frac{1}{2}$
	Correct multiplication of $P(B^1)$ by $P(T^1)$	$\frac{1}{2}$
	Correct answer	<u>1</u>
		4½
	Correct multiplication of $P(T)$ by $P(B)$	<u>1</u>
	Correct answer	<u>½</u>
		1½
ALITER		
i.	Correct Probability of Toyin failing the driving test {i.e. $P(T^1)$ }	$\frac{1}{2}$
	Correct Probability of Bola passing the driving test {i.e. $P(R)$ }	$\frac{1}{2}$
	Correct interpretation of the Probability {i.e. $P(\text{at least one fail}) = 1 - P(\text{both pass})$ }	<u>1</u>
	Correct expression for $P(\text{both pass})$ {i.e. $P(T) \times P(B)$ }	$\frac{1}{2}$
	Correct multiplication of $P(T)$ by $P(B)$	$\frac{1}{2}$
	Correct expression for the multiplication	$\frac{1}{2}$
	Correct answer	<u>1</u>
		4½
(b)		
ii.	Correct allocation of the products in the 4 cells ($\frac{1}{2}$ mark each)	2
	Correct expression for transportation cost	<u>1</u>
	Correct transportation cost	<u>1</u>
		<u>4</u>
	Total	<u>20</u>

EXAMINER'S REPORT

The question tests the candidates' knowledge of fraction, independent probability and transportation problem, using the Least Cost Method.

About 60% of the candidates attempted the question out of which about 20% scored less than 5 out of 20 marks.

The major pitfall of the candidates is their inability to interpret the question correctly.

Candidates are advised to use standard textbooks including the ICAN Study Text for better understanding of the principles required.

SOLUTION 6

a.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
EV_A	13.2×0.35 = 4.62	13.6×0.6 = 8.16	12.7×0.28 = 3.556	11.8×0.55 = 6.49	14.1×0.57 = 8.037	13.8×0.44 = 6.072	10.9×0.73 = 7.957
EV_B	14.2×0.56 = 7.952	13.0×0.71 = 9.23	10.8×0.75 = 8.1	12.8×0.27 = 3.456	13.9×0.45 = 6.255	13.1×0.36 = 4.716	11.9×0.54 = 6.426

$$\Sigma EV_A = 44.674 \text{ million Naira}$$

$$\Sigma EV_B = 46.135 \text{ million Naira}$$

Since $EV_B > EV_A$, then it is recommended that product B should be produced.

b. NPV calculation

Year	Cash flow (₦)	Discount factor (10%)	Present value (₦)
0	(379,000)	1	(379,000)
1	117,000	$\frac{1}{1.1} = 0.9091$	$\frac{1}{1.1}(117,000) = 106,363.64$
2	125,000	$\frac{1}{(1.1)^2} = 0.8264$	$\frac{1}{(1.1)^2}(125,000) = 103,305.79$
3	116,000	$\frac{1}{(1.1)^3} = 0.7513$	$\frac{1}{(1.1)^3}(116,000) = 87,152.52$
4	112,000	$\frac{1}{(1.1)^4} = 0.6830$	$\frac{1}{(1.1)^4}(112,000) = 76,497$
			<u><u>= 373,319.46</u></u>

$$\begin{aligned} \therefore NPV &= \text{₦} (373,319.46 - 379,000) \\ &= - \text{₦} 5,680.54 \end{aligned}$$

Since the NPV is negative, then the company should not invest in a new equipment

MARKING GUIDE

		MARKS
(a)		
i.	Correct expected values for product A column or row (for 7 years) (½ mark each)	3½
	Correct sum of the expected values for product A	1
	Correct expected values for product B column or row (for 7 years) (½ mark each)	3½
	Correct sum of the expected values for product B	1
	Correct conclusion/recommendation	<u>1</u>
		10
(b)		
	Correct cash flow for year 0 {i.e. –379,000 or (379,000)}	½
	Correct discount factor column from year 0 to year 4 (½ mark each)	2½
	Correct present value column from year 0 to year 4 (1 mark each)	5
	Correct sum of present values from year 1 to year 4 (i.e. 373,319.46)	½
	Correct expression for NPV (i.e. – 379,000 + 373,319.46)	½
	Correct NPV value	½
	Correct conclusion	<u>½</u>
		10
	Total	<u>20</u>

EXAMINER'S REPORT

The question tests the candidates' knowledge of the decision criteria using Expected Value and Net Present Value of a project.

About 70% of the candidates attempted the question out of which about 50% scored an average of 10 marks.

The major pitfall of some of the candidates is their inability to interpret the question correctly.

Candidates are advised to study relevant textbooks including ICAN Study Text very well in preparing for future ICAN examinations.

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – NOVEMBER 2016

BUSINESS AND FINANCE

Time Allowed: 3 hours

SECTION A: MULTIPLE - CHOICE QUESTIONS (20 MARKS)

INSTRUCTION: YOU ARE REQUIRED TO ANSWER 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. Content theories of motivation deal mainly with what motivate individuals to work while process theories of motivation deal with how people are motivated. Which of the following theories of motivation has elements of both content and process theories?
 - A. McClelland's motivational needs
 - B. Vroom's expectancy model
 - C. Handy's motivational calculus
 - D. Maslow's hierarchy of needs
 - E. Herzberg's hygiene and motivation factors

2. Noise can occur in any part of the communication process. The noise which arises when an e-mail message is sent to an invalid address is caused by
 - A. Technical problems
 - B. Communication problems
 - C. Distortion in the message problems
 - D. Redundancy problems
 - E. Automatic diversion problems

3. Successful work teams possess several characteristics. Which of the following is **NOT ONE** of them?
 - A. The work teams should have clearly defined areas of authority
 - B. There should be strong team loyalty and good teamwork
 - C. Good communication should exist between the team members
 - D. The work teams should have effective leadership
 - E. The work teams should have unclear purposes

4. The process of selling the debt of a company to another company is known as
- A. Debtor turnover
 - B. Factoring
 - C. Accounts receivable
 - D. Credit rating
 - E. Debt management.
5. When **TWO** projects are mutually exclusive, it means that
- A. The two projects can be taken dependently
 - B. The two projects can be taken independently
 - C. The two projects can only be taken together
 - D. The two projects can be taken manually
 - E. None of the two projects can be taken
6. Individuals who have the ability to influence, inspire and motivate others are called
- A. Managers
 - B. Leaders
 - C. Supervisors
 - D. Followers
 - E. Directors
7. The market for sales and repurchases of money market instruments is called
- A. Securities market
 - B. Repo market
 - C. Money market
 - D. Call market
 - E. Financial market
8. Which of the following roles in an organization is associated with middle managers?
- A. Setting organizational objectives
 - B. Technical direction of work activities
 - C. Involvement in short-to-medium term plans
 - D. Employees discipline and morale
 - E. Approval of annual budgets
9. The process of using mathematical technique to solve financial problems is known as
- A. Financial accounting
 - B. Management accounting
 - C. Financial management
 - D. Financial engineering
 - E. Financial techniques

10. A power culture can be found in an organization that is led by entrepreneurial business owner. Which of the following should be expected to adopt power culture?
- A. A small bakery that sells wheat bread
 - B. A department in a consultancy firm that provides IT consultancy services to client firms
 - C. The personnel department of a large deposit bank.
 - D. A civil service department that is responsible for the collection and publication of official government statistics
 - E. The production department in a large manufacturing outfit.
11. Which of the following is **NOT** a type of Not-For-Profit organisation?
- A. Fish Farm
 - B. Christian Fellowship
 - C. Nigeria Health Care Project
 - D. Faith Foundation
 - E. Lagos Digital Village
12. The process of capital budgeting includes all of the following **EXCEPT**
- A Generation of investment proposals
 - B Estimation of cash flows for the proposals
 - C Selection of proposals based on an accepted criterion
 - D Evaluation of cash flows based on only applied technique
 - E Execution of the project
13. Which of the following is **NOT** a requirement for the formation of a corporation?
- A. Company Promoter
 - B. Articles of Association
 - C. Memorandum of Association
 - D. Prospectus
 - E. Provision of Accounting Procedures
14. The sale of shares by a company to selected investors is called
- A. Bonus Issue
 - B. Offer For Sale
 - C. Private Placement
 - D. Offer For Subscription
 - E. Offer By Right
15. An entrepreneurial structure can also be referred to as a (an)
- A. Boundary-less structure
 - B. Innovation structure
 - C. Simple structure
 - D. Functional structure
 - E. Business structure

16. Which of the following **CANNOT** be classified as one of the main categories of stakeholder group in an organisation?
- A. Shareholders
 - B. Lenders
 - C. Entrepreneurs
 - D. Government
 - E. Customers
17. Why is the profit of a sole trader business treated as income in the hand of the owner?
- A. For the purpose of calculating the amount of tax payable on income
 - B. For the purpose of calculating the amount of liability for unpaid debts
 - C. For the purpose of calculating the amount payable on obligations of the business
 - D. For the purpose of calculating the amount payable on shares
 - E. For the purpose of calculating the amount payable on expenditure
18. Prescriptive strategy and rational-planned strategy are also called
- A. Emergent strategy
 - B. Incremental strategy
 - C. Deliberate strategy
 - D. Business strategy
 - E. Generic strategy
19. Which of the following is an interpretation of the acronym IESBA?
- A. International Ethic Standard Board for Accountant
 - B. International Ethic Standard Board for Accountancy
 - C. International Ethics Standards Board for Accountants
 - D. International Ethic Standards Board for Accountants
 - E. International Ethics Standard Board for Accountancy
20. Which of the following is **NOT** a factor that affects ethical views?
- A. Culture
 - B. Due care
 - C. Law
 - D. Consequences
 - E. Code of ethics

SECTION B**OPEN- ENDED QUESTION****(80 MARKS)****INSTRUCTION: YOU ARE REQUIRED TO ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION****QUESTION 1**

The management of an accounting firm is interested in getting the best possible performance from the employees and they have engaged you as a Consultant to advise them.

- a. State and explain **TWO** approaches they can use to get effective performance from the employees. (10 Marks)
 - b. Explain the term “team” (4 Marks)
 - c. List **SIX** characteristics of a successful work team. (6 Marks)
- (Total 20 Marks)**

QUESTION 2

The Agent-Principal relationship can cause problems in an organisation. This is because there could be conflicts of interest between the manager’s objectives or goals and those of the shareholders.

Required:

- a. Explain the concept of agency theory. (4 Marks)
 - b. State and explain **FIVE** ways agency conflicts may arise in an organization. (10 Marks)
 - c. Explain **THREE** methods of reducing agency problem in an organization. (6 Marks)
- (Total 20 Marks)**

QUESTION 3

The contingency theory of leadership states that effective leadership style is contingent upon the situation. The situational leadership theory is a contingency theory developed by Paul Hersey and Kenneth Blanchard.

- a. Use a 2x2 matrix to present the **FOUR** leadership styles identified by Hersey and Blanchard. (12 Marks)
 - b. Based on the views of Hersey and Blanchard on the **FOUR** leadership styles, state the leadership style considered most effective for a given work situation. (8 Marks)
- (Total 20 Marks)**

QUESTION 4

Godwin Plc invested ~~N~~500,000 for a period of 3 years at 12% interest rate per annum. Calculate the future value of the investment of Godwin Plc if interest rate is compounded.

- a. Annually
- b. Semi-annually
- c. Monthly
- d. Weekly
- e. Continuously

(4 Marks each)

(Total 20 Marks)

QUESTION 5

For an organisation to function and survive, the managers must at all times apply the most appropriate management principles.

- a. Define the term “Span of Control” and explain briefly **FOUR** factors that influence the most appropriate size of the span of control for a manager.
(10 marks)
- b. Explain briefly the following concepts:
 - i. Outsourcing
 - ii. Offshore outsourcing
 - iii. Divisional structure
 - iv. Operational planning
 - v. Stakeholder

(10 marks)

(Total 20 Marks)

QUESTION 6

Managers need to understand the nature, processes and complexity of their business environment as well as how they affect the various operations of their organisation.

- a. Explain briefly any **FIVE** political, legal, and environmental factors that could affect the performance of a business organisation.
(10 Marks)
- b. Explain briefly the following concepts:
 - i. Mission statement
 - ii. Objective
 - iii. Stakeholder mapping
 - iv. Deliberate strategy
 - v. Emergent strategy

(10 Marks)

(Total 20 Marks)

SOLUTIONS

SUGGESTION SOLUTION

Multiple Choice Questions (MCQ)

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

EXAMINER'S REPORT

There are twenty questions in this section. The questions cover the entire syllabus.

All candidates attempted the questions. Performance was above average.

SOLUTION 1

- a. The two approaches the management of an accounting firm can use if they are interested in getting effective performance from the employees are:
- i. The individual approach, and
 - ii. The team approach
- i. The individual approach:
This approach states that individual employees should be appointed to carry out specific job functions and such jobs should be properly organized. This is because it is believed that if each individual carries out his/her job effectively, then the entire work group will perform effectively. Thus, the work group effectiveness is the summation of the effectiveness of each group member.
- ii. The team approach:
This approach states that if a work group members work together as a team, that work group will be more effective. This is because it is believed that effectiveness emanates from both the ways in which the group members work with each other and the way that individuals perform their own job. Hence, management is faced with the task of not just developing effective individuals but also effective teams.
- b. A team is a particular type of workgroup where team members work effectively together, identify with the team, see themselves as part of a team and in which the team reaches decisions by agreement and consensus.
- c. The characteristics of a successful work team include:
- Effective leadership to direct its affairs;
 - The area of authority of the team that is clearly defined i.e. team members should know their “dos and don’ts”;
 - Resources to successfully complete tasks;
 - Necessary skills or experience to complete tasks successfully;
 - Clarity of purpose i.e. the purpose of the team should be clearly stated;
 - Communication between team members should be good;
 - Strong team loyalty and good teamwork;
 - Work that is beneficial to the business, i.e., it should lead to business success;
 - The roles of each team member that add to the effectiveness of the team;
 - Motivation and commitment to achieve group objectives;
 - A clear timescale for completion of the task.

MARKING GUIDE

		Marks
(a)		
i.	Stating the two approaches that can be used attracts 1 mark each	2
ii.	Explaining the two approaches that can be used to get effective performance from the employees attracts 4 marks each	<u>8</u>
		10
(b)	Stating what a team is attracts	4
(c)	Listing the characteristics of a successful team attracts (1 mark each for any six)	<u>6</u>
		10
	Total	<u>20</u>

EXAMINER'S REPORT

The question tests candidates' understanding of approaches to effective employee performance. It also explores candidates understanding of what a team means and factors that characterise successful work teams.

General performance level for question one was slightly below average (specifically about 40%).

Candidates are advised to use the ICAN Study Text as a guide in preparing for examination.

SOLUTION 2

a. Agency Theory

An agent is a person who acts on behalf of another person called the principal in dealing with other people. The agent acts in the name of the principal and commits the principal to agreements and transactions.

Agency theory was developed by Jensen and Meckling (1976). They suggested a theory of how the governance of a company is based on the conflicts of interest between the company's owners (shareholders), its managers and major providers of debt finance. Each of these groups has different interests and objectives which often conflict with each other.

Agency theory is based on the idea that when a company is first established, its owners are usually also its managers. As a company grows, the owners appoint managers to run the company. The owners expect the managers to run the company in the best interests of the owners; therefore a form of agency relationship exists between the owners and the managers. Agency problems however do arise because the directors (managers) may manage companies not in the best interest of the shareholders (the owners), but rather in their own selfish interest

b. Agency conflicts arise in the following ways:

i. Desire for additional incentives

A manager has an interest in receiving benefits from his or her position as a manager. The benefits include all that come from status, such as a company car, use of a company airplane, lunches, attendance at sponsored events, etc. Jensen and Meckling suggested that a manager's incentive to obtain these benefits is higher when he has no share or only a few shares, in the company.

ii. Effort Level

Managers may work less hard than they would if they were the owner of the company. The effect of this "lack of effort" could be lower profits and lower share price. The problem will exist in a large company at middle level of management as well as senior management level. The interest of middle managers and the interest of senior managers might well be different, especially if senior management are given pay incentives to achieve higher profits, but the middle managers are not.

iii. Divergence of Objectives

The objective of the firm is to maximize shareholders wealth whereas, the agents (directors) will pursue their personal objectives of getting as much money as possible

Where management remuneration is based on the size of the company, managers are likely to work towards increasing the size of the company. To this end, managers may opt for re-investments of profit rather than distribution of dividends. This will result in conflict of interest for the group of shareholders that prefer dividends.

iv. Attitude to Risk

Executive directors and senior managers usually earn most of their income from the company they work for. They are therefore interested in the stability of the company because this will protect their job and their future income. This means that management might be risk-averse and reluctant to invest in higher-risk projects. In contrast, shareholders might want a company to take bigger risks if the expected returns are sufficiently high.

v. Investment Proceeds

Shareholders are concerned about the long-term financial prospects of their company because the value of their share depends on expectations for the long-term future. In contrast, managers might only be interested in the short-term. This is partly because they might receive annual bonuses based on short-term performance and partly because they might not be with the company for more than a few years. Managers might therefore have an incentive to increase accounting return on capital employed (or return on investment), whereas shareholders have a greater interest in long-term share value.

c. Reducing the agency problem

Jensen and Meckling argued that in order to reduce the agency problem, incentives should be provided to management to increase their willingness to take value-maximising decisions, that is, to take decisions that benefit the shareholders by maximising the value of their shares.

Several methods of reducing the agency problem have been suggested.

These include:

- i. Devising a remuneration package for executive directors and senior managers that give them incentives to act in the best interest of the shareholders;
- ii. Fama and Jensen (1983) argued that an effective board must consist largely of independent non-executive directors. Independent non-executive directors have no executive role in the company and are not full-time employees. Through, the monitoring role, the independent non-executive directors are able to act in the best interest of the shareholders and thus, reduce the agency problem;
- iii. Independent non-executive directors should also take the decision where there is a conflict of interest between executive directors and the best interest of the company. For example, non-executive directors should be responsible for the remuneration packages for executive directors and other senior managers;
- iv. Having a large proportion of debt on the capital structure of the company. This step brings in additional stakeholders, diffuses the hold of agent and so they wield less influence; and
- v. Reduction of the level of cash in the company.

MARKING GUIDE

	MARKS
a. Explaining the concept of Agency Theory	4
b. Stating 5 ways agency conflicts may arise (1 mark each for any 5 points)	5
Succinct explanations for the 5 ways (1 mark for each point)	<u>5</u>
	10
c. Explaining 3 methods of reducing agency problem in an organisation (2 marks for each point)	<u>6</u>
	20

EXAMINER'S REPORT

The question tests candidates' understanding of the concept of agency theory. About 60% of the candidates attempted the question and about 40% passed.

The major pitfall of candidates was inability to show clear understanding of the concept of agency theory as developed by Jensen and Mecking.

Candidates are advised to cover the syllabus and use ICAN Study Text in preparing for future examinations.

SOLUTION 3

(a) 2x2 Matrix Presentation of Hersey and Blanchard Four Leadership Styles

		AMOUNT OF DIRECTIVE ACTIVITY (TASK FOCUS)	
		LOW	HIGH
AMOUNT OF SUPPORTIVE ACTIVITY (RELATIONSHIP FOCUS)	LOW	Delegating style Responsibility for decision-making given to subordinates	Telling/directive style Close supervision by the leader
	HIGH	Supportive/ Participating style Leader shares decision-making with subordinates, and ask them for input	Selling style Leader makes the decision but explains them to Subordinates and gives opportunities for asking questions

- b. Based on the views of Hersey and Blanchard on the four leadership styles, the most effective leadership styles for a given work situation are summarised below:
- The delegating style is most effective when subordinates have high competence and high commitment;
 - The telling/directive style is most effective when subordinates have low competence and high commitment;
 - The supportive/participating style is most effective when subordinates have high competence and variable commitment;
 - The selling style is most effective when subordinates have some competence and some commitment.

MARKING GUIDE

	Marks
a. Drawing and correct labeling/explanation of each quadrant of the matrix attracts 3 marks each	12
b. Stating the leadership style that is most effective in a given situation attracts 2 marks each	<u>8</u>
Total	<u>20</u>

EXAMINER'S REPORT

The question tests candidates' understanding of contingency theory of leadership as developed by Hersey and Blanchard.

About 5% of the candidates attempted the question and performance was below average.

Candidates are advised to use the ICAN Study Text as a guide in preparing for the examination.

SOLUTION 4

Future Value (FV) of the Investment of Godwin Plc if interest rate is compounded:

a. Annually: i.e. Interest is compounded once a year

	FV	=	$P(1+r)^n$
Where	FV	=	Future value or Terminal Amount
	P	=	Principal
	r	=	Annual rate of return
	n	=	Number of years
	FV	=	$\text{₦}500,000 (1+12/100)^3$
		=	$\text{₦}500,000 (1.12)^3$
		=	$\text{₦}500,000 (1.404928)$
		=	$\text{₦}702,464$

b. Semi-annually: i.e. Interest is compounded twice a year

	FV	=	$P (1 + r/m)^{nm}$
Where	FV	=	Future Value or Terminal Amount
	P	=	Principal
	r	=	Rate of Return
	n	=	Number of Years
	m	=	Number of Compounding per Year
	FV	=	$P (1+r/2)^{n*2}$
		=	$\text{₦}500,000 (1+0.12/2)^{3*2}$
		=	$\text{₦}500,000 (1.06)^6$
		=	$\text{₦}500,000 (1.418519)$
		=	$\text{₦}709,259.56$

c. Monthly: i.e. Interest is compounded monthly (12 times per year)

	FV	=	$P (1 + r/m)^{nm}$
Where	FV	=	Future Value or Terminal Amount
	P	=	Principal
	r	=	Rate of Return
	n	=	Number of Years
	m	=	Number of Compounding per Year
	FV	=	$P (1+r/12)^{n*12}$
		=	$\text{₦}500,000 (1+0.12/12)^{3*12}$
		=	$\text{₦}500,000(1.01)^{36}$
		=	$\text{₦}500,000(1.430769)$
		=	$\text{₦}715,384.39$

d. Weekly: i.e. Interest is compounded weekly (52 times per year)

	FV	=	$P (1 + r/m)^{nm}$
Where	FV	=	Future Value or Terminal Amount
	P	=	Principal
	r	=	Rate of Return
	n	=	Number of Years
	m	=	Number of Compounding per Year
	FV	=	$P (1+r/52)^{n*52}$
		=	$\text{₦}500,000 (1+0.12/52)^{(3 \times 52)}$
		=	$\text{₦}500,000 (1.002308)^{156}$
		=	$\text{₦}500,000 (1.432735)$
		=	$\text{₦}716,367.53$

e. Continuously: i.e. Interest is compounded indefinitely

	FV	=	$P e^{rn}$
Where	FV	=	Future value or Terminal Value
	P	=	Principal
	e	=	Exponential value given as 2.718282
	r	=	Rate of Return
	n	=	Number of Year
	FV	=	$P e^{rn}$
	FV	=	$\text{₦}500,000 \times 2.718282^{(0.12 \times 3)}$
	FV	=	$\text{₦}500,000 \times 2.718282^{(0.36)}$
	FV	=	$\text{₦}500,000 \times 1.433329$
		=	$\text{₦}716, 664.71$

MARKING GUIDE

	MARKS
a. Stating the formulae correctly in (a) to (e) (1 mark for each formula)	5
b. Substituting the symbols in the formulae with correct and relevant variables - 1 mark each (5 x 1)	5
c. Solving the substituted problems - 1 mark each (5 x 1)	5
d. Providing correct final solution - 1 mark each (5 x 1)	<u>5</u>
	<u>20</u>

EXAMINER'S REPORT

The question tests candidates' understanding of the application of compound interest formulae.

About 37% of the candidates attempted the question with only 16% of those who attempted the question scoring above average.

The major pitfall was that most of the candidates could not apply compound interest formulae correctly especially, in cases where the interest on principal was compounded semi-annually, monthly, weekly and continuously.

Candidates should expose themselves to basic formulae in business/ finance and have a mastery of their application.

SOLUTION 5

- a. Span of control refers to the number of subordinates for whom a manager is directly responsible and over whom the manager has authority. For example, if a manager has ten subordinates who report directly to him, the span of control for that manager is ten.

Factors that influence the most appropriate size of the span of control for a manager include the following:

- i. **The size of the organisation:** In very small organisations, the span of control will be narrow because the number of employees is limited;
- ii. **The complexity of the work and the knowledge required:** When the work is complex, or there is a high chance of making mistakes by subordinates, a manager should give each subordinate a reasonable amount of time and attention, and should try to apply close control over the quality of the work. So, a narrow span of control might therefore be appropriate. But when the work is fairly simple and a smaller amount of supervision is required then the span of control can be much wider;
- iii. **The geographical spread of employees:** When employees are spread over a wide geographical area, the span of control should not be so wide that a manager spends most of his time travelling between the different locations where the subordinates are working. Excessive travelling time is often a waste of valuable management time;
- iv. **The type of individuals and the culture of the organisation:** When employees are highly skilled and motivated, they may be left to do their work without much supervision. Responsibility for some decision-making might also be delegated to these individuals, making a wider span of control appropriate. However when employees lack confidence and are uncertain about what they should be doing, close supervision and a narrow span of control is more appropriate; and
- v. **The type of organizational structure being used in the organization:** When the organization is small and using an entrepreneurial structure, all activities revolves around the owner-manager.

b.

i. **Outsourcing**

Outsourcing is the practice of contracting work out to a third party or supplier. Companies do this to take advantage of specialist external expertise to free up management time to concentrate on core activities. For example, a national food retail company might outsource its delivery work to a specialist transport company.

ii. **Offshore outsourcing**

Offshore outsourcing describes what happens when a company contracts work out to a third party based overseas. The company supplying the outsourced services might be able to take advantage of lower pay rates in their home country and this would enable them to tender for the outsourced work at a lower fee than a company in the original country.

iii. **Divisional structure**

In a divisional organisation structure, the organisation is divided into a number of different divisions, sometimes called strategic business units or SBUs. There are two main types of divisional structure, namely; (i) a **product division structure**: each division specialises in a different product or service (or range of products or services). (ii) a **geographical division structure**: each division sells the same products or services, but in different regions or geographical areas.

iv. **Operational planning**

This is detailed planning of activities, often at a supervisory level or junior management level, for the achievement of short-term goals and targets. For example, a supervisor might divide the workload between several employees in order to complete all the work before the end of the day.

v. **Stakeholder**

A stakeholder in an organisation is a person who has an interest in what the organisation does, and who might, therefore, try to influence the decisions and actions of the organisation.

MARKING GUIDE

		MARKS
a.	Providing correct definition	2
	Explaining 4 factors that influence the most appropriate size of the span of control for a manager (2 marks each for 4 points)	<u>8</u>
		10
b.	Explaining the 5 Concepts (2 marks each)	<u>10</u>
		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' knowledge of span of control, factors that influence the appropriate span of control and basic concepts in business and finance.

91% of the candidates attempted the question and about 50% passed. Some of the candidates did not understand some basic concepts in business and finance.

Candidates should familiarise themselves with basic concepts in business and finance.

SOLUTION 6

a. **FIVE** political, legal and environmental factors that could affect the performance of a business organization include:

1. **Nationalisation of industry and privatization:** In some countries, industry is nationalised and owned wholly or partly by the state (the government). Occasionally, after a change of government, an incoming government decides to nationalise a business and take ownership of existing commercial business into ownership by the state. In other cases, a government might introduce a policy of de-nationalising an industry ('privatising the industry') and transferring ownership of state-owned businesses to commercial companies.
2. **Transport and infrastructure:** Businesses rely on the transport system to move their goods (and employees), and the quality of the road transport system depends on the infrastructure of roads. Although the transport system might be operated by commercial companies, most of the road network and possibly also the rail network are state-owned. Government policy on transport and building roads or rail networks can have an important effect on business activity.
3. **Education:** In most countries the government is responsible for most of the education system. Education policy affects the quality and skills of individuals who make up the work force of business organisations.
4. **Environmental policy:** Business organisations might be affected by changes in the environmental policy of a government, such as policy to reduce levels of pollution in the air, water or land.
5. **Taxation and subsidies:** Governments use taxation to raise income. They might also use taxation to influence behaviour, such as increasing tax on fuel in order to encourage a reduction in fuel consumption and increasing tax on the disposal of waste in order to encourage the recycling of waste. Governments sometimes encourage particular activities by offering subsidies, such as subsidies towards the cost of particular skills training.

b.

- i. **Mission statement:** A mission statement defines the purpose and the reason for an organisation's existence. Many entities give a formal expression to their mission in a mission statement. A mission statement describes the organisation's basic function in society in terms of its product or services. Mission statement defines the present state of an organisation.

- ii. **Objective:** Objectives are the ends that state specifically how the goals of an organization shall be achieved. They are concrete and specific in contrast to goals that are generalized. An objective is a specific time-bound, clear and quantifiable state of affairs, which an organisation is pursuing.
- iii. **Stakeholder mapping:** Stakeholder mapping is a technique that can help senior managers to assess their main stakeholders and consider what should be done (if anything) to win the support of particular stakeholders for particular decisions. One approach to stakeholder mapping is to evaluate each stakeholder group using a 2×2 stakeholder power/interest matrix. This is sometimes called a Mendelow matrix, named after the person who 'invented' it. It involves assessing the balance of power between the stakeholders groups; the relative power and interest of each group.
- iv. **Deliberate strategy:** Deliberate strategy is also called prescriptive strategy and rationally-planned strategy. It is the outcome from a formal strategic planning process in which management:
 - Carry out a strategic position analysis;
 - Identify and evaluates the strategic alternatives;
 - Make strategic choices; and
 - Implement the chosen strategies, which are set out in a formal business plan or strategic plan.

The business plan is reviewed regularly and amended if necessary.

- v. **Emergent strategy:** An emergent strategy is one that is not formally planned but which emerges in response to unforeseen developments and opportunities. Ideas for an emergent strategy might come from employees or junior managers rather than senior management. However, once a new strategy has emerged, the entity applies it consistently.

MARKING GUIDE

	MARKS
a. Explaining any 5 political, legal and environmental factors that could affect performance of a business organisation (2 marks each)	10
b. Explaining the 5 concepts listed (2 marks each)	<u>10</u>
Total	20

EXAMINER'S REPORT

The question tests candidates' knowledge of political, legal and environmental factors that affect business organisation. It equally tests candidates' understanding of some management principles.

The general performance of the candidates was average. Many of the candidates were not familiar with the political, legal and environment factors.

It is suggested that candidates should use ICAN Study Text on the subject matter. It is suggested that candidates should use the ICAN Study text as a guide in preparing for future examination.

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – NOVEMBER 2016

BUSINESS LAW

Time Allowed: 3 hours

SECTION A: MULTIPLE-CHOICE QUESTIONS (20 MARKS)

INSTRUCTION: YOU ARE REQUIRED TO ANSWER 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. Which of the following persons may **NOT** be appointed Trustee of trust property?
 - A. Trust Corporation
 - B. Beneficiary
 - C. Public Trustee
 - D. Bankrupt
 - E. Judicial Trustee
2. Under contract of employment, which of the following is **NOT** a duty of an employee to his employer?
 - A. Serving the employer faithfully
 - B. Keeping secret his employer's confidential information
 - C. Doing other jobs outside those officially assigned to him
 - D. Obeying the employer's lawful orders
 - E. Exercising professional skill and diligence
3. Which of the following is **NOT** a Negotiable Instrument?
 - A. Cheque
 - B. Bill of Exchange
 - C. Promissory note
 - D. Dividend warrant
 - E. Postage stamp
4. In Insurance Law, the legal maxim *Uberrimae fidei* means
 - A. Almost good faith
 - B. Always good faith
 - C. Utmost good faith
 - D. Likely good faith
 - E. Usual good faith.

5. Which of the following is an implied right of the hirer under the Hire Purchase Act?
- A. Right to sell the goods under hire
 - B. Right to buy the goods after full payment of instalments
 - C. Right to immediate ownership of the goods on possession
 - D. Right to exchange the goods with a third party
 - E. Right to defer instalmental payments.
6. Under Sale of Goods, price is referred to as the
- A. Income
 - B. Consideration
 - C. Profit
 - D. Title
 - E. Money.
7. Which of the following is classified under the Criminal Code?
- A. Tort
 - B. Fraud
 - C. Defamation
 - D. Trespass
 - E. Slander.
8. Agency could be created by
- A. Estoppel
 - B. Application
 - C. Payment
 - D. Buying and selling
 - E. Performance
9. In law of contract, the person to whom an offer is made is called the
- A. Oferrum
 - B. Offeree
 - C. Offerer
 - D. Offeror
 - E. Oferrex
10. Fraudulent interception of electronic financial transactions is called
- A. Local Networking Crime
 - B. Wide Range Network Crime
 - C. International Network Crime
 - D. Base Station Network Crime
 - E. Cyber-Crime

11. The Economic and Financial Crimes Commission investigates
 - A. Social disturbances
 - B. Protests against Government
 - C. All financial crimes allegedly committed
 - D. Robbery cases
 - E. Kidnapping and abduction.
12. Which of the following courts could hear cases under the Money Laundering (prohibition) Act (2004)?
 - A. Criminal Court
 - B. Special Tribunal
 - C. Court of Appeal
 - D. Judicial Commission
 - E. Federal High Court.
13. Under Sec.390 of the Criminal Code, the punishment for stealing of testamentary instrument is
 - A. 3 years jail term
 - B. Equivalent fine of the testamentary properties
 - C. Bail-bond forfeiture
 - D. Life imprisonment
 - E. Capital sentence.
14. The main objective of Criminal Law is to
 - A. Punish offenders for acts against general interests of society
 - B. Award damages against the defendant
 - C. Resolve conflicts between warring parties
 - D. Mediate in community disagreements
 - E. Enhance police efficiency.
15. A company is said to be insolvent when it
 - A. Retrenches its staff
 - B. Embarks on strike action
 - C. Stops production
 - D. Is unable to pay its debts
 - E. Is making losses.
16. At Companies' General Meetings, formal decisions are made through
 - A. Interactions
 - B. Lobbying
 - C. Debates
 - D. Resolutions
 - E. Bargaining

17. A partner who does **NOT** participate in managing the partnership business is called a
- A. General partner
 - B. Official partner
 - C. Ordinary partner
 - D. Special partner
 - E. Limited partner
18. In the Court system, appeal against a High Court judgment is filed at the
- A. Court of Appeal
 - B. Tribunal of Enquiry
 - C. Chief Magistrate Court
 - D. Special Judiciary Court
 - E. Supreme Court.
19. Which of the following is a remedy for breach of duty of care owed to an aggrieved party?
- A. Protest
 - B. Damages
 - C. Lien
 - D. Prison sentence
 - E. Stoppage in transit
20. Which court hears cases between States of the Federation and the Federal Government?
- A. Court of Appeal
 - B. National Arbitration Court
 - C. Supreme Court
 - D. Constitutional Court
 - E. Federal High Court

SECTION B:**OPEN-ENDED QUESTIONS****(80 MARKS)****INSTRUCTION: YOU ARE REQUIRED TO ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION****QUESTION 1**

- a. Okeke offered to sell his Abuja house to Bayo for ~~₦~~60 million. The offer was to be open for 3 weeks. Bayo agreed immediately, but proposed to pay by 3 monthly instalments of ~~₦~~20 million each, commencing from the month of signing the sale agreement. Okeke did not respond.

One month later, Bayo informed Okeke of his agreement to pay the ~~₦~~60 million offer price in full immediately, but Okeke had sold the house to another person five days earlier. Bayo wants to file a suit to obtain specific performance because he said he had earlier agreed to buy the house immediately Okeke made the offer to him.

Required:

- i. State and explain the position of the law in this case. (3 Marks)
 - ii. Advise Bayo accordingly. (6 Marks)
- b. The Economic and Financial Crimes Commission (EFCC) Act was enacted to deal with matters connected with economic crimes committed by public servants and other persons.

Required:

State **SIX** functions of the EFCC. (6 Marks)

- c. The financial services which a bank renders is generally known as banking business.

Required:

State **FIVE** businesses of a commercial bank. (5 Marks)
(Total 20 Marks)

QUESTION 2

- a. Under Insolvency Law, a company's insolvency may result in its liquidation.

Required:

State and explain briefly **THREE** tests for Insolvency in Nigeria as provided for in the Companies and Allied Matters Act 2004. (6 Marks)

- b. Public Limited Companies are required to hold General Meetings of members where decisions are made for the company.

Required:

Write short notes on the following, stating the period of months within which the meetings must be held, and the period of notice required for the meetings:

- i. Annual General Meeting (3 Marks)
 - ii. Statutory Meeting (3 Marks)
 - iii. Extra-Ordinary General Meeting (3 Marks)
- c. There are different classifications of courts in the Nigerian Judicial System, which include "Courts of Records" and "Superior Courts".

Required:

- i. Explain briefly "Courts of Records". (1 Mark)
 - ii. State the relationship between "Courts of Records" and "Superior Courts" (1 Mark)
 - iii. State **THREE** Superior Courts in the hierarchy of courts. (3 Marks)
- (Total 20 Marks)**

QUESTION 3

- a. Bill of Exchange is a type of Negotiable Instrument.

You are required to explain briefly:

- i. Bearer Bill (3 Marks)
- ii. Order Bill. (3 Marks)

- b. Agency is a consensual relationship between two persons, the principal and the agent.

You are required to write short notes on the following agents:

i. Broker; (2 Marks)

ii. Auctioneer (2 Marks)

- c. Legislation in the National Assembly constitutes a source of Nigerian law.

You are required to state **FOUR** other sources of Nigerian law. (4 Marks)

- d. Data storage and recovery require the use of some electronic devices to aid evidence in prosecuting computer fraud.

Required:

Explain briefly, the following computer storage and data recovery devices:

i. Hard Disk Storage; (2 Marks)

ii. External Disk Storage; (2 Marks)

iii. Flash Disk Storage. (2 Marks)

(Total 20 Marks)

QUESTION 4

- a. Under the Law of Torts, there are different forms of liability.

Required:

i. Explain briefly, the term “Strict Liability”. (2 Marks)

ii. State **TWO** of the elements a plaintiff must prove to succeed in his action for strict liability. (2 Marks)

- b. Hire Purchase Agreement is a contract between the owner and the hirer.

Required:

State **FOUR** of the terms that must be contained in a Hire Purchase Agreement as provided by law. (4 Marks)

- c. A personal representative that is referred to as an Administrator is a person appointed to manage the estate of a deceased person.

Required:

State **SIX** legal duties of an Administrator. (6 Marks)

- d. Partnership is a business relationship between parties to make profit.

Required:

Explain briefly **THREE** circumstances under which a partnership may be dissolved apart from court order. (6 Marks)

(Total 20 Marks)

QUESTION 5

- a. Mallam Bako had an office building, which he insured against fire risk with Arewa Insurance Limited. He sold the building to a company, Dry Desert Limited, who paid the full price by issuing 50 percent of its shares to Mallam Bako. This made him a joint-shareholder of the company. A few months later, fire razed the building, and Mallam Bako made a claim on Arewa Insurance Limited which denied liability.

Required:

i. Explain the legal issue involved in this case. (2 Marks)

ii. Advise Mallam Bako accordingly (2 Marks)

- b. Alero and Binta have been in partnership, trading profitably in rice importation for several years. However, as a result of a new regulation by the Central Bank of Nigeria (CBN) that banned importation of rice into the country through land borders, the business can no longer be done profitably.

Required:

i. State the position of the law on this issue. (2 Marks)

ii. Explain the consequence of the CBN's new regulation on the partnership. (2 Marks)

iii. Advise the partners on the action to take on this consequence. (2 Marks)

- c. Sale of Goods Act defines “goods” as all chattels personal, other than those in action and money.

Required:

Explain briefly the meaning of:

- i. Pledge (2 Marks)
- ii. Bailment. (2 Marks)

- d. Under the Criminal Code, “theft” is defined as taking anything capable of being stolen or converting anything for own use.

Required:

Explain briefly the following:

- i. Taking (3 Marks)
- ii. Converting (3 Marks)

(Total 20 Marks)

QUESTION 6

- a. In Company Law, a promoter undertakes to take part in the formation of a company.

Required:

State and explain briefly **THREE** fiduciary duties of a promoter. (9 Marks)

- b. The Money Laundering (Prohibition) Act provides that a financial institution shall keep its customer’s particulars.

Required:

Explain briefly “Proof of Identity”, with one example each to be submitted by the following bank customers:

- i. An individual (3 Marks)
- ii. Corporate body. (3 Marks)

- c. Employment Law is a branch of Labour Law which regulates the contract of employment.

Required:

Explain briefly, the following terms:

i. Interdiction (2½ Marks)

ii. Probationary period (2½ Marks)

(Total 20 Marks)

SOLUTIONS

SECTION A - MULTIPLE-CHOICE QUESTIONS - SOLUTIONS.

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

Multiple Choice Questions: 1 Mark each = 20 Marks.

EXAMINER'S REPORT

The questions cover the entire syllabus. About 95% of the candidates attempted and passed this section.

SECTION B

SOLUTION 1

1a.

i Under Law of Contract, a valid offer is made upon certain terms which must be clear and final. These terms must be accepted in their entirety for the offer to crystallise into a contract. Any modification of the terms of the offer by the offeree vitiates the offer and thus, becomes a “counter-offer”. Thus a counter offer amounts to a rejection of the original offer.

ii. The issue in this case is non-compliance with two terms, i.e., offer price of ₦60 million and the 3 weeks period the offer was open for acceptance. Bayo, the offeree, failed to honour both terms by offering instalmental payments instead of full payment and eventually accepting to buy the property for full payment after the period of offer had elapsed. Both are infractions on the original offer and thus become counter-offer.

Bayo is therefore advised not to sue for specific performance as the suit will fail because there is no valid contract between him and Okeke.

b. The Economic and Financial Crimes Commission (EFCC) Act states the duties of the EFCC as follows:

- i. Enforcement and administration of the Act;
- ii. Investigation of all economic and financial crimes;
- iii. Coordination of all economic and financial crimes by other Law Enforcement Agencies;
- iv. Identification, freezing, confiscation and seizure of proceeds from all economic and financial crimes;
- v. Prevention, minimisation or eradication of all economic and financial crimes;
- vi. Facilitation of rapid exchange of information between all Law Enforcement Agencies;
- vii. Examination and investigation of all reported cases of economic and financial crimes;
- viii. Detention of accused persons within stipulated period or by court order for economic and financial crimes;
- ix. Arraignment in court of accused persons for economic and financial crimes; and
- x. Collaboration with all government bodies in and outside the country on economic and financial crimes.

- c. The Banking Act lists the following as businesses of commercial banks:
- i. Receiving monies through cash or cheques as deposits or savings from customers;
 - ii. Payment of cash or cheques on behalf of customers;
 - iii. Granting of loans and overdraft facilities to customers;
 - iv. Acceptance of credits for and on behalf of customers;
 - v. Purchase and discounting of bills and cheques on behalf of others;
 - vi. Purchase and sales of securities on behalf of others;
 - vii. Financing of projects on behalf of others; and
 - viii. Effecting of transfers and clearing.

MARKING GUIDE

	<u>Marks</u>	<u>Marks</u>
a. i. Explain law on principle on offer, acceptance and counter-offer	3	
ii. Relate case to counter-offer and effect Advise to Bayo; legal action will fail	4 <u>2</u>	9
b. State 6 duties of EFCC	6	
c. State 5 businesses of banks	<u>5</u>	<u>11</u>
		<u>20</u>

EXAMINER'S REPORT

The question tests candidates' understanding of (a) the principles of offer and acceptance/counter-offer; (b) functions of EFCC; and (c) businesses of a commercial bank.

About 90% of the candidates attempted the question and performance was very good.

SOLUTION 2

- a. The Companies and Allied Matters Act (CAMA) provides the following as tests of insolvency of a company in Nigeria:
- i. **Inability to Pay ₦2,000 Debt**
A company that is unable to pay any of its creditors a debt in excess of ₦2,000 within 3 (Three) weeks after a demand for payment has been made by the creditor, is considered to be insolvent. This may lead to the liquidation of the company by court through application of the creditor.
 - ii. **Inability to Pay Judgment Debt**
A company shall be considered insolvent, if it is unable to pay wholly or partially or defaults in paying to the creditor, court judgment debt within stipulated period. This may result in winding-up process being commenced against the company.
 - iii. **Court Determination**
When a court of competent jurisdiction determines, after taking into account any contingent or prospective liability of the company that the company is unable to pay its debts, such company is considered insolvent and may be wound-up by order of the court.
 - iv. **Company's Liabilities Exceed Assets**
A company whose liabilities have been ascertained to exceed its assets is considered to be insolvent. The values of the liabilities and assets of the company must however be confirmed by a competent professional in the relevant field. This may result in the winding-up of the company.
- b. i. **Annual General Meeting**
A company is required to hold Annual General Meeting (AGM) once a year in addition to any other meeting in the year. A company must hold its AGM within 15 months between one AGM and the next. If a company holds its first AGM within 18 months of incorporation, it needs not hold it in the year of incorporation or the next.

Members of a company must be given 21 days notice of an AGM.

ii. **Statutory Meeting**

Sec 211 of Companies and Allied Matters Act (CAMA) provides that a public company is required to hold its Statutory Meeting within 6 months from the date of incorporation. This is the first General Meeting of members.

21 days notice is required to be given to members for the meeting.

iii. **Extra-Ordinary General Meeting**

The board of directors of a public company may convene an Extra-Ordinary General Meeting (EGM) when they believe it is desirable to do so, in the interest of the company and its members. Also, members of the company that hold at least 10% of the voting rights of all the members can convene the meeting.

The length of notice to be given to members for an Extra-Ordinary General Meeting is 21 days.

c.

i. In the Nigerian judicial system, Courts of Records are courts which keep records of their proceedings, and have the power to fine or imprison an offender.

ii. The relationship between Courts of Records and Superior Courts is that Superior Courts are all Courts of Records.

iii. Courts classified in Nigeria as Superior Courts in the hierarchy are:

- i. Supreme Court;
- ii. Court of Appeal;
- iii. Federal High Court;
- iv. State High Court;
- v. Customary Court of Appeal; and
- vi. Sharia Court of Appeal.

MARKING GUIDE

	<u>Marks</u>	<u>Total</u>
a. Company Insolvency:		
* State 3 Tests to prove Insolvency- 1 mark each	3	
* Explain each Test – 1 mark each	<u>3</u>	6
b. Company Meetings:		
i. * Write short note on Annual General Meeting	1	
* State period within which to hold	1	
* State period of notice	<u>1</u>	
	<u>3</u>	
ii. * Write short note on Statutory Meeting	1	
* State period within which to hold	1	
* State period of notice	<u>1</u>	
	<u>3</u>	
iii. * Write short note on Extra Ordinary Gen Meeting	1	
* State period within which to hold	1	
* State period of notice	<u>1</u>	
	<u>3</u>	9
2c. i. Explain Courts Of Records	1	
ii. Explain Relationship between Courts of Records and Superior Courts	1	
iii. State 3 Superior Courts in Hierarchy	<u>3</u>	<u>5</u>
		<u>20</u>

EXAMINER'S REPORT

The question tests candidates understanding of (a) the types of bills of exchange; (b) special agents; (c) sources of Nigerian Law; and (d) storage and data recovery devices – hard disk, external disk and flash disk.

About 95% of the candidates attempted the question and performance was very good.

SOLUTION 3

a.

i. **Bearer Bill**

Bearer Bill is a bill which is expressed to be made payable to the bearer, i.e., the person in possession of the bill.

It is transferable by mere delivery or by last endorsement to the named person or mere signature of the endorser.

ii. **Order Bill**

This is a Bill which is expressed to be payable to a particular person but, without prohibiting transfer or its transferability.

However, such a Bill can only be legally transferred by endorsement followed with delivery.

b. i. **Broker**

A Broker is an appointed agent who does not have possession of the goods but is only involved in the negotiation of contracts with a third party on behalf of his principal for a commission known as brokerage.

ii. **Auctioneer**

An Auctioneer is an appointed agent licensed by law that is authorised to sell the goods or property of another at a public sale. The Auctioneer may not have possession of the goods to be sold, but remains a double agent because he acts for both the seller and the buyer.

c. Apart from Laws passed by the National Assembly, other sources of Nigerian law are the following:

- i. Received English Law;
- ii. Judicial Precedent;
- iii. Customary Law;
- iv. International Law; and
- v. The Constitution.

- d.
 - i. **Hard Disk Drive**
This is an in-built primary permanent memory storage device in computer systems, with very large storage capacity, whose functions include memory storage for raw data, processed data and reports, which can be recalled whenever desired by the authorised user.
 - ii. **External Disk Drive**
External Storage Disk is a secondary back-up electronic device with facility for data storage and recovery. It also has very high storage capacity. The electronic device is connected to the computer system to store data.
 - iii. **Flash Disk Drive**
This is a secondary back-up storage device for data storage and recovery, with miniature size and high data storage capacity. The electronic device is connected to the computer system to store data and information.

MARKING GUIDE

		Marks	Total
3a. Bills Of Exchange:			
i.	* Explain Bearer Bill as no named beneficiary	2	
	* Transferable by mere delivery or mere endorsement	1	
ii.	* Explain Order Bearer as named beneficiary	2	
	* Transferable by endorsement of named Payee to another person	<u>1</u>	6
3b. Types Of Agency:			
i.	* Explain Broker as commissioned agent	1	
	* Broker's commission is called Brokerage	<u>1</u>	
		<u>2</u>	
ii.	* Explain Auctioneer as agent for public sales of goods and properties	1	
	* Act for both seller and buyer for a fee	<u>1</u>	
		<u>2</u>	4
3c. State 4 Sources of Nigeria Law – 1 mark each		4	
d. i.	Explain Hard Disk as computer inbuilt storage device for data processing	2	
ii.	Explain External Disk Drive as high capacity secondary data storage device.	2	
iii.	Explain Flash Disk Drive as miniature secondary data storage device.	<u>2</u>	<u>6</u>
			<u>20</u>

EXAMINER'S REPORT

The question tests candidates understanding of (a) the types of bills of exchange; (b) special agents; (c) sources of Nigerian Law; and (d) storage and data recovery devices – hand disk, external disk and flash disk.

About 95% of the candidates attempted the question and performance was very good.

SOLUTION 4

- a. i. Strict liability is a form of liability which is attached to a person without fault, who keeps for his own purpose, an object or thing and the object or thing escapes from his custody and causes mischief to another person, whether the person acted with or without intention to cause harm. That person will be held liable under strict liability.
- ii. To succeed against the defendant, the plaintiff must prove that:
- The damage to the plaintiff was caused by the object brought by the defendant;
 - The object is not supposed to be where it was placed; and
 - The object caused damage to the plaintiff.
- b. The terms that must be contained in a hire purchase contract are as follows:
- i. It must be in writing;
 - ii. The prospective hire purchase price must be stated;
 - iii. The amount and number of instalments must be stated;
 - iv. The cash price must be stated;
 - v. The hirer may terminate the contract before the final instalment and return the goods; and
 - vi. The hirer has the option to purchase the goods after payment of the final instalment.
- c. The legal duties of an Administrator include the following:
- i. Application to court for issuance of Letters of Administration;
 - ii. Gathering and realisation of the deceased's assets;
 - iii. Payment of debts and liabilities of the deceased;
 - iv. Payment of taxes due on the Estate properties;
 - v. Distribute the remainder of the assets to beneficiaries;
 - vi. Keep Accounts and Records of the estate administration;
 - vii. Not to make secret profit from the estate properties; and
 - viii. Protect and defend the estate properties against intrusion;
 - ix. Bury the deceased; and
 - x. Ascertain the indebtedness of the estate /deceased.

- d. Apart from court order, a partnership may be dissolved under the following circumstances:
- i. **On the Death of a Partner**
A partnership may be dissolved on the death of a partner. This is however subject to any agreement between the partners to the contrary, and contained in the Partnership Agreement.
 - ii. **When a Partner is Declared Bankrupt**
When a partner is adjudged bankrupt by a court of competent jurisdiction, the partnership may be dissolved. This is also subject to any agreement between the partners to the contrary, and contained in the Partnership Agreement.
 - iii. **Subsequent Illegality of the Partnership Business**
If an event occurs which makes it unlawful or illegal for the business of the firm to be carried on by the partners, the partnership stands dissolved. An example is when government promulgates a new law prohibiting a particular business.
 - iv. **Expiration of Fixed Term of the Partnership Venture**
Subject to any agreement between the partners to the contrary, a partnership may be dissolved at the expiration of the term fixed, or if entered into for a single venture, at the completion of the venture.
 - v. **Notice by a Partner**
A partnership may be dissolved if a partner gives required notice of dissolution of the partnership to the other partners, subject to any agreement between the partners to the contrary, and contained in the Partnership Agreement.
 - vi. **Insanity of a Partner**
A partnership will be dissolved if a partner becomes insane. This is because the loss of mental capacity by such a partner will deprive him of the ability to participate further in the business.
 - vii. **Charge on a Partner's Share of the Partnership**
If one partner suffers his share of the partnership to be charged for his personal debt, the other partners have the option to call for the dissolution of the partnership. This must however be by the aggrieved partners giving the required notice to the defaulting partner.

MARKING GUIDE

	<u>Marks</u>	<u>Total</u>
Question 4 - Solution		
ai. Explain 'Strict Liability' as a person being made liable for he keeps for self and causes harm to another	2	
ii. State 2 proofs of plaintiff to succeed- 1 mark each	2	
b. State 4 terms contained in Hire Purchase contract. - 1 mark each.	4	
c. State 6 duties of Administrator / Personal Representative - 1 mark each	6	
d. Explain 3 circumstances for partnership dissolution without court order – 2 marks each	<u>6</u>	20

EXAMINER'S REPORT

This question tests candidates' understanding of (a) strict liability and its elements; (b) terms of a hire purchase contract; (c) duties of an administrator; and (d) dissolution of partnership.

About 95% of the candidates attempted the question, while about 90% passed.

The commonest pitfall for the very few that failed was confusing strict liability with vicarious liability.

Candidates are enjoined to prepare more for the examination and avail themselves of the Institute's Study Text.

SOLUTION 5

- a. i. The legal issue involved in this case is insurable interest under Insurance Law, which provides that a person must have insurable interest in the subject-matter of the insurance contract; i.e. that the person must enjoy a benefit from the existence of the subject-matter, and/or suffer loss from its destruction.
- ii. The building had ceased to belong to Mallam Bako as he had sold it to Dry Desert Ltd. Thus, he no longer had insurable interest in the building.
- Mallam Bako is advised not to make a claim from the insurance company as such action will fail.
- b. i. The Partnership Act provides that a partnership may be dissolved by Court order if an event happens which makes it illegal for the business of the firm to continue or when the partnership business can only be carried out at a loss.
- ii. The consequence of the CBN's new regulation is that the partnership business has become illegal and can only be carried on at a loss. These are grounds for the dissolution of the partnership.
- iii. The partners are advised to apply to Court for an order to dissolve the partnership, or to mutually agree to dissolve the partnership without applying to the court.
- c. i. **Pledge**
A pledge is the delivery of goods by a person to another to secure the payment of a debt or financial obligation. There is no absolute transfer of title to the goods from the owner of the goods to the creditor.
- ii. **Bailment**
Bailment is a transaction under which possession of goods is delivered by the owner of the goods, called bailor, to another person, called bailee, requesting the bailee to hold on to the goods, and later re-deliver the goods to the bailor, when the underlying purpose has been fulfilled.
- d. i. **Taking**
'Taking' can be defined as an act of stealing what belongs to another person, with intent of permanently depriving the owner of its use. It is not necessary for the thief to take the item into his possession completely; he is deemed to have taken the thing if he moves it or causes it to be moved away without the consent of the owner.
- Taking is an offence punishable under the Criminal Code.

ii. **Converting.**

‘Converting’ can be described as an act of fraudulently destroying, altering, selling, pledging, forging or using property belonging to another person without the consent of the owner of the property.

Conversion is an offence punishable under the Criminal Code.

MARKING GUIDE

	Marks	Total
ai. Explain ‘Insurable Interest’ of an insured.	2	
ii. * Relate case to insurable interest.	1	
* Advise Bako – legal action will fail	<u>1</u>	4
bi. Explain position of the law when partnership business is affected by Government policy.	2	
ii. Relate case on CBN policy and consequence on the partnership business as illegal	2	
iii. Advise partners to dissolve the partnership and/or diversify the business.	<u>2</u>	6
ci. Explain ‘Pledge’ as security for debt or for financial obligation	2	
ii. Explain ‘Bailment’ as money or property deposited by owner (bailor) with a person (bailee) as surety or another.	<u>2</u>	4
di. * Explain ‘Taking’ as act of stealing or pilfering depriving owner of the goods	2	
* It is a criminal offence	<u>1</u>	3
ii. * Explain ‘Converting’ as act of fraudulent diversion of the owner’s property without the latter’s consent.	2	
* It is a criminal offence	<u>1</u>	<u>3</u>
		20

EXAMINER’S REPORT

The question tests candidates’ understanding of (a) insurable interest; (b) effect of supervening illegality on partnership business; (c) pledge and bailment; and (d) explanation of ‘taking’ and conversion in theft.

Less than 40% of the candidates attempted this question and their performance was poor.

Their commonest pitfall was inadequate preparation which manifested in their abysmal failure to understand and articulate the issues at stake.

Candidates should prepare more for the examinations and study the Institute’s Study Text thoroughly.

SOLUTION 6

a. The fiduciary duties of a promoter are as follows:

i. **Utmost Good Faith**

A promoter has a fiduciary duty to the proposed company and must observe utmost good faith towards the company in all the transactions entered into with the company, or undertaken for and on behalf of the company.

ii. **No Secret Profit**

A promoter must not make any secret profit in any transaction with or on behalf of the company. Therefore, a promoter must disclose all profits made from transactions executed for and on behalf of the company.

iii. **Disclose Deals in Personal Property**

A promoter must disclose his personal property and interest in any transaction for and on behalf of the company after incorporation of the company. After such disclosure, such transaction must be ratified by the company after its incorporation.

iv. **Ratification of all Transactions by Company**

Any transaction by a promoter on behalf of the company may be rescinded, unless all material facts known to the promoter were disclosed when such transactions were entered into by the promoter.

The ratification must be done by the company by the board of directors or members at the company's general meeting.

b.

- i. An individual shall be required to provide proof of his/her identity by presenting to the financial institution a valid original copy of an official document bearing his name and photograph.

Examples of such official documents include valid Driver's License, valid International Passport and Permanent Voter's Card.

- ii. A corporate body shall be required to provide proof of its identity by presenting official documents as evidence of its legal artificial personality, existence and operation in business.

Examples of such official documents include: Certificate of Incorporation, VAT Registration Certificate, Company Income Tax Certificate and other business transactions documents dating from not less than 3 months before the date of transaction and attesting to the existence of the body corporate.

c. **Interdiction**

i. This is the suspension of an employee from office pending the determination of a criminal charge against him/her. If at the end the criminal charge the employee is discharged and acquitted, he/she will be reinstated in his/her employment.

ii. **Probationary Period**

This is usually a period when an employee is put on trial immediately he /she is employed. During this period, the employer takes the opportunity to study, test and assess the skill and suitability of the new employee. Within this transit period, there are usually provisions for the relationship to be terminated at a short notice.

MARKING GUIDE

	<u>Marks</u>	<u>Total</u>
a. Duties of Promoter:		
* State 3 duties – 1 mark each	3	
* Explain each duty – 2 marks each	<u>6</u>	9
b. Customer's identity required by Financial Institutions:		
i. * Explain individual proof of identity	1	
* State 2 examples	2	
ii. * Explain corporate proof of identity	1	
* State 2 examples	<u>2</u>	6
ci. Explain 'Interdiction' as temporary suspension of employee for crime charges.	2 ^{1/2}	
ii. Explain 'Probationary Period' as to assess new employee's performance	<u>2^{1/2}</u>	<u>5</u>
		20

EXAMINER'S REPORT

The question tests candidates' knowledge of the duties of a promoter; proof of identity by bank customers, as well as interdiction and probationary period in employment law.

About 75% of the candidates attempted the question, and about 70% of them passed.

The commonest pitfall was candidates' lack of understanding of the duties of promoters of a company.