



**THE INSTITUTE OF CHARTERED
ACCOUNTANTS OF NIGERIA**

PATHFINDER

**MAY 2018 DIET
FOUNDATION LEVEL EXAMINATIONS**

Question Papers

Suggested Solutions

Examiner's Reports

Plus

Marking Guides

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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Time Allowed: 3¼ hours (including 15 minutes reading time)

INSTRUCTION: YOU ARE REQUIRED TO ANSWER ALL QUESTIONS IN THIS SECTION

1. Which of the following is **NOT** a purpose of the Conceptual Framework for Financial Reporting?

2. Adeyemi Boat Shop bought a ₦70,000 electric hoist to lift engines out of boats. The Boat Shop paid ₦20,000 in cash for the hoist and signed a note to pay the balance in 90 days. This transaction will cause:

3. Which of the following is included in the cost of inventories?

- 3

4. At the end of the year, Chukwu makes a charge against the profit for electricity consumed but not yet paid, this adjustment is in accordance with the:
- A. Consistency concept
 - B. Objectivity concept
 - C. Materiality concept
 - D. Accruals concept
 - E. Prudence concept
5. Which of the following elements is directly related to the measurement of an entity's financial position?
- A. Performance, income and expenses
 - B. Income, expenses and equity
 - C. Performance, income and equity
 - D. Assets, liabilities and equity
 - E. Assets, liabilities and performance.
6. At the end of a financial period, the statement of profit or loss of a company showed a profit of ~~₦~~2,400,000. It was however, discovered that revenue of ~~₦~~240,000 was recorded as expenses while expenses of ~~₦~~80,000 had been recorded as revenue. What should be the correct profit for the period?
- A. ~~₦~~2,080,000
 - B. ~~₦~~2,560,000
 - C. ~~₦~~2,640,000
 - D. ~~₦~~2,680,000
 - E. ~~₦~~2,720,000
7. A cheque payment recorded in the cash book, but not yet reflected in the bank statement is
- A. Uncredited cheque
 - B. Dishonoured cheque
 - C. Standing order
 - D. Unpresented cheque
 - E. Undebited cheque
8. The cash basis of accounting requires the recognition of revenue only when they are
- A. Due
 - B. Earned
 - C. Paid
 - D. Received
 - E. Budgeted

9. Which of the following is **NOT** an enhancing qualitative characteristic of useful financial information?
- A. Understandability
 - B. Relevance
 - C. Timeliness
 - D. Comparability
 - E. Verifiability
10. Which of the following is the definition of non-current assets?
- A. Assets held for trading purposes
 - B. Assets which are used for production and services over a number of years
 - C. Assets that are expected to be realised within normal operating cycle
 - D. Assets that are expected to be realised within a year
 - E. Assets expected to be consumed in ordinary course of business
11. Computer Company Limited recently bought ten computers for its use, which of the following is the correct method of recording this transaction?
- A. Debit computers account and credit cash account
 - B. Debit purchases account and credit cash account
 - C. Debit cash account and credit purchases account
 - D. Debit cash account and credit computers account
 - E. Debit computers account and credit purchases account
12. Alaro Company Limited has authorised share capital of ₦1,000,000 ordinary shares of 50 kobo each. The company issued enough shares at par to raise ₦900,000. What is the number of shares stated in the Company's memorandum of association?
- A. 900,000 shares
 - B. 1,000,000 shares
 - C. 1,600,000 shares
 - D. 1,800,000 shares
 - E. 2,000,000 shares
13. The double entry for partners' drawings is to
- A. Debit appropriation account and credit drawings account
 - B. Debit partners' current accounts and credit cash account
 - C. Debit cash account and credit appropriation account
 - D. Debit partners' current accounts and credit appropriation account
 - E. Debit appropriation account and credit cash account

14. In the statement of cashflows, when recognising income under the accrual basis, which of the following statements is correct?
- A. Income is recognised when earned and cash is received
 - B. Income is recognised only when it is not certain that cash will be received
 - C. Income is recognised only when cash is received
 - D. Income is recognised when earned and not necessarily when cash is received
 - E. Accrued income is only recognised in the financial statements.
15. Which of the following is **NOT** an operating activity?
- A. Cash receipt and cash payment of an insurance entity for premiums on claims, annuities and other policy benefits
 - B. Cash advances and loans made to other parties
 - C. Cash payments or payments from contracts held for dealing or trading purposes.
 - D. Cash receipts from the sale of goods and rendering of services
 - E. Cash receipts from royalties, fees, commissions and other revenue
16. If opening capital was ₦125,000, closing capital was ₦137,000, and the owner's withdrawals were ₦123,000, the amount of profit or loss for the period was
- A. Loss of ₦139,000
 - B. Loss of ₦135,000
 - C. Profit of ₦111,000
 - D. Profit of ₦135,000
 - E. Profit of ₦139,000
17. Which of the following errors does **NOT** affect the balancing of a trial balance?
- A. Error of principle
 - B. Casting error
 - C. Transposition error
 - D. Duplication entries
 - E. Missing entries in the ledger
18. What accounting concept is violated when ₦50,000 cost of electricity consumed during the first year of operation of a business was not charged as expense for the year?
- A. Accrual
 - B. Materiality
 - C. Historical cost
 - D. Business entity
 - E. Prudence

19. A vehicle was purchased on January 1, 2011 at a cost of ₦2,000,000 and was depreciated at 25% on cost. It was sold on December 31, 2013 for ₦1,400,000. Full-year depreciation was charged in the years of purchase and disposal. Determine the profit or loss on the disposal
- ₦900,000 loss
 - ₦500,000 loss
 - ₦500,000 profit
 - ₦900,000 profit
 - ₦1,150,000 profit
20. The source of data for the recording of sales day book of a business enterprises is
- Returns inward note
 - Returns outward note
 - Official receipt
 - Payment voucher
 - Invoice

SECTION B:

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

QUESTION 1

On January 1, 2016, Mr. Wale commenced business as a sole trader with ₦10,000,000 which he paid into the business bank account. He purchased a van for ₦6,000,000 from Mallam Tanko and paid half of the amount due by cheque on January 2, 2016. The following transactions took place in the month of January, 2016:

- | | |
|--------|---|
| Jan 2 | Paid rent of ₦500,000 for two years in advance for the business premises by cheque |
| Jan 3 | Purchased goods worth ₦2,000,000 from Granules Limited and paid half of the amount by cheque so as to enjoy a cash discount of 4% |
| Jan 4 | Purchased furniture for ₦200,000 and computers for ₦250,000 by cheque |
| Jan 6 | Conducted sales promotion for one month that gave customers opportunity to enjoy cash discounts and trade discounts as follows:
All sales with full cash payments will be given 5% discount and all sales above ₦500,000 will qualify for a trade discount of 10%. |
| Jan 8 | Sold goods for cash to Sanders Limited for ₦340,000 |
| Jan 10 | Sold goods to Miles and Stone Limited for ₦1,000,000, who paid 75% of the amount by cheque |
| Jan 12 | Mr. Bobby purchased goods valued at ₦100,000 from Mr. Wale and paid fully by cash |
| Jan 13 | Deposited the sum of ₦300,000 cash in the safe to the bank |
| Jan 15 | Paid salaries by cheque of ₦80,000 and electricity bill of ₦10,000 |
| Jan 20 | Paid the sum of ₦1,750,000 to Mallam Tanko by cash for the Van |

Jan 27 Mr. Wale withdrew cash of ~~₦~~10,000 to pay for some of his personal expenses
Jan 30 Cash sales of ~~₦~~40,000 was made

Required:

- a three column cash book (6 Marks)
 - the ledger accounts for the transactions (8 Marks)
 - a trial balance as at January 31, 2016 (6 Marks)
- (Total 20 Marks)**

QUESTION 2

The financial statements of Uwana Manufacturing Limited are given below:

Uwana Limited
Statement of profit or loss and other comprehensive income for the year ended
December 31, 2017

	2017		2016	
	₦'000	₦'000	₦'000	₦'000
Revenue		8,380		6,983
Cost of Sales		<u>(3,351)</u>		<u>(2,234)</u>
Gross Profit		5,029		4,749
Distribution Cost	1,676		1,676	
Administrative expenses	<u>2,514</u>		<u>2,486</u>	
		<u>(4,190)</u>		<u>(4,162)</u>
Operating profit		839		587
Finance cost		<u>(559)</u>		<u>(279)</u>
Profit before tax		280		308
Tax		<u>(140)</u>		<u>(151)</u>
Profit for the year		<u>140</u>		<u>157</u>

Statement of Financial Position as at December 31, 2017

	2017		2016	
	₦'000	₦'000	₦'000	₦'000
Non-current assets				
Property, plant & equipment (PPE)		5,978		4,302
Current Assets				
Inventory	358		207	
Trade receivables	335		223	
Cash and cash equivalent	<u>84</u>	<u>777</u>	<u>112</u>	<u>542</u>
Total assets		<u>6,755</u>		<u>4,844</u>
Equity & Liabilities				
Equity:				
Share capital	3,910		2,794	
Retained earnings	<u>207</u>			
		4,117	<u>179</u>	2,973

Liabilities**Non-current liabilities**

Loan notes	1,676		670	
5% Preference shares	<u>438</u>	2,114	<u>838</u>	1,508

Current Liabilities

Trade payables	117		67	
Taxation payable	140		151	
Bank overdraft	<u>267</u>	<u>524</u>	145	<u>363</u>
Total equity & liabilities		<u>6,755</u>		<u>4,844</u>

Movement on property, plant & equipment is given below:

	Land & Building	Plant & Machinery	Other Equipment	Total
Cost	₦'000	₦'000	₦'000	₦'000
January 1, 2017	2,793	1,676	1,117	5,586
Additions	1,117	1,304	280	2,701
Disposals	<u>-</u>	<u>(466)</u>	<u>-</u>	<u>(466)</u>
December 31, 2017	3,910	2,514	1,397	7,821
Depreciation:				
January 1, 2017	279	558	447	1,284
Charge for the year	56	615	223	894
Disposals	<u>-</u>	<u>(335)</u>	<u>-</u>	<u>(335)</u>
December 31, 2017	<u>335</u>	<u>838</u>	<u>670</u>	<u>1,843</u>
Carrying amount:				
December 31, 2017	<u>3,575</u>	<u>1,676</u>	<u>727</u>	<u>5,978</u>
January 1, 2017	<u>2,514</u>	<u>1,118</u>	<u>670</u>	<u>4,302</u>

Additional Information

In the year 2017, a plant costing ₦466,000 with accumulated depreciation of ₦335,000 was disposed off for ₦186,000. Included in trade payables is accrued interest of ₦37,000 (₦18,000 in 2016).

The trade payables had a creditor for plant purchased of ₦18,000.

Required:

Prepare statement of cash flow for the year ended December 31, 2017 using the indirect method. (Total 20 Marks)

QUESTION 3

Peju runs a big grocery store in Ibadan, but many of her accounting records were destroyed by a flood incident close to the end of the financial year of the business. From the records that were retrieved after the incident, the following balances were gathered in respect to her assets and liabilities at the beginning of the year:

	₦'000
Tables, chairs and shelves	12,000
Motor van	3,500
Inventory	15,000
Trade receivables	4,000
Trade payables	15,000

The analysis of the printout of her bank statement showed the following:

	Deposits ₦'000	Withdrawals ₦'000	Balance ₦'000	
Deposits from customers	10,600		14,850	
Cash deposit	155,370		170,220	
Sale of old van	3,000		173,220	
Payment to suppliers		165,940	7,280	
Procurement of new van		10,000	2,720	Dr
Rent for nine months		2,250	4,970	Dr
Electricity bills for 18 months		3,600	8,570	Dr
Sundry expenses		4,460	13,030	Dr
Motor vehicle expenses		600	13,630	Dr
Advertising		2,190	15,820	Dr
Drawings		920	16,740	Dr
Closing balance			16,740	Dr

The cash book retrieved after the flood had the following information:

Dr			Cr
	₦'000		₦'000
Balance b/d 1/1/17	210	Wages and salaries	15,240
Cash sales	154,000	Cash paid into bank	155,370
Receipt from customers	33,360	Van expenses	1,680
Insurance policy redemption	1,420	Advertising	840
		Drawings	13,510
		Sundry expenses	1,190
		Payment to suppliers	1,040
		Balance c/d 31/12/17	120
	<u>188,990</u>		<u>188,990</u>

In addition to the above, you were informed that:

- (i) Inventory was valued at ~~₦~~46,510,000, trade receivables at ~~₦~~20,680,000 and trade payables at ~~₦~~15,430,000.
- (ii) Sundry expenses accrued amounted to ~~₦~~370,000 for 2016.
- (iii) Depreciation is to be provided as follows; furniture and fittings 10% and motor vehicle 20% on reducing balance method
- (iv) Peju took some groceries from the store costing ~~₦~~2,060,000. She is yet to pay.
- (v) Allowances for doubtful debts are raised at the beginning and end of the year at 5%. Bad debts of ~~₦~~600,000 had been written off the trade receivables as at December 31, 2017
- (vi) The insurance policy redeemed was to be used as additional capital.

Required:

- a. Calculate the capital as at January 1, 2017 (6 Marks)
 - b. Prepare statement of profit or loss for the year ended December 31, 2017 (8 Marks)
 - c. Prepare statement of financial position as at December 31, 2017 (6 Marks)
- (Total 20 Marks)**

QUESTION 4

- a. Define “depreciation” (2½ Marks)
- b. List **FIVE** factors which should be taken into account in arriving at the depreciation charged on a non-current asset. (7½ Marks)
- c. Mr. Jingolo is a trader who prepares account to December 31, each year.

The following transactions with regard to non-current assets have taken place:

- January 3, 2015 purchased one office equipment for ~~₦~~2,000,000.
- July 5, 2016 purchased plant and machinery costing ~~₦~~50,000,000.
- December 1, 2016 purchased plant and machinery for ~~₦~~20,000,000.
- December 15, 2017 bought office equipment for ~~₦~~1,000,000.
- Bank balance as at January 1, 2015 was ~~₦~~100,000,000.

Mr. Jingolo maintains its non-current assets at cost and keeps a separate ledger for each type of non-current asset. All assets are purchased and are paid for immediately.

Required:

- i. Prepare plant and machinery account (1 Mark)
 - ii. Prepare office equipment account (3 Marks)
 - iii. Prepare bank account (6 Marks)
- (Total 20 Marks)**

QUESTION 5

Yerima and Boluke have been friends for some time and they both had different businesses as sole-traders and decided to form a partnership with effect from May 1, 2017.

Their respective financial position on April 30, 2017 are as follows:

	Yerima	Boluke		Yerima	Boluke
	₦'000	₦'000		₦'000	₦'000
Capital	50,000	80,300	Premises	20,000	40,000
Payables	500	1,200	Office equip.	10,000	20,000
Loan from business associates	-	20,000	Inventory	500	2,000
			Receivables	10,000	20,000
			Bank	5,000	10,000
			Cash	<u>5,000</u>	<u>9,500</u>
	<u>50,500</u>	<u>101,500</u>		<u>50,500</u>	<u>101,500</u>

For the purpose of the partnership formation, the following agreements were reached:

(i) **Yerima:**

Premises were re-valued at ₦30,000,000 and was to be used as an office annex and the equipment valued at ₦3,000,000 was counted as obsolete; some of the customers were found unable to pay their outstanding debts therefore, ₦2,000,000 should be written-off. The payables were paid out of the bank balance; other assets were brought in at book values.

(ii) **Boluke:**

He agreed to acquire, out of his private resources, additional equipment costing ₦3,000,000, to pay his payables from his bank balance, repay his loan by himself and bring in his other assets at book values.

Required:

- Prepare the statement of financial position for the partnership of Yerima and Boluke on May 1, 2017. (10 Marks)
 - State TEN provisions that should be contained in partnership agreement. (10 Marks)
- (Total 20 Marks)**

QUESTION 6

- a. Explain chart of accounts and its usefulness. (3 Marks)
- b. The trial balance of Emeka failed to agree. The debit exceeded the credit by ₦8,204,000. The following errors were subsequently discovered:
- Sale of goods for ₦16,000,000 on credit to Lade was debited to Wale's account.
 - A sale of goods to Ben for ₦1,323,000 was posted to the credit of his account.
 - Purchase of office furniture for ₦7,600,000 was debited to the purchases account.
 - The sales day book was under-cast by ₦10,000,000.
 - ₦1,500,000 paid by Titi was not credited to her account, although it was correctly entered in the cash book.
 - A debit balance of ₦650,000 in the insurance account was omitted from the trial balance.

Required:

- i. Prepare the necessary journal entries, and (10 Marks)
- ii. Prepare the suspense account. (7 Marks)

(Total 20 Marks)

PART 1- MULTIPLE CHOICE QUESTIONS

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

Working Note

Question 6

Determination of the correct profit for the period

	₦
Reported Net Profit	2,400,000
Add:	
Revenue treated as expenses (240,000 x 2)	480,000
Less:	
Expenses treated as revenue (80,000 x 2)	<u>(160,000)</u>
Corrected Profit for the year	<u>2,720,000</u>

Question 16

Determination of profit for the period

	N
Closing Capital	137,000
Add Drawing	<u>123,000</u>
	260,000
Less: Opening Capital	<u>125,000</u>
Net Profit for the period	<u>135,000</u>

Question 19

Determination of profit or loss on disposal

Dates	Details	Amount
		N
01/01/2011	Cost	2,000,000
31/12/2013	Accumulated Depreciation (25% x N2,000,000 x 3yrs)	<u>(1,500,000)</u>
31/12/2013	Carrying Amount	500,000
31/12/2013	Proceeds from disposal	<u>1,400,000</u>
31/12/2013	Profit on Disposal	<u>900,000</u>

SOLUTION 1

(a)

MR. WALE CASH BOOK FOR THE MONTH OF JANUARY, 2016

DATE	DETAILS	DISCOUNT	CASH	BANK	DATE	DETAILS	DISCOUNT	CASH	BANK
		₦	₦	₦			₦	₦	₦
1/1/16	Capital			10,000,000	2/1/16	Sundry payable - Mallam Tanko			3,000,000
8/1/18	Sales	17,000	323,000		2/1/16	Rent			500,000
10/1/16	Trade Receivables – Miles & Stone			675,000	3/1/16	Trade payables – Granules Ltd	80,000		960,000
12/1/16	Sales	5,000	95,000		4/1/16	Furniture			200,000
13/1/16	Cash		300,000		4/1/16	Office equipments			250,000
30/1/16	Sales	2,000	38,000		13/1/16	Bank		300,000	
					15/1/16	Salaries			80,000
					15/1/16	Electricity			10,000
					20/1/16	Sundry payable – Malam Tanko			1,750,000
					27/1/16	Drawings		10,000	
		_____	_____	_____	31/1/16	Balance c/d	_____	<u>146,000</u>	<u>4,225,000</u>
		<u>24,000</u>	<u>456,000</u>	<u>10,975,000</u>			<u>80,000</u>	<u>456,000</u>	<u>10,975,000</u>
1/2/16	Balance c/d		146,000	4,225,000					

(b)

WALE
LEDGER ACCOUNTS FOR THE MONTH OF JANUARY, 2016

Capital a/c

		N				N
31/1/2016	Balance c/d	<u>10,000,000</u>		1/1/2016	Bank	<u>10,000,000</u>
				2/1/2016	Balance c/d	10,000,000
		Motor Van a/c				
		N				N
2/1/2016	Sundry payables – Malam Tanko	<u>6,000,000</u>		31/1/2016	Balance c/d	<u>6,000,000</u>
1/2/2016	Balance b/d	6,000,000				
		Sundry Payable – Mallam Tanko a/c				
		N				N
2/1/2016	Bank	3,000,000		2/1/2016	Motor Van	6,000,000
20/1/2016	Bank	1,750,000				
31/1/2016	Balance c/d	<u>1,250,000</u>				
		<u>6,000,000</u>				<u>6,000,000</u>
				1/2/2016	Balance b/d	1,250,000

		Rent a/c			
		N			N
1/2/2016	Balance b/d	<u>500,000</u>		31/1/2016	Balance c/d <u>500,000</u>

Trade Payables - Granules Limited a/c

		N				N
3/1/2016	Discount Received	80,000		3/1/2016	Purchase	2,000,000
3/1/2016	Bank	960,000				
31/1/2016	Balance c/d	<u>960,000</u>				
		<u>2,000,000</u>				<u>2,000,000</u>
				1/2/2016	Balance c/d	960,000
		Purchases a/c				
		N				N
3/1/2016	Trade Payables – Granules Limited a/c	<u>2,000,000</u>		31/1/2016	Balance c/d	<u>2,000,000</u>
1/2/2016	Balance b/d	2,000,000				
		Furniture and Fittings a/c				
		N				N
4/1/2016	Bank	<u>200,000</u>		31/1/2016	Balance c/d	<u>200,000</u>
1/2/2016	Balance b/d	200,000				
		Office Equipments a/c				
		N				N
4/1/2016	Bank	<u>250,000</u>		31/1/2016	Balance c/d	<u>250,000</u>
1/2/2016	Balance b/d	250,000				

		Sales a/c				
		₦				
31/1/2016	Balance c/d	1,380,000		6/1/2016	Cash	323,000
				8/1/2016	Discount allowed	17,000
				10/1/2016	Trade receivables- Miles and Stone	900,000
				12/1/2016	Cash	95,000
				12/1/2016	Discount allowed	5,000
				30/1/2016	Cash	38,000
				30/1/2016	Discount allowed	2,000
		<u>1,380,000</u>				<u>1,380,000</u>
				1/2/2016	Balance b/d	1,380,000

Discount Allowed a/c

		₦				₦
8/1/2016	Sales	17,000		31/1/2016	Balance c/d	<u>24,000</u>
12/1/2016	Sales	8,000				
30/1/2016	Sales	<u>2,000</u>				
		<u>24,000</u>				<u>24,000</u>
1/2/2016	Balance b/d	24,000				
Trade Receivable - Miles and Stone Limited a/c						
		₦				₦
10/1/2016	Sales	<u>900,000</u>		10/1/2016	Bank	675,000
				31/1/2016	Balance c/d	<u>225,000</u>
		<u>900,000</u>				<u>900,000</u>
1/2/2016	Balance b/d	225,000				

		Salaries a/c			
		₦			₦
15/1/2016	Bank	<u>80,000</u>		31/1/2016	Balance c/d <u>80,000</u>
1/2/2016	Balance b/d	80,000			
		Electricity a/c			
15/1/2016	Bank	<u>10,000</u>		31/1/2016	Balance c/d <u>10,000</u>
1/2/2016	Balance b/d	10,000			
		Drawings a/c			
		₦			₦
27/1/2016	Cash	<u>10,000</u>		31/1/2016	Balance c/d <u>10,000</u>
	Balance b/d	10,000			
		Discount received a/c			
		₦			₦
31/1/2016	Balance c/d	<u>80,000</u>		3/1/2016	Trade payables – Granules ltd <u>80,000</u>
				2/1/2016	Balance b/d 80,000

(c)

MR. WALE
TRIAL BALANCE AS AT 31 JANUARY, 2016

DETAILS	DR	CR
	N	N
Cash	146,000	
Bank	4,225,000	
Capital		10,000,000
Motor van	6,000,000	
Sundries payables – Mallam Tanko		1,250,000
Rent	500,000	
Trade payables – Granules Limited		960,000
Furniture and fittings	200,000	
Office equipments	250,000	
Sales		1,380,000
Discount allowed	24,000	
Trade receivables – Miles and Stone	225,000	
Salaries	80,000	
Electricity	10,000	
Purchases	2,000,000	
Drawings	10,000	
Discount received		80,000
	<u>13,670,000</u>	<u>13,670,000</u>

EXAMINER'S REPORT

The question tests candidates' ability to prepare three-column cash book, the relevant double entries and extraction of trial balance.

Over 90% of the candidates attempted the question and performance was below average.

The commonest pitfalls are that:

- i. The candidates demonstrated lack of understanding of the basic double entry principle.
- ii. Candidates also did not follow the presentation format required by the question.

Candidates are advised to pay attention to the accounting principle.

Marking Guide		Marks	Total
(a)	Three column cash-book:		
	Discount column	1	
	Cash column	$1\frac{3}{4}$	
	Bank column	$3\frac{1}{4}$	6
(b)	Ledgers accounts		8
(c)	Trial balance		<u>6</u>
	Total		<u>20</u>

SOLUTION 2

UWANA MANUFACTURING LIMITED

STATEMENT OF CASH FLOW FOR THE YEAR ENDED DECEMBER 31, 2017

	₦'000	₦'000
Cashflow from Operating Activities		
Profit before tax		280
Adjust for items not involving cash movement:		
Finance charge	559	
Depreciation	894	
Profit on sale of plant & machinery	<u>(55)</u>	
		1,398
Movement in Working Capital		
Increase in inventory	(151)	
Increase in trade receivables	(112)	
Increase in trade payables	<u>13</u>	
		<u>(250)</u>
Total Cashflows from Operating Activities		1428
Interest paid (w1)	(540)	
Tax paid (w2)	<u>(151)</u>	<u>(691)</u>
Net Cashflow from Operating Activities		737
Cashflow from investing activities		
Proceeds from sale of PPE	186	
Cash paid for purchase of PPE (2701-18)	<u>(2,683)</u>	
Net cash outflow from investing activities		(2,497)

Cashflow from Financing Activities

Cash from issue of shares	1,116	
Cash from issue of loans	1,006	
Repayment of pref. Shares	(400)	
Dividend paid (w3)	<u>(112)</u>	
Net cash flow from financing activities		<u>1,610</u>
Net cash and cash equivalent for the year		(150)
Cash and cash equivalent January 1, 2017		<u>(33)</u>
Cash and cash equivalent December 31, 2017		<u>(183)</u>
Cash and cash equivalent	2017	2016
	₦'000	₦'000
Cash	84	112
1. Bank overdraft	<u>(267)</u>	<u>(145)</u>
	<u>(183)</u>	<u>(33)</u>

Workings

1.	Interest	₦'000
	Balance b/d	18
	Charge for the year	<u>559</u>
		577
	Paid during the year	<u>(540)</u>
	Balance c/d	<u>37</u>
2.	Taxation	
	Balance b/d	151
	Charge for the year	<u>140</u>
		291
	Paid	<u>(151)</u>
	Balance c/d	<u>140</u>
3.	Dividend	
	Profit b/d	179
	Profit for the year	<u>140</u>
		319
	Dividend paid	<u>(112)</u>
	Profit c/f	<u>207</u>

4. Trade Payables	2017	2018
	₦'000	₦'000
Given	117	67
Accrued interest	(37)	(18)
Creditors for PPE	<u>62</u>	<u>49</u>

EXAMINER'S REPORT

The question examines candidates' ability to prepare the statement of cashflows, in accordance IAS7.

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

Candidates' failure could be attributable to their lack of understanding of the items to be classified under the three categories of operating, investing and financing activities. Some candidates also could not derive the figures to be included in the statement due to their poor understanding of the double entry principle.

Candidates are advised to pay attention to presentation format and apply the double entry principles correctly.

Marking Guide	Marks	Total
Cash flows from operating activities		11
Cash flows from investing activities		2
Cash flows from financing activities		5
Cash and cash equivalents		<u>2</u>
Total		<u>20</u>

SOLUTION 3

(a)	PEJU		
	CAPITAL AS AT JANUARY 1, 2017		
	₦'000	₦'000	₦'000
Non-Current Assets:			
Motor van			3,500
Furniture and fittings			<u>12,000</u>
			15,500
Current Assets			
Inventory		15,000	
Trade receivables	4,000		
Allowance for doubtful debts	<u>(200)</u>	3,800	
Bank balance		4,250	
Cash in hand		<u>210</u>	<u>23,260</u>
Total Assets			<u>38,760</u>
Equity and Liabilities			
Equity:			23,390
Owners' equity (balance)			
Current Liabilities			
Trade payables		15,000	
Accrued sundry expenses		<u>370</u>	
			<u>15,370</u>
Total Equity and Liabilities			<u>38,760</u>

(b)	PEJU	
	STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED DECEMBER 31, 2017	
	₦'000	₦'000
Revenue (Wk 3)		215,240
Cost of sales		
Opening inventory	15,000	
Purchases (Wk 4)	<u>165,350</u>	
	180,350	
Closing inventory	<u>(46,510)</u>	<u>(133,840)</u>
Gross profit		81,400
Operating expenses		
Loss on sale of motor van (Wk 5)	500	
Increase in allowance for doubtful debts (Wk 6)	834	
Depreciation (Wk 7)	3,200	
Sundry expenses (Wk 8)	5,280	

Motor van expenses (Wk 9)	2,280	
Advertising (Wk 10)	3,030	
Rent (Wk 11)	3,000	
Electricity (Wk 12)	2,400	
Bad debts	600	
Wages and salaries	<u>15,240</u>	<u>(36,364)</u>
Profit for the year		<u>45,036</u>

(c)

	₦'000	₦'000	₦'000
Non-Current Assets	Cost	Accumulated Depreciation	Net Book Value
Motor van (Wk 7)	10,000	(2,000)	8,000
Furniture and fittings (Wk 7)	<u>12,000</u>	<u>(1,200)</u>	<u>10,800</u>
	<u>22,000</u>	<u>(3,200)</u>	<u>18,800</u>
Current Assets			
Inventory		46,510	
Trade receivables	20,680		
Allowances for doubtful debts	<u>(1,034)</u>	19,646	
Prepaid electricity (Wk 12)		1,200	
Cash in hand		<u>120</u>	<u>67,476</u>
Total Assets			<u>86,276</u>
Equity and Liabilities			
Equity:			
Owners' equity			23,390
Additional capital			1,420
Net profit			<u>45,036</u>
			69,846
Drawings (Wk 13)			<u>(16,490)</u>
			53,356
Current Liabilities			
Trade payables		15,430	
Accrued rent (Wk 11)		750	
Bank overdraft		<u>16,740</u>	<u>32,920</u>
Total Equity And Liabilities			<u>86,276</u>

WORKING NOTES

Wk 1: Credit sales for the year

Trade receivables control account

	₦'000		₦'000
Bal b/d	4,000	Bank	10,600
Credit sales (Difference)	61,240	Cash	33,360
		Bad debt	600
		Bal c/d	<u>20,680</u>
	<u>65,240</u>		<u>65,240</u>
Bal b/d	20,680		

Wk 2: Total purchases for the year

Trade payables control account

	₦'000		₦'000
Bank	165,940	Bal b/d	15,000
Cash	1,040	Purchases (Difference)	167,410
Bal c/d	<u>15,430</u>		
	<u>182,410</u>		<u>182,410</u>
		Bal b/d	15,430

Wk 3: Total sales for the year

	₦'000
Credit sales for the year (Wk 1)	61,240
Cash sales for the year	<u>154,000</u>
	<u>165,350</u>

Wk 4: Purchases figure as per statement of profit or loss

	₦'000
Purchases as per account (Wk 2)	167,410
Cost of goods taken for personal use	<u>(2,060)</u>
	<u>165,350</u>

Wk 5: Gain/loss on sale of motor van

	₦'000
Sales proceed on old van disposed	3,000
Carrying value of old van disposed	<u>(3,500)</u>
Loss on sale on old van	<u>(500)</u>

Wk 6: Increase/decrease in allowance for doubtful debts

	₦'000	₦'000
Allowance for doubtful debts @ beginning 5% x 400		200
Allowance for doubtful debts @ end 5% x 20,680		<u>(1,034)</u>
Increase in allowance for doubtful debts		<u>(834)</u>

Wk 7: Depreciation for the year

	Furniture & Fittings	Motor Van	Total
Depreciation rate	10%	20%	
	₦'000	₦'000	₦'000
Carrying amount of assets at Jan. 1, 2017	12,000	3,500	15,500
Additions during the year	-	10,000	10,000
Carrying amount of assets disposed during the year normal	<u> </u>	<u>(3,500)</u>	<u>(3,500)</u>
	12,000	10,000	22,000
Depreciation for the year	<u>(1,200)</u>	<u>(2,000)</u>	<u>(3,200)</u>
Carrying amount December 31, 2017	<u>10,800</u>	<u>80,000</u>	<u>18,800</u>

Wk 8:**Sundry expenses account**

	₦'000		₦'000
Bank	4,460	Accrued b/f	370
Cash	<u>1,190</u>	Profit or loss	<u>5,280</u>
	<u>5,650</u>	(difference)	<u>5,650</u>

Wk 9: Total van expenses

	₦'000
Van expenses as per cash account	1,680
Van expenses as per bank statement	<u>600</u>
	<u>2,280</u>

Wk 10: Total advertising expenses

	₦'000
Advertising expenses as per cash account	840
Advertising expenses as per bank statement	<u>2,190</u>
	<u>3,030</u>

Wk 11: Rent expenses as per statement of profit or loss

	₦'000
Rent paid for 9 months as per bank statement	2,250
Accrued rent for 3 months (₦ 2,250/9 x 3)	<u>750</u>
	<u>3,000</u>

Wk 12: Electricity payment for the year

	₦'000
Amount paid for electricity as per bank statement for 18 months	3,600
Electricity expenses for the year (₦ 3,600/18 x 12)	<u>(2,400)</u>
Prepaid electricity (₦ 3,600/18 x 6)	<u>1,200</u>

Wk 13: Total drawings

	₦'000
Drawings as per bank statement	920
Drawings as per cash account	13,510
Cost of goods taken for personal use	<u>2,060</u>
	<u>16,490</u>

EXAMINER'S REPORT

The question tests the ability of candidates to prepare financial statements from incomplete records.

About 70% of the candidates attempted the question but they displayed poor understanding as a result of which their performance was below average.

Candidates' pitfalls are their inability to make necessary adjustments that relate to accruals, prepayments and the determination of credit sales and credit purchases through the receivables and payables control accounts.

The double entry principle is germane to the understanding of financial statements, hence, candidates should devote more time to learn and practice this principle.

Marking Guide	Marks
Capital at January 1, 2017	6
Statement of profit or loss	3
Statement of financial position	4
Calculation of credit sales	1
Calculation of credit purchases	1
Determination of total sales and total purchases	1
Determination of carrying of PPE	1
Determination of sundry expenses, rent, electricity and advertising	2
Gain or loss on motor van	$\frac{1}{2}$

SOLUTION 4

- a) Depreciation can be defined as the systematic allocation of the depreciable amount of an item of property, plant and equipment over its estimated useful life.
- b) The following are the factors which should be taken into consideration in arriving at the depreciation charged on a non-current asset:
- i) The cost (or revalued amount) of the non-current asset.
 - ii) The estimated residual value of the non-current asset.
 - iii) The estimated useful economic life of the non-current asset.
 - iv) The method of depreciation considered appropriate for the business by management (i.e. Straight line, Reducing balance, Sum of the year digit etc.)
 - v) Nature of the non-current asset.
 - vi) The legal norms relating to such non-current asset, where such is application.
 - vii) The chance of the asset becoming obsolete.

- c) (i) **In the books of Mr. Jingolo
Plant and Machinery Account**

2016	₦'000	2016	₦'000
Jan. 5 Bank	50,000	Dec. 31 Balance c/d	70,000
Dec. 1 Bank	<u>20,000</u>		
	<u>70,000</u>		<u>70,000</u>
Balance b/d	70,000		

(ii) Office Equipment Account			
2015	₦'000	2015	₦'000
July 3 Bank	<u>2,000</u>	Dec. 31 Balance c/d	<u>2,000</u>

2016			2016	
Jan. 1 Balance b/f	<u>2,000</u>		Dec. 31 Balance c/d	<u>2,000</u>
2017			2017	
Jan. 1 Balance b/f	2,000		Dec. 31 Balance c/d	3,000
Dec. 15 Bank	<u>1,000</u>			
	<u>3,000</u>			<u>3,000</u>
Balance b/d	3,000			

(iii)

Bank Account					
Date	Particulars	₦'000	Date	Particulars	₦'000
Jan 1-15	Balance b/f	100,000	Jan 3-15	Office equipment	2,000
		<u>100,000</u>	Dec 31-15	Balance c/d	<u>98,000</u>
Jan 1-16	Balance b/d	98,000			<u>100,000</u>
		<u>98,000</u>	Jul 5-16	Plant & machinery	50,000
Jan 1-17	Balance b/d	28,000	Dec 1-16	Plant & machinery	20,000
		<u>28,000</u>	Dec 31-16	Balance c/d	<u>28,000</u>
Jan 1-18	Balance b/d	27,000			<u>98,000</u>
			Dec 15-17	Office equipment	1,000
			Dec 31-17	Balance c/d	<u>27,000</u>
					<u>28,000</u>

EXAMINER'S REPORT

The question tests candidates' knowledge of definition of depreciation as well as factors taken into account in arriving at the depreciation charged on non-current asset. Principles of accounting entries into the ledger for each type of non-current asset is also tested.

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

Most candidates could not define depreciation in accordance with IAS 16 while some candidates could not post entries into the ledger using the double entry principle.

Candidates are advised to be conversant with the relevant provisions of the International Accounting Standards by studying the Institute's study text and practice with past questions in the Institute's Pathfinder.

Marking Guide

	Marks
(a) Correct definition of depreciation	2½
(b) Factors affecting depreciation of PPE (5 x 1½)	7½
(c)i. Plant account	1

ii.	Office equipment account	3
iii.	Bank account	<u>6</u>
	Total	<u>20</u>

SOLUTION 5

YERIMA AND BOLUKE

STATEMENT OF FINANCIAL POSITION AS AT MAY 1, 2017

	₦'000	₦'000
Non-Current Assets:		
Premises		70,000
Office equipments		<u>30,000</u>
		100,000
Current Assets:		
Inventory	2,500	
Trade receivables	28,000	
Bank balance	13,300	
Cash in hand	<u>14,500</u>	
		<u>58,300</u>
Total Assets		<u>158,300</u>
Equity		
Capital accounts:		
Yerima		55,000
Boluke		<u>103,300</u>
Total Equity		<u>158,300</u>

Wk 1:

Yerima - Revaluation account

	₦'000		₦'000
Office equipment	3,000	Premises	10,000
Bad debt written off	2,000		
Capital	<u>5,000</u>		
	<u>10,000</u>		<u>10,000</u>

Wk 2: Bank balances transferred to the partnership

	Yerima	Boluke
	₦'000	₦'000
Balance b/f	5,000	10,000
Less: Payments to suppliers	<u>500</u>	<u>1,200</u>
	<u>4,500</u>	<u>8,800</u>

Wk 3:

Capital accounts

	Yerima	Boluke		Yerima	Boluke
	₦'000	₦'000		₦'000	₦'000
Bal c/d	55,000	103,300	Bal b/f	50,000	80,300
			Loan capitalised	-	20,000
			Revaluation gain	5,000	-
			Additional		
			Equipment		<u>3,000</u>
	<u>55,000</u>	<u>103,300</u>		<u>55,000</u>	<u>103,300</u>

ALTERNATIVE SOLUTION TO QUESTION 5A

SOLUTION 5

(a)

**Yerima and Boluke
Statement of financial position as at May 1, 2017**

	Yerima	Boluke	Total
	₦'000	₦'000	₦'000
Non-Current Assets			
Premises	30,000	40,000	70,000
Office equipment	<u>7,000</u>	<u>23,000</u>	<u>30,000</u>
	<u>37,000</u>	<u>63,000</u>	<u>100,000</u>
Current Assets			
Inventory	500	2,000	2,500
Receivables	8,000	20,000	28,000
Bank	4,500	8,800	13,300
Cash	<u>5,000</u>	<u>9,500</u>	<u>14,500</u>
	<u>18,000</u>	<u>40,300</u>	<u>58,300</u>
Total assets	<u>55,000</u>	<u>103,000</u>	<u>158,300</u>
Capital	<u>55,000</u>	<u>103,300</u>	<u>158,300</u>

- b) The following are the provisions that are usually contained in the partnership agreement:
- i. **Capital:** The agreement would indicate whether each partner should contribute a fixed amount of capital or not and how much each partner should contribute;
 - ii. **Profit Sharing:** How profits and losses should be shared among the partners will be spelt out; whether they are capital or revenue profits or losses;
 - iii. **Interest on capital and drawings:** Whether interest on capital or drawings should be allowed or charged before arriving at divisible profits, and if so at what rate;
 - iv. **Interest on loan by partners:** The rate of interest payable on any loan advanced by any of the partners.
 - v. Whether current accounts are to bear interest, and if so at what rate;
 - vi. Whether partners' drawings are to be limited in amount so that the current account does not turn into debit balance;
 - vii. Whether partners are entitled to remuneration for their services before arriving at divisible profits and if so what amounts and which of the partners;
 - viii. How the books of account would be kept and where they should be kept;
 - ix. The method for the valuation of assets, (e.g. goodwill) in case of an incoming or outgoing partner;
 - x. The method and procedures for settlement of disputes;
 - xi. The method of determining the amount due to a deceased or retiring partner and the rate of interest to be allowed on outstanding balances;
 - xii. The need to audit the partnership accounts and how the auditors are to be appointed;
 - xiii. Whether the partners' capital accounts are to be operated on fixed bases so that drawings and profit are adjusted on partners' current accounts or to operate capital accounts on circulating basis;
 - xiv. The name of the firm, types of business and duration of the partnership.

EXAMINER'S REPORT

The question tests candidates' knowledge of principles involved in formation of partnership by sole traders as well as stating provisions contained in partnership agreement.

About 30% of the candidates attempted the question and performance was below average.

Commonest pitfall is their lack of understanding of the basic accounting principles of partnership.

Candidates are advised to familiarise themselves with the provisions of partnership agreement, read the ICAN study text and practise relevant past questions.

Marking Guide		Marks	Total
(a)	Partnership Accounts		
	Statements of financial position	4	
	Revaluation account	2	
	Bank balance	2	
	Partners' capital account	<u>2</u>	10
(b)	Provisions contained in partnership accounts		
	10 points at 1 mark each		<u>10</u>
	Total		<u>20</u>

SOLUTION 6

- (a) Chart of Accounts is a list of accounts created by a business to be used to organise its financial transactions into identified categories of assets, liabilities, income and expenses. The aim of the chart is to ensure that all transactions are recognised in accordance with the requirements of the business.

Each general ledger account is identified by a unique code and heading. This allows a business to generate instructions and policies to be followed by those members of staff responsible for recording information.

The list is typically arranged in the order of the customary appearance of accounts in the financial statements, statement of financial position general ledger accounts and statement of profit or loss general ledger accounts. The structure and headings in the list aim to result in consistent posting of transactions.

A company might have complete freedom in designing its chart of accounts (within the boundaries set by the rules of accounting). In some countries, the

government might issue a generic chart of accounts from which a business selects those codes that are appropriate to its needs.

(b) i. Journal Entries	DR ₦	CR ₦
Trade Receivables - Lade's Account	16,000,000	
Trade Receivables - Wale's Account		16,000,000
Being error of commission corrected		
Trade Receivables - Ben's Account	2,646,000	
Suspense Account		2,646,000
Being error of partial reversal of entry corrected		
Office Furniture Account	7,600,000	
Purchases Account		7,600,000
Being error of principle corrected		
Suspense Account	10,000,000	
Sales Account		10,000,000
Being sales daybook undercast, now corrected		
Suspense Account	1,500,000	
Trade Receivables - Titi's Account		1,500,000
Being error of single entry corrected		
Insurance Account	650,000	
Suspense Account		650,000
Being Insurance balance omitted from the trial balance		

ii.	Emeka		
	Suspense Account		
	₦		₦
Sales Revenue	10,000,000	Balance b/f	8,204,000
Trade Receivable - Titi's	1,500,000	Trade Receivable - Ben	2,646,000
		Insurance	<u>650,000</u>
	<u>11,500,000</u>		<u>11,500,000</u>

EXAMINER'S REPORT

The question requires candidates to explain and state usefulness of chart of accounts. Candidates are also required to prepare journal entries to correct errors in posting of transactions in the ledger and prepare suspense account.

About 80% of the candidates attempted the question and performance was above average.

Commonest pitfall was inability of candidates to explain and state usefulness of chart of accounts.

Candidates should make use of the Institute's study text to familiarise themselves with the theoretical aspects of financial accounting, which will continue to feature in future examinations of the Institute at the foundation level.

Marking Guide		Marks
(a)	Chart of accounts - 3 points	3
(b)i	Journal entries - including narrations	10
ii.	Suspense account	<u>7</u>
	Total	<u>20</u>

MANAGEMENT INFORMATION

SECTION A: MULTIPLE-CHOICE QUESTIONS (20 MARKS)

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

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5. Which of the following statements correctly defines stepped costs?
- A. Costs which occur at certain times or seasons during the year
 - B. Costs which increase with each succeeding month
 - C. Costs which are semi-fixed or semi-variable
 - D. Costs which remain fixed over a given range of activity but jump to a higher level once the activity increases beyond the range
 - E. Costs which are incurred at various levels of a company's hierarchy
6. Which of the following statements is **NOT** true of conversion costs?
- A. All non-production costs apportioned to product units
 - B. The combination of direct labour costs and manufacturing overheads
 - C. Production costs necessary to convert raw materials into products
 - D. Production costs other than the cost of materials
 - E. Production costs incurred from the moment materials are introduced into production up to saleable stage
7. Which of the following is **NOT** a feature of standard cost?
- A. Estimated
 - B. Predetermined
 - C. Actual
 - D. Basis for later comparison
 - E. Developed from historical data
8. The term 'equivalent units' features under which of the following?
- A. Contract Costing
 - B. Process Costing
 - C. Standard Costing
 - D. Job Costing
 - E. Batch Costing
9. Which of the following may **NOT** be classified as period cost?
- A. Depreciation
 - B. Consumables
 - C. Vehicle Insurance
 - D. Rent
 - E. Administrative Salaries
10. What is the difference between a budget and a forecast?
- A. They mean the same and they are used interchangeably
 - B. A budget is for internal use while a forecast is for external use
 - C. A budget is qualitative while a forecast is quantitative
 - D. A budget is a plan whereas a forecast is the actual
 - E. A budget is a plan of where a business wants to go while a forecast is the indication of where it is actually going

11. What is the basis for requesting for progress payments on an on-going contract?
- A. Contractor's invoice
 - B. Architect's certificate
 - C. Bill of quantities
 - D. Inspection report
 - E. Certificate of Occupancy
12. Which of the following is **NOT** a purpose of cash budgeting?
- A. To ensure availability of working capital throughout the period concerned
 - B. To determine the timing of cash inflows and outflows in advance
 - C. To plan on investing surplus cash whenever it arises
 - D. To plan against likely cash deficits during the budget period
 - E. To reduce cost of operation
13. An Information System Auditor should be involved in
- A. Observing tests of the disaster recovery plan
 - B. Assessing disaster recovery plan
 - C. Developing disaster recovery plan
 - D. Maintaining disaster recovery plan
 - E. Reviewing disaster recovery requirement of supplier contracts
14. Which of the following should be addressed by digital signature?
- A. Unauthorised reading
 - B. Theft
 - C. Unauthorised copying
 - D. Interruption
 - E. Alteration
15. Which of the following is **NOT** an Information System Control objective?
- A. Ensuring consistent system functionality
 - B. Safeguarding system assets
 - C. Maintaining system economy and efficiency
 - D. Promoting technology usage
 - E. Preventing system facilities from hackers
16. To sponsor change effectively in change management, sponsors must demonstrate authority, accountability and
- A. Knowledge
 - B. Involvement
 - C. Power
 - D. Currency
 - E. Training

17. An output device that translates digital output into a visual display directly to a screen is known as
 - A. Speaker
 - B. Scanner
 - C. Visual Display Unit
 - D. Printer
 - E. Projector
18. Binary coded program is a product of
 - A. Language translator
 - B. Text editor
 - C. Decoder
 - D. Loader
 - E. Debugger
19. Which of the following is **NOT** true about data?
 - A. Consist of unprocessed facts
 - B. Collected and processed to produce information
 - C. Has no meaning until processed into information
 - D. Raw facts about entities
 - E. Relevant to a particular purpose
20. Which of the following is **NOT** a major function of a typical Human Resource Transaction Processing System?
 - A. Budgeting
 - B. Salaries
 - C. Labour Relation
 - D. Training
 - E. Employee benefits

SECTION B: OPEN-ENDED QUESTIONS (80 MARKS)

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

QUESTION 1

The following data is compiled from the operations of QUEENSLY NIGERIA LIMITED in respect of their sole product:

	PROCESS 1	PROCESS 2
Material introduced (Kgs)	8,000	2,000
Labour costs (₦)	12,000	8,000
Material cost per kg. (₦)	10	15
Expenses (₦)	20,000	15,000
Normal loss (%)	10	15
Output (Kgs)	6,800	7,700

You are required to:

Draw up the process, abnormal loss and abnormal gain accounts.

(20 Marks)

QUESTION 2

Orok Trading Company sells cement bags at ~~₦~~2,000 each. According to projections, it would sell 100 bags each in October, November and December; and 120 bags per month in the succeeding months.

The company sells on credit, with customers paying 50% in the month following sale, and the balance 30 days later.

Other expected inflows are:

- Sale of plant, ~~₦~~80,000 in January and ~~₦~~50,000 in February
- Insurance claim, ~~₦~~50,000 in February
- Damages from a lawsuit, ~~₦~~60,000 in March

The company purchases its products from a supplier who gives two months' credit. The company's cost of sale is 60%.

Projected outflows are:

- Salaries of ~~₦~~30,000, paid monthly
- Rent of ~~₦~~25,000, paid monthly
- Other administrative expenses of ~~₦~~55,000 per month are settled as they arise.
- Income tax of ~~₦~~25,000 payable in January
- New asset, ~~₦~~40,000 to be purchased in January

The bank balance on December 31 is ~~₦~~235,000 negative.

You are required to:

Prepare a monthly Cash Budget for January to March. Show all workings.

(20 Marks)

QUESTION 3

Seagull Fabricators Limited buys a component for ~~₦~~280 per unit, 6,000 units of which it uses monthly. Below is the cost of making the same component in-house:

	UNIT COST	TOTAL COST
	₦	₦
Direct Material	100	600,000
Direct Labour	100	600,000
Variable Overheads	<u>50</u>	<u>300,000</u>
Total	<u>250</u>	<u>1,500,000</u>

In order to produce the component, the company would purchase a mould for ₦5 million with an estimated life span of 5 years. An annual rent of ₦1 million is required for the fabrication space and the cost of power consumption is expected to increase by ₦500,000 per year.

- a. You are required to advise the company whether to discontinue the outsourcing of the component and commence local fabrication or not, based on the given quantitative factors. (11 Marks)
 - b. In deciding to outsource a component, explain **THREE** qualitative factors to be taken into consideration. (9 Marks)
- (Total 20 Marks)**

QUESTION 4

- a. The overhead costs of HABA LIMITED is analysed below:

	₦
Production Departments - Weaving	1,000,000
- Spinning	500,000
Service Departments - Admin	80,000
- Maintenance	60,000

The administrative overhead costs are to be apportioned on the basis of Weaving 50%, Spinning 30% and Maintenance 20%; while the Maintenance overhead costs are to be apportioned on the basis of Weaving 60%, Spinning 20% and Administrative 20%.

You are required to apportion service departments' overhead to production departments using continuous apportionment method. (10 Marks)

- b. Describe **FIVE** career path options available to an Accountant in an IT-based environment. (10 Marks)
- (Total 20 Marks)**

QUESTION 5

- a. Define Object-Oriented Programming (OOP) and state **TWO** examples. (4 Marks)
 - b. State **THREE** advantages of Object-Oriented Programming (OOP) as a fifth generation language (5GL). (3 Marks)
 - c. List and describe the **FOUR** system changeover methods. (10 Marks)
 - d. Explain the term 'IP address'. (3 Marks)
- (Total 20 Marks)**

QUESTION 6

- a. Define computer network and explain **TWO** types of computer networks.
(6 Marks)
 - b. What is Open-Source Software (OSS)? State **ONE** example. (3 Marks)
 - c. State **FIVE** key functions of an Operating System. (5 Marks)
 - d. List and explain briefly **THREE** requirements of a multi-user environment.
(6 Marks)
- (Total 20 Marks)**

MULTIPLE CHOICE SOLUTIONS - SECTION A

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

EXAMINER'S REPORT

There are twenty multiple-choice questions which test various aspects of the syllabus.

All the candidates attempted these questions and performance was good with about half of the candidates scoring 50% and above.

It is evident that those who did not do well are those who did not cover the syllabus preparatory to the examination.

For improved performance in future, it is recommended that candidates should cover the syllabus. They should also practise with past question papers.

**SECTION B
SOLUTION 1**

QUEENSLY NIGERIA LIMITED

PROCESS 1 Account

	Kg	Unit Cost ₦	Total ₦		kg	Unit Cost ₦	Total ₦
Materials	8000	10	80,000	Normal Loss	800		-
Labour			12,000	Abnormal Loss	400	15.56	6,192
Expenses			20,000	Transfer to			
				Process 2	<u>6,800</u>	15.56	<u>105,808</u>
	<u>8000</u>		<u>112,000</u>		<u>8000</u>		<u>112,000</u>

PROCESS 2 Account

	Kg	Unit Cost ₦	Value ₦		Kg	Unit Cost ₦	Total ₦
From Process 1	6,800	15.56	105,808	Normal Loss	1,320		-
Materials Intro.	2,000	15	30,000	Finished Goods	7,700	21.23	163,471
Labour			8,000				
Expenses			15,000				
Abnormal Gain	<u>220</u>	21.23	<u>4,663</u>				
	<u>9,020</u>		<u>163,471</u>		<u>9,020</u>		<u>163,471</u>

ABNORMAL LOSS ACCOUNT

	Kg	Total ₦		Kg	Total ₦
Process 1	<u>400</u>	<u>6,192</u>	Income Statement	<u>400</u>	<u>6,192</u>

ABNORMAL GAIN ACCOUNT

	Kg	Total ₦		Kg	Total ₦
Income Statement	<u>220</u>	<u>4,663</u>	Process 2	<u>220</u>	<u>4,663</u>

EXAMINER'S REPORT

This question tests candidates' ability to prepare a simple Cash Budget with minimal derivations.

About 90% of the candidates attempted the question but performance was poor as about only 30% of them scored 50% and above of the allocated marks.

Candidates who performed poorly had similar shortcomings as follows:

- i) Inadequate presentation
- ii) Difficulty in driving the monthly sales proceeds and the monthly payments to suppliers.

- iii) Confusing a Cash Budget with an Income Statement
- iv) Poor Arithmetic

To improve performance in future, candidates are advised to:

- a) Develop ability to differentiate items of inflow from those of outflow
- b) Take time to understand the requirements of a question before attempting them.
- c) Practise with the Pathfinder.
- d) Improve on the quality of time spent on preparation.

Marking Guide		Marks	Marks
1.	Headings: Queensly Nig. Ltd	1	
	Process 1	$\frac{1}{2}$	
	Process 2	$\frac{1}{2}$	
	Abnormal Loss Account	$\frac{1}{2}$	
	Abnormal Gain Account	$\frac{1}{2}$	3
	Process 1: 14 ticks x $\frac{1}{2}$ marks per tick		7
	Process 2: 16 ticks x $\frac{1}{2}$ mark per tick		8
	Abnormal Loss Account 2 ticks x $\frac{1}{2}$ mark per tick		1
	Abnormal Gain Account 2 ticks x $\frac{1}{2}$ mark per tick		<u>1</u>
	Total		<u>20</u>

SOLUTION 2

OROK TRADING COMPANY CASH BUDGET FOR JANUARY TO MARCH

	Jan	Feb.	Mar.
	₦	₦	₦
INFLOWS			
Collection from sales	200,000	220,000	240,000
Sales of Plant	80,000	50,000	-
Insurance	-	50,000	-
Damages from Lawsuit	-	-	60,000
Total Inflows	280,000	320,000	300,000
Outflows			
Purchases	120,000	120,000	144,000
Salaries	30,000	30,000	30,000
Rent	25,000	25,000	25,000
Other administrative expenses	55,000	55,000	55,000
Total Outflows	<u>295,000</u>	<u>230,000</u>	<u>254,000</u>
Opening Balance	(235,000)	(250,000)	(160,000)
Inflows	280,000	320,000	300,000
Outflows	(295,000)	(230,000)	(254,000)
Closing balance	(250,000)	(160,000)	<u>(114,000)</u>

WORKINGS

1. Collections from sales

	NOV.	DEC.	JAN.	FEB.	MAR.	Total
Sales Collections	<u>200,000</u>	<u>200,000</u>	<u>240,000</u>	<u>240,000</u>	<u>240,000</u>	
	JAN. 100,000	100,000				200,000
	FEB.	100,000	120,000			220,000
	MAR.		120,000	120,000		240,000

PAYMENT TO CREDITORS:-

Jan	- 60% of Nov. Sales	=	60% x 200,000	=	₦120,000
Feb	- 60% of Dec. Sales	=	60% x 200,000	=	₦120,000
Mar	- 60% of Jan. Sales	=	60% x 240,000	=	₦144,000

EXAMINER'S REPORT

The question tests candidates' ability to prepare Process Costing Accounts with the intricacies of Abnormal Loss and Abnormal Gain.

About 80% of the candidates attempted the question and performance was very good with about 65% of candidates who attempted the question scoring 50% and above of the allocated marks.

Those candidates who did not do well had some common pitfalls including:

- i. Poor presentation
- ii. Poor display of the knowledge required
- iii. Preparation of accounts without headings

For improved performance in future, candidates are enjoined to:

- a) Improve on their presentation
- b) Do improved coverage of the syllabus
- c) Practise with Past Question Papers
- d) Make better use of standard texts including the ICAN Study Texts

Marking Guide

Marks

Heading	1 tick
Collection from sales	3 ticks
Sale of Plant	2 ticks
Insurance Claim	1 tick
Damages from land suit	1 tick
Total Receipts	3 ticks
Purchases	3 ticks
Income Tax	1 ticks

Salaries	3 ticks	
New Assets	1 ticks	
Rent	3 ticks	
Other admin expenses	3 ticks	
Total Receipts	3 ticks	
Opening Balance	3 ticks	
Total Receipt	3 ticks	
Total Payments	3 ticks	
Closing Balance	<u>3 ticks</u>	
	40 ticks x ½ mark	<u>20</u>

SOLUTION 3

a.

SEAGULL FABRICATORS LIMITED

	Per Unit ₦	Per Month ₦	Per Year ₦
Cost of Producing the component			
Direct Material	100	600,000	7,200,000
Direct Labour	100	600,000	7,200,000
Variable Overhead	50	300,000	3,600,000
Other Relevant Costs:			
Cost of Mould/Component	14	84,000	1,008,000
Rentage of Space	14	84,000	1,008,000
Increase in powder consumption	<u>7</u>	<u>42,000</u>	<u>504,000</u>
	<u>285</u>	<u>1,710,000</u>	<u>20,520,000</u>
Cost of Buying from outside suppliers	<u>280</u>	<u>1,680,000</u>	<u>20,160,000</u>

Decision: The company should outsource the component since it is cheaper for her to do so.

b. Qualitative factors to consider when deciding whether to manufacture locally or outsource

- **The quality of the product**

The company must ensure that the quality of the component from the supplier is neither traded off nor discounted. The decision to outsource must be based not only on the lower price, but on the quality of the component.

- **The reliability of the supplier as to timely delivery**
It is important to be assured that supplies will come in a timely basis. This is essentially to ensure that production by the customer is not disrupted unnecessarily. Late deliveries or deliveries coming much earlier than planned or expected is not good for business, delivery must therefore come at the right time.
- **The impact on the decision on the suppliers and the customers**
The suppliers may need to increase capacity in terms of equipment and staff as a result of the new contract. The customer in the same vein may subsequently have idle capacity and may also need to lay off some employees as a result of redundancy.
- **The implication on the labour force that may be sent away if the company decided to outsource**
When a company decides to outsource, there would be excess employees who may need to be laid off. The challenge here is the impact of severance package of the company's cashflow. The company may need to go out to borrow if its current cashflow is incapable of meeting these payments. To avoid labour unrest, the outgoing staff have to be paid off before their exit from the company
- **The environmental factors, e.g. noise, smoke, toxic waste etc if the company decides to manufacture in-house**
All the problems and challenges itemised here will be avoided by the customer. The costs of averting or attending to these problems will be saved thereby having a positive impact on the company's cashflow and profitability.

EXAMINER'S REPORT

This question tests candidates' ability to make a simple business decision on Make or Buy under Marginal Costing Technique.

The question appears popular with candidates and performance was good as about 60% of the candidates who attempted the question scored 50% and above of the allocated marks.

Common pitfalls of the candidates who performed poorly include:

- i. **Mixing up a monthly information with those of annual without prorating and segregating**
- ii. **Poor Arithmetic**

- iii. Insufficient number of qualitative factors in comparison with numbers required by the question

For improved performance in future, candidates are enjoined to:

- Appreciate the essence of making regular business decisions
- Improve on their ability in the process of decision making
- Understand the fact that business decisions require both quantitative and qualitative factors
- Use ICAN Study Text.

Marking Guide

	Marks	Marks
a. Direct Materials		1
Direct Labour		1
Variable Overhead		1
Cost of Mould/Component		2
Rentage of Space		2
Increase in power consumption		<u>2</u>
		9
Decision		<u>2</u>
		11
b. Listing of 3 points @ 1 mark each	3	
Explanation of the 3 points @ 2 marks each	<u>6</u>	<u>9</u>
Total		<u>20</u>

SOLUTION 4

a.

HABA LIMITED APPORTIONMENT OF SERVICE DEPARMENTS' OVERHEAD TO PRODUCTION DEPARTMENTS

	Production Departments		Service Departments	
	Weaving	Spinning	Admin.	Maintenance
	₦	₦	₦	₦
Primary Allocation	1,000,000	500,000	180,000	60,000
Adm 50/30/20	40,000	24,000	-	16,000
Maint 60/20/20	45,600	15,200	15,200	(76,000)
Adm 50/30/20	7,600	4,560	-	3,040
Maint 60/20/20	1,824	608	608	-
Adm 50/30/20	304	182.4	-	121.6
Maint 60/20/20	72.96	24.32	24.32	-
Adm 50/30/20	12.16	7.296	-	4.864
Main 60/20/20	<u>2.9184</u>	<u>0.9728</u>	0.9728	
	<u>1,095,416.04</u>	<u>544,582.99</u>		

	Production Department		Service Department	
	Weaving	Spinning	Maintenance	Admin.
	₦	₦	₦	₦
Primary Allocation	1,000,000	500,000	60,000	80,000
Adm 60/20/20	36,000	12,000	-	12,000
Maint 50/30/20	46,000	27,600	18,400	92,000
Adm 60/20/20	11,040	3,680	-	3,680
Maint 50/30/20	1,840	1,104	736	-
Adm 60/20/20	441.6	147.2	-	147.2
Maint 50/30/20	73.6	44.16	29.44	-
Adm 60/20/20	17.664	5.888	-	5.888
Main 50/30/20	<u>2.944</u>	<u>1.7664</u>	1.1776	-
	<u>1,095,415.81</u>	<u>544,583.01</u>		

- b. The career options available to an Accountant in an IT based environment include:
- Forensic auditing:** Forensic auditing is a specialist branch of auditing devoted primarily to 'special investigations', often employed when a fraud is suspected. Specialist Information Technology/Information System (IT/IS) skills may be required in order to help uncover hidden audit trails adopted to camouflage fraudulent activity.
 - System security:** Organisations require the service of system security expert to protect their valuable data from the activities of intruders such as hackers, eavesdroppers and to also protect the entire system resources.
 - Network Engineering:** A network engineer sets up networks and troubleshoots networks.
 - Due diligence and corporate finance advisory:** One of the increasingly popular assurance services offered by firms of accountants is due diligence and corporate finance advisory of a take-over target.

The accountant needs robust knowledge of IT/IS in order to analyse and advise fully in a corporate action.
 - Programming:** A programmer writes programs by using appropriate programming language. He debugs programs and carries out authorised update on programs.
 - System Analysis:** A system analyst proposes system development, supervises system development and carries out system test.

- vii. **Database Administration:** A Database Administrator designs database by using DBMS (Database Management System). He manages and controls the database. He ensures the integrity of the data in the database. He creates user accounts, carries out authorised update on the data in the database and renders necessary assistance to the database users.
- viii. **Computer Operator:** He operates computer system according to manual and generates output from the system.
- ix. **Computer Engineering:** A computer engineer assembles computer hardware, carries out repairs and maintenance on the system and installs software.
- x. **Web design:** To design websites using appropriate HTML (Hypertext Mark-up Language) and carries out authorised update on websites.
- xi. **Education and Training:** Opportunity to train employees in sales and marketing. This includes presales product demonstration etc.
- xii. **Accountancy:** The knowledge of accounting and auditing methods and procedures are important in helping a company choose or design the best software and overall system.
- xiii. **Financial Audit:** This is to examine a company's financial statements, expense reports and accounting records to make sure that the information is accurate.
- xiv. **System Audit:** To look at the controls, data processing methods, data integrity, general operations, maintenance, security and other aspects of all types of information systems used by businesses.
- xv. **Consultancy:** Assessing the inefficiencies in a company's IT system and making recommendations for improvements.
- xvi. **Upper Management:** This is managing IT businesses to achieve excellence.

EXAMINER'S REPORT

- a. This question tests the ability of candidates to apportion overheads using the Continuous Allocation Method.

About 90% of the candidates attempted the question. Performance was a little below average as about 45% of them scored 50% and above of the allocated marks.

Majority of the candidates that performed poorly had the following characteristics:

- a. Using apportionment methods other than that prescribed by the question
- b. Poor Arithmetic
- c. Wrong sequence of figures for apportionment

Candidates who will do well in future must:

- i) Cover the syllabus more appropriately
- ii) Vary study texts for preparation
- iii) Adhere strictly to examination instructions
- iv) Revise with ICAN Study Text and the Pathfinder

- b. This question requires candidates to itemise and discuss the available career paths for a professional accountant in an IT environment.

About 90% of the candidates attempted the question and performance was fairly good as about 50% of them passed.

The common pitfall of the candidates that performed poorly are:

- a. Lack of sufficient understanding
- b. Itemisation of points instead description
- c. Poor communication

In order to improve performance in future, candidates are advised to:

- i. Use of ICAN Study Texts and the Pathfinder for preparation
- ii. Improve on their vocabulary with respect to computer terminologies

Marking Guide		Marks	Marks
a.	Heading	$\frac{1}{2}$	
	Primary allocation	$\frac{1}{2}$	
	Admin 50/30/20	1	
	Maint 60/20/20	1	
	Admin 50/30/20	1	
	Maint 60/20/20	1	
	Admin 50/30/20	1	
	Maint 60/20/20	1	
	Admin 50/30/20	1	
	Maint 60/20/20	1	
	Total	<u>1</u>	10
b.	1 mark each for 5 sub-heading labels (1x5) =	5	
	1 mark for each of 5 explanations (1x5)	<u>5</u>	<u>10</u>
	Total		<u>20</u>

SOLUTION 5

- a. **Object-Oriented Programming (OOP)** is a programming language model organised around objects rather than “actions” and data rather than logic. It introduced a form of sub-routine called objects to avoid re-writing of programs. An object is a predetermined set of programme codes that, after having been written and tested, will also behave the same way, so that it can be used for other applications. Examples include:

- i. Smalltalk,
- ii. C++ ,
- iii. Visual Basic
- iv. Java
- v. Python
- vi. Object Pascal
- vii. PHP

- b. Advantages of Object-Oriented Programming include:

- 1. Usage of graphical interface
- 2. Ease of use
- 3. Faster program development
- 4. Enhancement of programmer productivity
- 5. More reliable programs which contain fewer errors
- 6. Easy modification and maintenance
- 7. Objects have the ability to hide certain parts of themselves from programmers thereby preventing the programmers from tampering with values they should not tamper with.

- c. **Direct Change-over**

Direct change-over approach is a direct approach where an old system is cut and over-written by a new system. The direct change-over approach causes the change-over from the old system to the new system to occur immediately the new system becomes operational.

Parallel change-over

The two systems run simultaneously for some time. The parallel operation change-over method requires that both the old and the new information systems operate fully for a specified period. When users, management, and the IT group are satisfied that the new system operates correctly, the old system is terminated.

Pilot Change-over

Pilot change-over method involves implementing the complete new system at a selected location of the company. The group that uses the new system first is called the pilot site. The old system continues to operate for the entire organisation including the pilot site. After the system proves successful at the pilot site, it is implemented in the rest of the organisation, usually, using direct change-over method.

Phased Operation/Change-over

Phased operation works in different phases or stages. Implementation of a new system in modules or stages is called phased operation. In this approach the entire system is **NOT** provided to some users. Instead, a part of the new system is provided to all users.

- d. Internet Protocol (IP) address is a code that uniquely identifies a particular computer on the Internet. Every computer requires a unique IP address to connect to the Internet, which consists of four sets of numbers from 0 to 255.
- e.g. "125.148.224.63"

IP addresses enable computers to locate other computers and Internet hosts on the Internet.

EXAMINER'S REPORT

The question tests candidates' understanding of the following:

- a. Object Oriented Programming Technique
- b. System Development Change-over Technique
- c. Internet Protocol Address

25% of the entire population candidate attempted the question. Performance was poor as about 40% of them scored 50% and above of the allocated marks.

The common pitfalls of candidates who performed poorly include:

- i) Lack of good understanding of the requirement of the question.
- ii) Poor communication
- iii) Illegible handwriting

Performance by candidates in future will be better if they:

- Study hard with respect to the contents of the syllabus.
- Improve on their use of computer language
- Read ICAN Study Text and the Pathfinder
- Extend their reading and preparation beyond the classroom lectures.

Marking Guide		Marks	Marks
a.	2 marks for definition	2	
	1 mark each for 2 examples (1x2) =	<u>2</u>	4
b.	1 mark each for three examples (1 x3) =		3
c.	1 mark each for listing 4 methods (1x4)	4	
	1½ marks each for defining 4 methods (1½ x 4) =	<u>6</u>	10
d.	3 marks for explanation		<u>3</u>
Total			<u>20</u>

SOLUTION 6

- a. A computer network is a telecommunications infrastructure that allows computers to exchange data (or 'talk') with each other. The connection that exists between networked computers can use either physical media such as fibre optics, copper wire cables, or wireless media.

OR

A computer network may be defined as an interconnection of a number of computers, telephones, and other shared devices in various ways so that users can process and share information.

Types of Network include:

- i. **LAN - Local Area Network:** A LAN is a computer network covering a small geographic area such as a home, office, group of buildings or school
 - ii. **WAN - Wide Area Network:** A WAN is a computer network that covers a broad area i.e. a network that communicates across regional, metropolitan or national boundaries over a long distance
 - iii. **MAN - Metropolitan Area Network:** It is a computer network that interconnects users with computer resources in a geographic area or region larger than that covered by even a large LAN but smaller than the area covered by a WAN.
- b. **Open-Source Software (OSS)** is a computer software with its source code made available and licensed with an open-source license in which the copyright holder provides the rights to study, change and distribute the software for free to anyone and for any purpose. Linux is a computer operating system assembled under the model of free and open source software development and distribution.

Examples include:

- i. Linus Kernel
- ii. GNU utilities and compilers
- iii. My SQL
- iv. Samba
- v. BSD Operating System
- vi. Apache
- vii. D Space
- viii. Perl
- ix. Ubuntu
- x. Open office

c. Key functions of an Operating System (OS) include:

- i. Control of all operations within the computer itself
- ii. Control of the operations of all other software, such as the application software
- iii. Control of the operation of all the hardware connected to the computer
- iv. Provision of systems security. For example, it enables work to be saved and provides password protection
- v. Provision the graphical user interface (GUI) between the user and the computer
- vi. Control of the operation of all the other hardware connected to the computer
- vii. Control of communications between the computer system and operator, other computer systems within the network
- viii. Keeping operation log of all the processing activities carried out on computer
- ix. Control of application software which are online the computer system.
- x. Control of multi programming
- xi. Allocating memory and loading programs
- xii. Job scheduling and loading in a multi programming environment
- xiii. Peripheral control
- xiv. Error correction and reporting
- xv. Communication with operator
- xvi. It controls the input and output of data between the computer (CPU) and the peripheral input and output devices (like keyboard and monitor)
- xvii. It tests the main components of the computer whenever it is powered on. This is the POST (Power On Self-Test) operation
- xviii. It prepares the main memory for the loading of application programs. This process is known as booting the computer

d. Multi-user application

A multi-user environment is a system or software that allows access by multiple users of a computer system. This will avoid having the processor idle while it waits for input/output operations to be completed. The work space repository resides on a database server and can be accessed by any user with appropriate database privileges.

The requirements include:

- i. Terminal controllers for controlling the operations of groups of terminals.
- ii. If the terminals are located remotely, it requires modem, multiplexors and front-end processor private leased communication lines
- iii. A powerful processor to support the multi-user environment as it must be capable of pooling the lines to allocate time slots (time slices) to each terminal
- iv. Large memory capacity for storing the various user programs as well as the high overhead required for storing the OS (overhead is the area of the primary memory which is inaccessible to the user)
- v. Protection features for preventing system crash as a result of several users processing the same file simultaneously
- vi. Graphical User Interface: This allows users to interact with electronic devices through graphical icons
- vii. Operating System: This allows programs to run very well
- viii. Software requirement: Standard glossary of software engineering terminology defines a requirement needed by a user to solve a problem

EXAMINER'S REPORT

This question tests candidates' knowledge of:

- a. Networking
- b. Open-Source Software
- c. Functions of Operating System
- d. The requirements for Multi-Usage environment

About 90% of the candidates attempted the question and about 30% of them passed.

General characteristics displayed by those who performed poorly are itemised below:

- i) Exhibition of poor quality tuition
- ii) Poor presentation of facts
- iii) Poor communication

For improved performance in future, it is advised that candidates should:

- Use ICAN Study Text and the Pathfinder
- Spend more time for preparation

Marking Guide

	Marks	Marks
a. 2 marks each for explanation	2	
1 mark each for listing two examples (1x2) =	2	
1 mark each for explaining two examples (1x2) =	<u>2</u>	6
b. 2 marks for definition	2	
1 mark for one example	<u>1</u>	3
c. 1 mark each for five examples (1x5)=		5
d. 1 mark each for three requirements (1 x 3) =	3	
1 mark each for three examples	<u>3</u>	<u>6</u>
Total		<u>20</u>

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA
FOUNDATION LEVEL EXAMINATION – MAY 2018
QUANTITATIVE TECHNIQUES IN BUSINESS

Time Allowed: $3\frac{1}{4}$ hours (including 15 minutes reading time)

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. An experiment consists of rolling two dice. Find the probability that the sum of the numbers thrown is at least 10
 - A. $\frac{1}{3}$
 - B. $\frac{3}{4}$
 - C. $\frac{1}{6}$
 - D. $\frac{5}{6}$
 - E. $\frac{1}{36}$
2. The pump price of a particular petroleum product was reduced from ~~₦~~97.00 to ~~₦~~86.00. Calculate the percentage decrease of the product
 - A. 0.89%
 - B. 11.34%
 - C. 12.79%
 - D. 88.66%
 - E. 100.00%
3. The total cost of producing x number of nails is ~~₦~~40,000. Each of these nails has a variable cost of ~~₦~~3.00, if the fixed cost is ~~₦~~10,000, then the value of x is
 - A. 6,000
 - B. 7,000
 - C. 8,000
 - D. 9,000
 - E. 10,000

4. The table below shows the number of customers who made various deposits (₦'000) into a bank within the first quarter of a year:

Deposits(₦'000)	Number of customers
0 but less than 220	25
220 but less than 240	38
240 but less than 260	68
260 but less than 280	29

The relative frequency of the 'class 240 but less than 260' is

- A. 0.410
B. 0.415
C. 0.425
D. 0.430
E. 0.435
5. If the total cost of a product at a point is minimum, then the second derivative of the cost function at that point is zero
A. Less than
B. Equal to
C. Greater than
D. Less than or equal to
E. Greater than or equal to
6. In a transportation problem, dummy source or destination is utilised to have the
A. Rim conditions satisfied
B. Solution to be optimal
C. Solution not degenerated
D. Total cost not exceeding a limit
E. Profit matrix table solvable
7. Yaro, the eldest of the four sons of a business tycoon is to take 40% of the profit from the business. Chukwu's share is 50% of the remainder while Olu and Etim share the rest equally. If Etim receives ₦600,000, the total profit is
A. ₦2,000,000
B. ₦2,500,000
C. ₦3,000,000
D. ₦4,000,000
E. ₦5,000,000

8. Which of the following is **NOT** a limitation of the range, as a measure of dispersion?
- It does not reveal the distribution values as related to measure of central tendency
 - It cannot be computed when distribution has open-end classes
 - It does not utilise the entire data for computation
 - It is easy to understand and its computation is simple
 - Since it is based on two extreme values of the entire distribution, it can be changed if either of the extreme values is dropped
9. A sales person takes record of his daily sales figures for a month. If he wants to measure his performance for the month, which of the following statistics will be appropriate for him to use?
- Upper quartile
 - Median
 - Lower quartile
 - Mean
 - Mode
10. Which of the following best describes time series?
- It is a record of data over a period of time
 - It is a result of a number of movements
 - It is used for prediction by continuing the series forward to time.
 - It is plotted as a graph called a historigram
 - Its five models differ in how the components in each model are linked
11. Three business partners ADEX(X), BIOK(Y) and CARZ(Z) invested in a business deal. If the profit shared at the end of the deal is in the ratio 3:4 between X and Y, and ratio 6:5 between Y and Z, then the ratio of the profit shared among X,Y and Z respectively is
- 3 : 24 : 5
 - 3 : 12 : 10
 - 9 : 10 : 12
 - 9 : 12 : 10
 - 12 : 10 : 3
12. The drawing of a frequency polygon does not need **ONE** of the following steps
- The mid-point of the top of the first rectangle is joined to a point on the x-axis that is half a class interval above the upper limit of that rectangle
 - The mid-point of the top of the last rectangle is joined to a point on the x-axis that is half a class interval above the upper limit of that rectangle

- C. The mid-point of the top of the first rectangle is joined to a point on the x-axis that is half a class interval below the upper limit of that rectangle
 - D. A histogram as a graph is converted to a curve by joining the mid-point of the top of each rectangle with a straight line.
 - E. The curve is extended to the x-axis at a point outside the first and last class intervals
13. The two types of series of regular periodic payments of equal amount are
- A. Ordinary annuity and discounting annuity
 - B. Ordinary annuity and annuity due
 - C. Sinking fund and annuity due
 - D. Ordinary annuity and sinking fund
 - E. Present value annuity and amortisation
14. The extent of relationship between **TWO** related variables can be measured with
- A. Regression
 - B. Spearman's rank
 - C. Correlation
 - D. Pearson product moment method
 - E. Least squares method
15. Histogram, bar chart, pie chart, etc. are examples of diagrammatic representation. Which of the following is **NOT** an advantage of a diagrammatic representation?
- A. Diagrams have greater attraction than figures
 - B. Diagrams help in deriving the required information in less time and without any mental strain
 - C. Diagrams have great memorising value than figures
 - D. Diagrams and figures have equal advantage
 - E. Diagrams facilitate comparism
16. Which of the following is **NOT** true about correlation coefficient?
- A. It is -1 for perfect negative correlation
 - B. Its value ranges between -1 and $+1$
 - C. It is the measurement of the degree of correlation between variables
 - D. It is always zero for inverse correlation
 - E. It is $+1$ for perfect positive correlation

17. The average of 20, 70 and x is 40. If the average of 20, 70, x and y is 50, then y is
- 30
 - 60
 - 70
 - 80
 - 95
18. The cost function of a business has been estimated to be $400 + 60x$ while the revenue function is $100x$, where x is the number of items produced and sold. The profit which the business will make if 20 items are produced is
- ~~₦400~~
 - ~~₦800~~
 - ~~₦1,200~~
 - ~~₦1,600~~
 - ~~₦2,000~~
19. Which of the following methods **CANNOT** be utilised for trend measurement in time series data?
- Free hand method
 - Semi-average method
 - Moving average method
 - Least squares method
 - Spearman's ranking method
20. Which of the following expressions correctly represents the relationship that exists among the Arithmetic Mean(AM), Harmonic Mean(HM) and Geometric Mean(GM) given that $AM = 57.6$, $HM = 43.2$ and $GM = 50.7$?
- $57.6 \geq 43.2 \geq 50.7$
 - $43.2 \leq 50.7 \leq 57.6$
 - $43.2 < 50.7 < 57.6$
 - $43.2 \leq 50.7 < 57.6$
 - $43.2 < 50.7 \leq 57.6$

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 lorry load of cement supplied to dealers, P, Q, R & S contained some defective bags. The consignments to dealers P, Q, R & S contain 21%, 20%, 17% and 15% defectives respectively. Dealers P, Q & R got $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{8}$ of all the consignments respectively while dealer S got the rest.

You are required to:

- a. Draw the appropriate tree diagram to represent the above information.
(15Marks)
 - b. Use the tree diagram above to calculate the probability that, if:
 - i. Any defective is found in a consignment, it is from the ones supplied to dealer R.
(2½ Marks)
 - ii. Any good bag of cement is found, it is from the ones supplied to dealer S.
(2½ Marks)
- (Total 20 Marks)**

QUESTION 2

A car battery manufacturing company's weekly sales of 100A-hour batteries are recorded as follows:

45	32	74	24	37	40	66
21	79	49	48	17	26	23
16	65	28	23	79	15	33
61	22	60	85	64	87	81
18	33	42	52	37	55	71

- a. By grouping the recorded sales into classes 13 and under 20, 20 and under 27, etc., use TALLY method to construct the frequency distribution of the battery sales.
(5 Marks)
 - b. Determine the number of such classes
(1 Mark)
 - c. Calculate the Mean Deviation
(14 Marks)
- (Total 20 Marks)**

QUESTION 3

- a. The demand for an item of stock in a bank is 4,000 units per quarter, the cost of an order is ₦400 and the holding cost of an item is 80k per annum. If the cost of an item is ₦300, you are required to determine the:
- i. number of orders per annum (2½ Marks)
 - ii. length of inventory circle in weeks (2 Marks)
 - iii. total annual cost (7½ Marks)
- b. WFF Printing Press Limited gives the following information on the production of accounting textbooks: the total cost of producing 300 textbooks is ₦90,000 and the cost of producing 500 textbooks is ₦100,000.
- Given that the cost function is linear,
- i. Find the relationship between the cost (C) and the number of textbooks produced (N), taking C as the dependent variable and N as the independent variable. (6½ Marks)
 - ii. Determine the cost of producing 1,000 textbooks. (1½ Marks)
- (Total 20 Marks)**

QUESTION 4

- a. BOBODI Plc. produces commodities at a variable cost of ₦5 per unit with a fixed cost of ₦400,000. The demand curve for the commodities is given by
- $$P = 55 - 0.001q$$
- where q is the quantity of commodities produced and sold.
- i. Derive an expression for the marginal profit
- Calculate:
- ii. The quantity to be sold for maximum profit
 - iii. The maximum profit
 - iv. The unit price at maximum profit (16 Marks)
- b. The profit after tax (in millions of naira) of a firm increases geometrically from ₦4M in year 2000 to ₦8M in year 2001, and ₦16M in year 2002. It is assumed that the trend of profit is maintained over the years.
- Find the total profit of the firm from Year 2000 to Year 2011. (4 Marks)
- (Total 20 Marks)**

QUESTION 5

- a. A research was carried out to know the weights of employees in a firm in order to solve the problem of obesity within the organisation. By this, it was discovered that the mean weight of 400 employees was 70kg and the standard deviation was 6kg. If the weights are normally distributed, find how many employees weigh;
- i. Between 60kg and 75kg (10 Marks)
 - ii. More than 80kg (6 Marks)
- b. A petty trader planned to start saving for a project. She saved ₦10,000 at the end of 1980 and increased it by ₦2,000 in the subsequent years. What amount would she have saved at the end of 1999? (4 Marks)
- (Total 20 Marks)**

QUESTION 6

- a. The distribution of the marks scored, out of 100, by some candidates in a qualifying examination is as given below:

Marks	Number of candidates
20 – 29	18
30 – 39	21
40 – 49	35
50 – 59	14
60 – 69	9
70 – 79	2

You are required to:

- i. Obtain the modal mark. (2 Marks)
 - ii. Draw the histogram for the distribution of marks and use it to estimate the mode. (13 Marks)
 - iii. Give a reason which may account for the difference (if any) between the modes obtained in (i) and (ii) above. (1 Mark)
- b. A small manufacturing firm's total revenue function (in ₦) of producing and selling q units of a product was investigated to be $q^2 - 1,140q + 10,000$. How many units of the product must be produced and sold to make a total revenue of ₦82,000? (4 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

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

$$\text{Mode} = L + \left(\frac{f_0 - f_1}{2f_0 - f_1 - f_2} \right) c$$

$$\text{Median} = L_m + \left(\frac{\frac{N}{2} - \sum f_m}{f_m} \right) c$$

All notations bear their usual meanings.

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

Multiplicative Model Series = Trend * Seasonal * Random

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

$$PV = \frac{1 - (1 + r)^{-n}}{r}$$

Perpetuity

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

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

ARITHMETIC PROGRESSION

nth term : $T_n = a + (n-1)d$

Sum : $S_n = \frac{n}{2}[2a + (n-1)d]$

GEOMETRIC PROGRESSION

nth term : $T_n = ar^{n-1}$

Sum : $S_n = \frac{a(r^n - 1)}{r - 1}$ **for** $r > 1$

Sum : $S_n = \frac{a(1 - r^n)}{1 - r}$ **for** $r < 1$

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

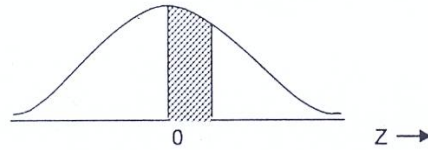
Discount rate (r)

Periods

(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

SECTION A:

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

WORKINGS

1.

	1	2	3	4	5	6
1	1,1	1,2	1,3	1,4	1,5	1,6
2	2,1	2,2	2,3	2,4	2,5	2,6
3	3,1	3,2	4,3	3,4	3,5	3,6
4	4,1	4,2	5,3	4,4	4,5	4,6
5	5,1	5,2	6,3	5,4	5,5	5,6
6	6,1	6,6	6,3	6,4	6,5	6,6

$$P(\text{At least sum of 10}) = P((4,6), (5,5), (5,6), (6,4), (6,5), (6,6))$$

$$= \frac{6}{36} = \frac{1}{6} \quad (C)$$

2. Decrease = ~~N~~97.00 - ~~N~~86.00 = ~~N~~11.00

$$\% \text{ Decrease} = \frac{11.00}{97.00} \times \frac{100}{1}$$

$$= 11.34\% \quad (B)$$

3. Total cost = Variable cost + fixed cost

$$40,000 = 3x + 10,000$$

$$\Rightarrow 3x = 40,000 - 10,000$$

$$\Rightarrow 3x = 30,000$$

$$\Rightarrow x = \text{N}10,000 \quad (E)$$

4. Relative frequency of 240 < 260 = $\frac{68}{25 + 38 + 68 + 29}$

$$= \frac{68}{160} = 0.425 \quad (C)$$

7. Let x be the profit shared

$$\therefore \text{Yaro} = 0.4x$$

$$\text{Chuku} = 50\% \text{ of } (x - 0.4x) = 0.3x$$

$$\therefore \text{Olu} = \frac{1}{2}(x - (0.4x + 0.3x)) = 0.15x$$

$$\text{and Etim} = \frac{1}{2}(x - (0.4x + 0.3x)) = 0.15x$$

$$\text{But Etim's share} = 600,000$$

$$\therefore 0.15x = 600,000$$

$$\Rightarrow x = \frac{600,000}{0.15}$$

$$\Rightarrow x = 4,000,000 \quad (D)$$

$$\begin{aligned}
 11. \quad x : y &= 3 : 4 & \Rightarrow \frac{x}{y} = \frac{3}{4} & \Rightarrow y = \frac{4x}{3} \\
 y : z &= 6 : 5 & \Rightarrow \frac{y}{z} = \frac{6}{5} & \Rightarrow z = \frac{5y}{6} \\
 & & \therefore z &= \frac{5}{6} \cdot \frac{4x}{3} \\
 & & &= \frac{20x}{18}
 \end{aligned}$$

$$\therefore x : y : z$$

$$= x : \frac{4x}{3} : \frac{20x}{18}$$

The LCM is 18

$$\therefore x : y : z = 18x : 24x : 20x$$

Divide them by 2x gives

$$x : y : z = 9 : 12 : 10 \quad (D)$$

ALITER (alternative solution)

$$x : y : z$$

$$\begin{array}{ll}
 3 & 4 \\
 6 & 5
 \end{array}
 \begin{array}{l}
 \text{Multiply this line by 6} \\
 \text{Multiply this line by 4 gives}
 \end{array}$$

$$\therefore x : y : z$$

$$18 : 24 : 20$$

$$\text{or } x : y : z = 9 : 12 : 10$$

$$17. \quad \frac{20+70+x}{3} = 40$$

$$\Rightarrow 90+x=120$$

$$\Rightarrow x=120-90=30$$

$$\text{Also } \frac{20+70+30+y}{4} = 80$$

$$\Rightarrow 120+y=200$$

$$\Rightarrow y=200-120=80 \quad (D)$$

18. $C = 400 + 60x$
 $R = 100x$

$$\begin{aligned}\therefore P &= R - C = 100x - (400 + 60x) \\ &= 100x - 400 - 60x \\ &= 40x - 400\end{aligned}$$

$$\begin{aligned}\text{At } x &= 20 \\ &= 40(20) - 400 = 800 - 400 \\ &= 400\end{aligned}$$

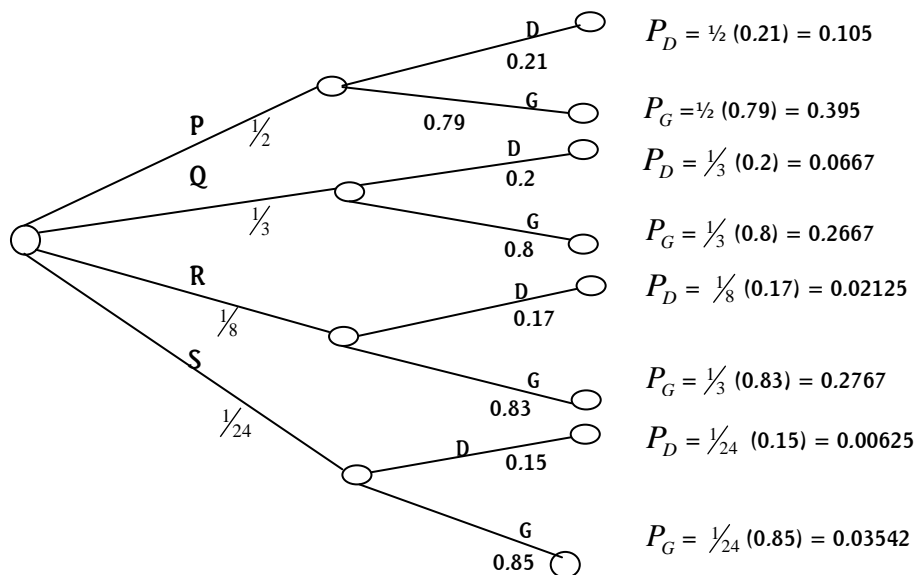
(A)

EXAMINER'S REPORT

All the candidates attempted the Multiple Choice Questions out of which about 45% scored 10 marks or above.

SECTION B: SOLUTION 1

(a)



where P_D = Proportion of defectives

P_G = Proportion of good ones

$$\begin{aligned}\text{Part supplied to dealer S} &= 1 - \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{8} \right) \\ &= 1 - \frac{23}{24} \\ &= \frac{1}{24}\end{aligned}$$

- (b) (i) Proportion of defective parts in all the consignments from the diagram
- $$= 0.105 + 0.0667 + 0.02125 + 0.00625$$
- $$= 0.1992$$
- \therefore Probability of discovering defective parts from the consignment of dealer R
- $$= \frac{0.02125}{0.1992} = 0.107$$
- (ii) Proportion of good parts in all the consignments from the diagram
- $$= 0.395 + 0.2667 + 0.10375 + 0.03542$$
- $$= 0.80087$$
- \therefore Probability of discovering a good part from the consignment of dealer
- $$= \frac{0.03542}{0.80087} = 0.0442$$

EXAMINER'S REPORT

The question tests the candidates' knowledge of the application of conditional probability in business environment using probability tree diagram. About 65% of the candidates attempted the question, out of which about 50% of them scored 9 marks or above. The commonest pitfall in answering the question was inability of the candidates to show the part supplied to dealer 'S' to be $1/24$ or 0.042.

Relevant materials and ICAN Study Text should be utilised by the candidates.

MARKING GUIDE

	Marks	Marks
(a) For correct well labeled 8 branches of the tree diagram (1 mark for each branch)	8	
For correct probability value for multiplication of two probabilities along the 8 branches of the tree diagram ($1/2$ mark for each correct probability value)	4	
For correct expression $1 - (1/2 + 1/3 + 1/8)$	1	
For simplifying to get $1 - \frac{23}{24}$	1	
For correct answer i.e. $\frac{1}{24}$	<u>1</u>	15

- (b) i. For correct expression for the sum of 4 probabilities to get proportion of defective parts (i.e. $0.105 + 0.0667 + 0.025 + 0.00625$) $\frac{1}{2}$
 For correct sum of 0.1992 1
 For correct answer of 0.107 1 $2\frac{1}{2}$
- ii. For correct expression for the sum of 4 probabilities to get proportion of good parts (i.e. $0.3951 + 0.2667 + 0.10375 + 0.03542$) $\frac{1}{2}$
 For correct sum of 0.80065 1
 For correct answer of 0.0442 1 $2\frac{1}{2}$
20

SOLUTION 2

(a)

No of batteries sold	Frequency		Mid-point value x	$f \cdot x$	$x - \bar{x}$	$ x - \bar{x} \cdot f$
	Tally	f				
13 < 20	IIII	4	16.5	66	-29.6	118.4
20 < 27	HHH	6	23.5	141	-22.6	135.6
27 < 34	IIII	4	30.5	122	-15.6	62.4
34 < 41	III	3	37.5	112.5	-8.6	25.8
41 < 48	II	2	44.5	89	-1.6	3.2
48 < 55	III	3	51.5	154.5	5.4	16.2
55 < 62	III	3	58.5	175.5	12.4	37.2
62 < 69	III	3	65.5	196.5	19.4	58.2
69 < 76	II	2	72.5	145	26.4	52.8
76 < 83	III	3	79.5	238.5	33.4	100.2
83 < 90	II	2	86.5	173	40.4	80.8
		35		1613.5		690.8

(b) No of classes is 11

$$(c) \bar{x} = \frac{\sum fx}{\sum f} = \frac{1613.5}{35} = 46.1$$

$$\therefore \text{Mean Deviation} = \frac{\sum f|x - \bar{x}|}{\sum f} = \frac{690.8}{35} = 19.7$$

EXAMINER'S REPORT

The question tests the candidates' understanding of the application of the Tally method to construct frequency distribution for grouped data and computation of a measure of dispersion (mean deviation). About 98% of the candidates attempted the question. About 80% of them scored 12 marks or above.

The candidates' commonest pitfall included their inability to use the Tally method correctly in constructing the frequency distribution and not being able to correctly determine mid-points of the class intervals. In order to improve on the candidates' performance, they should familiarise themselves with construction of frequency distribution of various types of class intervals.

MARKING GUIDE

(a)	Correct Tally column (-1/2 each error)	3	
	Correct frequency (f) column (-1/2 each error)	<u>2</u>	5
(b)	Correct number of classes (i.e. 11)		1
(c)	Correct x column (for at least correct two values)	1	
	Correct fx column (-1/2 each error)	3	
	Correct $x - \bar{x}$ column (-1/2 each error)	2	
	Correct $f x - \bar{x} $ column (-1/2 each error)	3	
	Correct $\sum fx$ i.e. 1613.5	1	
	Correct $\sum f x - \bar{x} $ i.e. 690.8	1	
	Correct substitution into mean (\bar{x}) formula	1	
	Correct value for the mean, \bar{x}	1/2	
	Correct mean deviation formula	1/2	
	Correct substitution into mean deviation formula	1/2	
	Correct value for mean deviation	<u>1/2</u>	<u>14</u>
			<u>20</u>

SOLUTION 3

(a)

(i) Annual demand = $4,000 \times 4 = 16,000$

Q

$$= \sqrt{\frac{2cd}{h}} \quad \text{where } c = \text{N}400, d = 16,000, h = \text{N}0.8$$

$$\therefore Q = \sqrt{\frac{2 \times 400 \times 16000}{0.8}}$$

$$= 4,000$$

$$\text{Number of orders per annum} = \frac{d}{Q} = \frac{16,000}{4,000} = 4$$

(ii) Length of inventory cycle = $\frac{52}{4} = 13$ weeks

(iii) Total annual cost = annual cost of items + annual ordering cost + annual holding cost.

$$= (300 \times 16,000) + (4 \times 400) + \frac{4,000}{2} \times 0.8$$

$$= \text{N}4,800,000 + \text{N}1,600 + \text{N}1,600$$

$$= \text{N}4,803,200$$

(b) (i) The cost function is linear
Let N be independent variable and C dependent variable

Two points are (300, ~~N~~90,000) and (500, ~~N~~100,000)

$$\text{Slope, } m = \frac{\text{Change in cost}}{\text{Change in the number of textbooks}}$$

$$= \frac{C_2 - C_1}{N_2 - N_1}$$

$$= \frac{100,000 - 90,000}{500 - 300}$$

$$= \frac{10,000}{200}$$

$$= 50$$

\therefore The linear cost function is given by

$$C - C_1 = m(N - N_1)$$

$$C - 90,000 = 50(N - 300)$$

$$C - 90,000 = 50N - 15,000$$

$$C - 50N = -15,000 + 90,000$$

$$C - 50N = 75,000$$

(ii) When $N = 1,000$

$$C - 50(1,000) = 75,000$$

$$C - 50,000 = 75,000$$

$$C = 75,000 + 50,000$$

$$C = \text{N}125,000$$

ALTERNATIVE SOLUTION FOR Q3b(i)

(i) Assume total cost is a linear function represented by $y = a + bx$

where $y = TC$, $a = FC$, $b = VC$ per unit, $x = \text{units}$

$$y = a + b(300) = 90,000 \dots\dots\dots(1)$$

$$y = a + b(500) = 100,000 \dots\dots\dots(2)$$

Solving simultaneously, we have

$$b = \text{N}50/\text{unit} \text{ and } a = \text{Fixed Cost} = \text{N}75,000$$

\therefore the cost function relationship is $y = 75,000 + 50x$

(ii) $TC(x) = \text{N}75,000 + \text{N}50x$

$$TC(1000) = \text{N}75,000 + \text{N}50(1000)$$

$$= \text{N}75,000 + \text{N}50,000$$

$$= \text{N}125,000$$

ALTERNATIVE FOR Q3b(i)

Using the linear regression equation of y on x approach,

Let the linear cost function be

$$y = a + bx$$

let N be the independent variable i.e $N = x$

let C be the dependent variable i.e $C = y$

$$\therefore C = a + bN$$

x	y	x^2	xy
300	90,000	90,000	27,000,000
500	100,000	250,000	50,000,000
$\sum x = 800$	$\sum y = 190,000$	$\sum x^2 = 340,000$	$\sum xy = 77,000,000$

$$n=2$$

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

$$\Rightarrow b = \frac{2(77,000,000) - (800)(190,000)}{2(340,000) - (800)^2}$$

$$\Rightarrow b = \frac{154,000,000 - 152,000,000}{680,000 - 640,000}$$

$$\Rightarrow b = \frac{2,000,000}{40,000}$$

$$\Rightarrow b = 50$$

$$\therefore a = \frac{\sum y}{n} - b \frac{\sum x}{n}$$

$$\Rightarrow a = \frac{190,000}{2} - 50 \frac{(800)}{2}$$

$$\Rightarrow a = 95,000 - 20,000$$

$$\Rightarrow a = 75,000$$

\therefore The linear cost function is

$$C = 75,000 + 50N$$

EXAMINER'S REPORT

The question tests the candidates' understanding of the Inventory Control and simultaneous equations in business. About 70% of the candidates attempted the question, out of which 20% scored 10 marks or above. Most of the candidates did not obtain the correct figures for the parameters in the EOQ formular. Also in (3b), the candidates could not obtain the appropriate simultaneous equations to be solved to obtain the required values. Candidates are advised to prepare well by studying the ICAN Study Text for better performance in future ICAN examinations.

MARKING GUIDE

	Marks	Marks
(a) i. Correct annual demand i.e. 16,000	$\frac{1}{2}$	
Correct substitution into Q formular	$\frac{1}{2}$	
Correct value for Q i.e. 4,000	$\frac{1}{2}$	
Correct substitution into No of orders per annual formular	$\frac{1}{2}$	
Correct answer	<u>$\frac{1}{2}$</u>	2 $\frac{1}{2}$
ii. Correct substitution into length of inventory cycle formular	1	
Correct answer	<u>1</u>	2
iii. Correct total annual cost formular showing the sum of annual cost of items, annual ordering cost and annual holding cost	2	
Correct expression for annual cost of items (i.e. $300 \times 16,000$)	1	
Correct annual cost of items (i.e. ₦ 4,800,000)	$\frac{1}{2}$	
Correct expression for annual ordering cost (i.e. 4×400)	1	
Correct annual ordering cost (i.e. ₦ 1,600)	$\frac{1}{2}$	
Correct expression for annual holding cost (i.e. $\frac{4000}{2} \times 0.8$)	1	
Correct annual holding cost (i.e. ₦ 1,600)	$\frac{1}{2}$	
Correct final answer (i.e. ₦ 4,803,200)	<u>1</u>	7 $\frac{1}{2}$
(b) i. Correct identification of the two points (i.e. (300, ₦ 90,000) and (800, ₦ 100,000)) (1 mark for each point)	2	
Correct slope, m formular	1	
Correct substitution of the two points into the slope formular	$\frac{1}{2}$	
Correct value for m	$\frac{1}{2}$	
Correct substitution of the slope and a point into the		

formular	$\frac{1}{2}$	
Correct simplification	<u>1</u>	
Correct linear cost function	<u>1</u>	$6\frac{1}{2}$
ii. Correct substitution of ₦1,000 into the linear cost function	$\frac{1}{2}$	
Correct simplification	$\frac{1}{2}$	
Correct answer	<u>$\frac{1}{2}$</u>	<u>$1\frac{1}{2}$</u>
		<u>20</u>

ALTERNATIVE FOR QUESTION 3b (i)

Correct representation of total cost function by $y = a + bx$	1	
Correct substitution of (300, 90.000) into the total cost function	1	
Correct substitution of (500, 100.000) into the total cost function	1	
Correct simplification and solving	1	
Correct value of b	1	
Correct value of a	1	
Correct total cost function	<u>$\frac{1}{2}$</u>	<u>$6\frac{1}{2}$</u>

ALTERNATIVE FOR QUESTION 3b (i)

Correct representation of cost function by $y = a + bx$ (i.e. $C = a + bN$)	$\frac{1}{2}$	
Correct x^2 column	$\frac{1}{2}$	
Correct xy column	$\frac{1}{2}$	
Correct Σx	$\frac{1}{2}$	
Correct Σy	$\frac{1}{2}$	
Correct Σx^2	$\frac{1}{2}$	
Correct Σy^2	$\frac{1}{2}$	
Correct substitution into b formular	$\frac{1}{2}$	
Correct simplification	$\frac{1}{2}$	
Correct value of b	$\frac{1}{2}$	
Correct substitution into a formular	$\frac{1}{2}$	
Correct value of a	$\frac{1}{2}$	
Correct cost function	$\frac{1}{2}$	<u>$6\frac{1}{2}$</u>

SOLUTION 4

- (a) i. Given the demand expression as $p = 55 - 0.001q$
 \therefore Revenue $R = q.p = 55q - 0.001q^2$

The total cost $TC = 5q + 400,000$

\therefore profit function $\pi = R - TC$

$$= 55q - 0.001q^2 - 5q - 400,000$$

$$= -0.001q^2 + 50q - 400,000$$

$$\therefore \text{marginal profit, } \frac{d\pi}{dq} = -0.002q + 50$$

- ii. But at the turning point, $\frac{d\pi}{dq} = 0$

$$\therefore -0.002q + 50 = 0 \Rightarrow q = \frac{50}{0.002}$$

i.e. $q = 25,000$

To test for maximum profit, we have

$$\frac{d^2\pi}{dq^2} = -0.002$$

But $-0.002 < 0$

$\therefore q = 25,000$ units will give maximum profit

ALTERNATIVE Q4(a) (ii)

$$MR = 55 - 0.002q$$

$$MC = 5$$

Condition for maximum profit is

$$MR = MC$$

$$\text{i.e. } 55 - 0.002q = 5$$

$$0.002q = 50$$

$$q = \frac{50}{0.002}$$

$$q = 25,000$$

- iii. Maximum profit = ~~£~~ $[50(25,000) - 400,000 - 0.001(25,000)^2]$
~~£~~ $(1,250,000 - 400,000 - 625,000)$
~~£~~ $225,000$

$$\begin{aligned}
 \text{iv. The selling price per unit } P &= \text{N}[55 - 0.001 (25,000)] \\
 &= \text{N}(55 - 25) \\
 &= \text{N}30
 \end{aligned}$$

(b) Year: 2000, 2001, 2002, ...
 Profit: 4, 8, 16, ...

This follows geometric progression

$$a = 4, r = 2$$

$$\text{for 2011, } n = 12$$

$$S_n = \frac{a(r^n - 1)}{r - 1}$$

$$S_n = \frac{4(2^n - 1)}{2 - 1}$$

$$S_{12} = 4(2^{12} - 1) = 4(4,096 - 1)$$

$$S_{12} = 4(4,095)$$

$$S_{12} = 16,380$$

$$\begin{aligned}
 \therefore \text{The total profit of the firm from year 2000 to year 2011} &= 16,380 \times 1,000,000 \\
 &= \text{N}16,380,000,000
 \end{aligned}$$

ALTERNATIVE Q4(b)

Since profit increases geometrically from 4million in 2000 to 8million in 2001

$$\therefore \text{Rate of increase} = \frac{8m}{4m} = 2$$

2000	_____	4m
2001	_____	8m
2002	_____	16m
2003	_____	32m
2004	_____	64m
2005	_____	128m
2006	_____	256m
2007	_____	512m
2008	_____	1024m
2009	_____	2048m
2010	_____	4096m
2011	_____	8192m
Total 16,380m i.e		N 16,380,000,000.00

EXAMINER'S REPORT

The question tests the candidates' knowledge of application of differentiation to marginal and geometric progression in business. About 35% of the candidates attempted the question, out of which about 40% scored 8 marks or above.

The major pitfall of the candidates was due to the fact that most of the candidates integrated instead of differentiating the relevant functions. The candidates are advised to study the ICAN Study Text and consult other relevant textbooks for better performance in future examinations.

MARKING GUIDE

		Marks	Marks
(a)	i.		
	Correct revenue function	1	
	Correct total cost function	1	
	Correct substitution of revenue function and total cost function into profit function formula	1	
	Correct profit function	1	
	Correct marginal profit function	<u>1</u>	5
	ii.		
	Correct condition for turning point i.e. $\frac{d\pi}{dq} = 0$	1	
	Correct expression of marginal profit being equated to zero and solve	1	
	Correct value of $q = 25,000$	1	
	Correct $\frac{d^2\pi}{dq^2} = -0.002$	1	
	Correct condition for maximum profit i.e. $-0.002 < 0$	1	
	Correct conclusion	<u>1</u>	6
	ALITER QUESTION 4a (ii)		
	Correct MR function	1	
	Correct MC function	1	
	Correct condition for maximum Profit (i.e. $MR = MC$)	1	
	Equating MR to MC	$\frac{1}{2}$	
	Correct simplification	$\frac{1}{2}$	
	Correct further simplification	1	
	Correct value of q	<u>1</u>	<u>6</u>
	iii.		
	Correct substitution of $q = 25,000$ into the profit function	1	
	Correct simplification	1	
	Correct answer	<u>1</u>	3
	iv.		
	Correct substitution of $q = 25,000$ into the demand function	1	
	Correct answer	<u>1</u>	2

(b)	Correct identification of geometric progression	$\frac{1}{2}$	
	Correct value for r	$\frac{1}{2}$	
	Correct S_n formular	1	
	Correct substitution into S_n formular	$\frac{1}{2}$	
	Correct simplification	$\frac{1}{2}$	
	Correct value of S_{12}	$\frac{1}{2}$	
	Correct value for total profit	<u>$\frac{1}{2}$</u>	<u>4</u>
			<u>20</u>

ALITER QUESTION 4b

Correct rate of increase (i.e. 2)	$\frac{1}{2}$	
Correct profit from year 2003 to year 2011 ($-\frac{1}{2}$ each error)	$2\frac{1}{2}$	
Correct total profit	<u>1</u>	<u>4</u>

SOLUTION 5

- (a) i. $n = 400$
Mean, $\mu = 70\text{kg}$
Standard deviation, $\sigma = 6\text{kg}$

$$Z = \frac{X - \mu}{\sigma}$$

The probability that an employee weighs between 60kg and 75kg is calculated as follows:

$$\text{For 60kg, } Z = \frac{60 - 70}{6} = \frac{-10}{6} = -1.67$$

$$\text{For 75kg, } Z = \frac{75 - 70}{6} = \frac{5}{6} = 0.83$$

\therefore Using the Normal Table

$$\begin{aligned} \text{The required probability} &= 0.4525 + 0.2967 \\ &= 0.7492 \end{aligned}$$

$$\begin{aligned} \therefore \text{The number of employees with weights between 60kg and 75kg} \\ &= 0.7493 \times 400 \\ &= 299.68 \\ &= 300 \text{ approximately} \end{aligned}$$

- (ii) The probability that an employee weighs more than 80kg is calculated as follows:

$$\text{For 80kg, } Z = \frac{80-70}{6} = \frac{10}{6} = 1.67$$

∴ Using the Normal table

$$\begin{aligned}\text{The required probability} &= 0.5000 - 0.4525 \\ &= 0.0475\end{aligned}$$

$$\begin{aligned}\therefore \text{The number of employees with weights more than 80kg} \\ &= 0.0475 \times 400 \\ &= 19\end{aligned}$$

- (b) Year: 1980, 1981, 1982,
Amount: ₦10,000, ₦12,000, ₦14,000,

This follows arithmetic progression

$$\therefore a = \text{₦}10,000$$

$$d = \text{₦}2,000$$

From 1980 to 1999 gives $n = 20$

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

$$\therefore S_{20} = \frac{20}{2}[2(10,000) + (20-1)2000]$$

$$S_{20} = 10[20,000 + 38,000]$$

$$S_{20} = \text{₦}580,000$$

ALITER Q5 (b)

Since she saved ₦10,000 at the end of 1980 and increased it by ₦2,000 in the subsequent years, then rate of increase arithmetically = ₦2,000

∴ 1980	_____	₦10,000
1981	_____	₦12,000
1982	_____	₦14,000
1983	_____	₦16,000
1984	_____	₦18,000
1985	_____	₦20,000
1986	_____	₦22,000
1987	_____	₦24,000
1988	_____	₦26,000
1989	_____	₦28,000
1990	_____	₦30,000
1991	_____	₦32,000
1992	_____	₦34,000
1993	_____	₦36,000

1994	_____	N 38,000
1995	_____	N 40,000
1996	_____	N 42,000
1997	_____	N 44,000
1998	_____	N 46,000
1999	_____	N 48,000
Total:		N 580,000

EXAMINER'S REPORT

The question tests the candidates' understanding of the application of Normal Probability Distribution and Arithmetic progression (A.P) to solve business problems.

Less than 50% of the candidates attempted the question. About 65% of the candidates that attempted the question scored 10 marks and above.

The interpretation and computation of Z –scores constitute the major weakness observed. Relevant materials and ICAN Study Text are recommended for candidates for better performance in future examinations.

MARKING GUIDE

		Marks	Marks
(a)	i.		
	Correct Z-score expression for 60kg	1	
	Correct Z-score value for 60kg	1	
	Correct Z-score expression for 75kg	1	
	Correct Z-score value for 70kg	1	
	Correct probability for Z-score value for 60kg (i.e. 0.4525)	1	
	Correct probability for Z-score value for 75kg (i.e. 0.2967)	1	
	For adding the two probabilities	1	
	Correct probability value for between 60kg and 75kg	1	
	Correct multiplication of the probability value by 400	1	
	For getting 299.68	$\frac{1}{2}$	
	Correct answer (i.e. 300)	<u>$\frac{1}{2}$</u>	10
	ii.		
	Correct Z-score expression for 80kg	1	
	Correct Z-score value for 80kg	1	
	Correct probability for Z-score value for 80kg (i.e. 0.4525)	1	
	For subtracting 0.4525 from 0.5000	1	
	Correct probability value for more than 80kg	1	
	Correct multiplication of the probability value by 400	$\frac{1}{2}$	
	Correct answer (i.e. 19)	<u>$\frac{1}{2}$</u>	6

(b)	Correct identification of the Arithmetic progression	1	
	Correct d value	$\frac{1}{2}$	
	Correct S_n formula	1	
	Correct substitution into S_n formula	$\frac{1}{2}$	
	Correct answer	<u>1</u>	<u><u>4</u></u>
ALITER Q5b			

	Marks	Marks
Correct rate of increase arithmetically	$\frac{1}{2}$	
Correct savings from year 1981 to 1999 ($-\frac{1}{2}$ each error)	3	
Correct total savings	<u>$\frac{1}{2}$</u>	<u><u>4</u></u>

SOLUTION 6

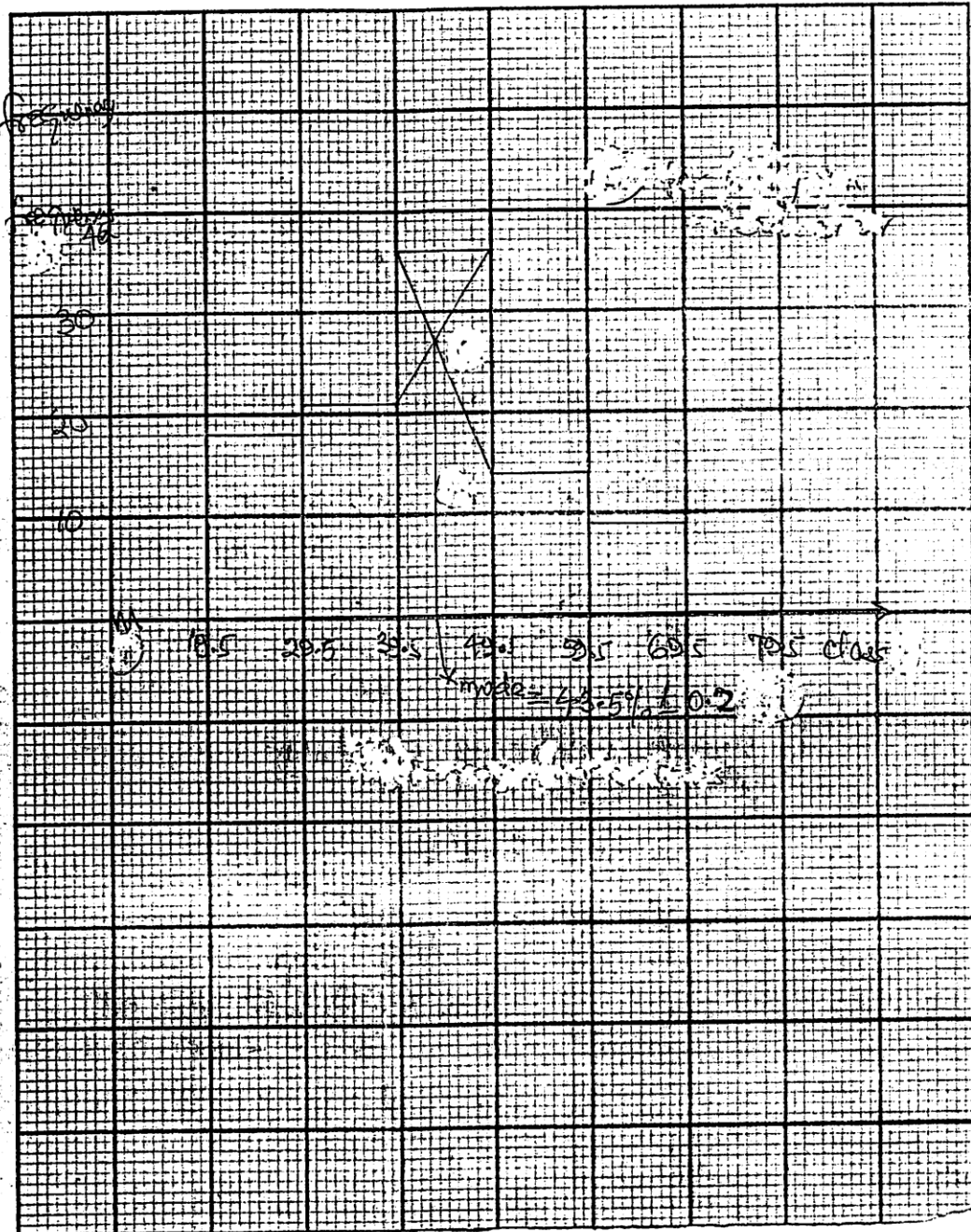
(a) (i) modal class is 40 – 49

$$\begin{aligned}
 \therefore \text{Mode} &= L + \left(\frac{f_0 - f_1}{2f_0 - f_1 - f_2} \right) c \\
 &= 39.5 + \left(\frac{35 - 21}{70 - 21 - 14} \right) 10 = 39.5 + \frac{140}{35} \\
 &= 39.5 + 4 \\
 &= 43.5
 \end{aligned}$$

(ii) Table for histogram

Class	Frequency
19.5 – 29.5	18
29.5 – 39.5	21
39.5 – 49.5	35
49.5 – 59.5	14
59.5 – 69.5	9
69.5 – 79.5	2

GRAPH



From the graph, the mode is read as 43.5

(iii) Both calculations are approximately the same.

(b)

$$q^2 - 1,140q + 10,000 = 82,000$$

$$q^2 - 1,140q + 10,000 - 82,000 = 0$$

$$q^2 - 1,140q - 72,000 = 0$$

This is a quadratic equation. Hence, using the quadratic formula, we have

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

$$a = 1, b = -1,140, c = -72,000$$

$$q = \frac{-(-1,140) \pm \sqrt{(-1,140)^2 - 4(1)(-72,000)}}{2(1)}$$

$$q = \frac{1,140 \pm \sqrt{1,587,600}}{2}$$

$$q = \frac{1,140 \pm 1,260}{2}$$

$$q = \frac{1,140 - 1,260}{2} \text{ or } \frac{1,140 + 1,260}{2}$$

$$q = \frac{-120}{2} \text{ or } \frac{2,400}{2}$$

$$q = -60 \text{ or } 1,200$$

Since q cannot be negative.

Therefore, $q = 1,200$ units.

ALITER 1 Q6 (b)

$$q^2 - 1,140q + 10,000 = 8,200$$

$$q^2 - 1,140q - 72,000 = 0$$

$$\left(q - \frac{1,140}{2}\right)^2 = 72,000 + \left(\frac{1,140}{2}\right)^2$$

$$(q - 570)^2 = 72,000 + (570)^2$$

$$(q - 570)^2 = 72,000 + 324,900$$

$$(q - 570)^2 = 396,900$$

$$q - 570 = \pm \sqrt{396,900}$$

$$q - 570 = \pm 630$$

$$q = 570 \pm 630$$

$$q = 1,200 \text{ or } q = -60$$

q can not be negative

$$\therefore q = 1,200$$

ALITER 2 Q6 (b)

$$q^2 - 1,140q + 10,000 - 8,200 = 0$$

$$q^2 - 1,140q - 72,000 = 0$$

$$72,000 = 72 \times 1,000$$

$$= 6 \times 12 \times 1,000$$

$$= 60 \times 1,200$$

$$\therefore q^2 - 1,200q + 60q - 72,000 = 0$$

$$\Rightarrow q(q - 1,200) + 60(q - 1,200) = 0$$

$$\Rightarrow (q + 60)(q - 1,200) = 0$$

$$\text{i.e. } (q + 60) = 0 \text{ or } (q - 1,200) = 0$$

$$\therefore q = -60 \text{ or } 1,200$$

But q can not be negative

$$\therefore q = 1,200$$

EXAMINER'S REPORT

The question tests the candidates' knowledge and understanding of the construction of histogram and using it to estimate the mode. Q6(b) is testing the candidate's ability to use the quadratic equation to solve total revenue problem. About 90% of the candidates attempted the question out of which about 70% scored 10 marks or above. The commonest pitfall included the inability of the candidates to use the correct formula as well as differentiating the revenue function correctly. Candidates should be encouraged to register at any ICAN approved Tuition House and study the ICAN Study Text in order to improve on their performance.

MARKING GUIDE

		Marks	Marks
(a)	i.	Correct modal class	$\frac{1}{2}$
		Correct modal formula	$\frac{1}{2}$
		Correct substitution	$\frac{1}{2}$
		Correct answer	$\frac{1}{2}$
			2

ii.	Correct class boundaries column ($-\frac{1}{2}$ each error)	2	
	Correct labeling of frequency axis	$\frac{1}{2}$	
	Correct labeling of class axis	$\frac{1}{2}$	
	Correct construction of 6 bars for the histogram (1 mark for each correct bar)	6	
	Correct 2 diagonal lines joining the vertices of two adjacent bar to the highest bar ($\frac{1}{2}$ mark for each line)	1	
	Correct line through the point of intersection of the 2 diagonal lines	1	
	Correct reading of the modal mark from the graph	1	
	Correct answer	<u>1</u>	13
iii.	Correct conclusion	1	1
(b)	Correctly equating $q^2 - 1140q + 1000$ to 82,000	$\frac{1}{2}$	
	Correct quadratic equation	$\frac{1}{2}$	
	Correct substitution into the quadratic equation formular	$\frac{1}{2}$	
	Correct simplification	$\frac{1}{2}$	
	Correct further simplification to get $q = \frac{-210}{2}$ or $\frac{2400}{2}$	$\frac{1}{2}$	
	Correct $q = -60$	$\frac{1}{2}$	
	Correct $q = 1200$	$\frac{1}{2}$	
	Correct conclusion/answer	<u>$\frac{1}{2}$</u>	<u><u>4</u></u> <u>20</u>

ALITER 1 Q6(b)

Correct equation of $q^2 - 1140q + 10000$ and 8200	$\frac{1}{2}$	
Correct quadratic equation	$\frac{1}{2}$	
Correct 2 factors for $72000 q$ i.e $-1200 q$ and $60 q$	$\frac{1}{2}$	
Correct factorization	$\frac{1}{2}$	
For getting $(q + 60)(q - 1200) = 0$	$\frac{1}{2}$	
For equating $q + 60 = 0$ or $q - 1200 = 0$	$\frac{1}{2}$	
Correct value of q i.e -60 or 1200	$\frac{1}{2}$	
Correct conclusion/ answer	<u>$\frac{1}{2}$</u>	<u><u>4</u></u>

ALITER 2 Q6(b)

Correct equation of $q^2 - 1140q + 10000$ and 8200	$\frac{1}{2}$	
--	---------------	--

For getting $q^2 - 1140q = 72000$	$\frac{1}{2}$	
For getting $\left(q - \frac{1140}{2}\right)^2 = 72000 + \left(\frac{1140}{2}\right)^2$	$\frac{1}{2}$	
For getting $(q - 570)^2 = 396900$	$\frac{1}{2}$	
For getting $q - 570 = \pm 630$	$\frac{1}{2}$	
For getting $q = 570 \pm 630$	$\frac{1}{2}$	
For getting $q = 1200$ or -60	$\frac{1}{2}$	
For correct conclusion/answer	<u>$\frac{1}{2}$</u>	<u>4</u>

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – MAY 2018

BUSINESS AND FINANCE

Time Allowed: 3¼ hours (including 15 minutes reading time)

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 is **NOT** a characteristic of a well stated corporate mission statement?
 - A. Ambiguity
 - B. Precision
 - C. Motivation
 - D. Clarity
 - E. Distinctiveness

2. Which of the following options is **NOT** a tool for developing organisational strategy?
 - A. SWOT analysis
 - B. Critical question analysis
 - C. PEST analysis
 - D. Business portfolio analysis
 - E. Profitability ratio

3. Which of the following is **NOT** a barrier to international business?
 - A. Tariff
 - B. Quota
 - C. Embargoes
 - D. Market Growth
 - E. Infrastructure

4. Which of the following is a benefit derivable through international business?
- A. Economies of scale
 - B. Low profit
 - C. High cost
 - D. Short supply of goods and services
 - E. Insufficient capital accumulation
5. Which of the following is **NOT** a feature of an informal organisation?
- A. It is a network of personal and social relationships
 - B. It develops from the way in which individuals meet and communicate with each other
 - C. It has been created and maintained by its leaders
 - D. It develops friendships and personal relationships
 - E. It focuses on people, not the work
6. A company that needs to innovate and continually produce new services is likely to have a/n function.
- A. Research and development
 - B. Procurement
 - C. Operations
 - D. Finance
 - E. Administration
7. The level of culture in which unconscious beliefs, perceptions and thoughts are taken for granted is the level.
- A. Artefacts
 - B. Basic underlying assumptions
 - C. Inner layer
 - D. Outer skin
 - E. Espoused values
8. Which of the following options is **NOT** directly related to financial management?
- A. Sourcing for funds
 - B. Decision making
 - C. Assessment of risk
 - D. Evaluation of return
 - E. Recording data accurately and reporting business transactions

9. A source of financing, negotiated between a bank and a company for a duration of 4-10 years at a fixed rate of interest is called
- A. Finance lease
 - B. Term loan
 - C. Acceptance credit
 - D. Factoring of debtors
 - E. Preference share
10. Managerial functions like planning, organising, co-ordinating and communicating require because they involve giving guidance and direction to employees.
- A. Management
 - B. Foresight
 - C. Experience
 - D. Leadership
 - E. Intuition
11. Expenditure that does not create a long-term asset is called a(n)
- A. Capital expenditure
 - B. Investment expenditure
 - C. Revenue expenditure
 - D. Sundry expenditure
 - E. Capital budgeting expenditure
12. The factors that impact group cohesiveness **EXCLUDE**
- A. Group success
 - B. Task cohesion
 - C. Location
 - D. Finance
 - E. Leadership style
13. The main threats to ethical behaviour in the accountancy profession fall into the following categories **EXCEPT**
- A. Professional competence threat
 - B. Intimidation threat
 - C. Self interest threat
 - D. Familiarity threat
 - E. Advocacy threat

14. The code of conduct in respect of employees as a stakeholder group might include all of the following **EXCEPT**
- A. Equal opportunities for all employees regardless of gender, race or religion
 - B. Refusal to tolerate harassment of employees by colleagues and managers
 - C. Respect for the privacy of confidential information about each employee
 - D. Concern for the health and safety of employees
 - E. Unfair dealing with the company's customers.
15. Who amongst the following theorists is associated with the Human Relations School of Management?
- A. Max Weber
 - B. Elton Mayo
 - C. Henry Mintzberg
 - D. Rosemary Stewart
 - E. Lyndall Urwick
16. A written communication of factual information on a specific subject presented in an orderly and formal manner is called a(n)
- A. Operating report
 - B. Business plan
 - C. Feasibility study
 - D. Business report
 - E. Business proposal
17. A club culture or spider's web culture is also known as
- A. Personal culture
 - B. Existential culture
 - C. Task culture
 - D. Role culture
 - E. Power culture
18. The process of using the right words in the right order to achieve the objective of a message is called
- A. Communication Style
 - B. Communication Skills
 - C. Communication Personality
 - D. Communication Structure
 - E. Communication Creativity

19. Which of the following options is **NOT** a feature of an effective work team?
- A. Good communication
 - B. Focus
 - C. Collaboration
 - D. Doing your own job
 - E. Positive conflicts
20. The theory of motivation, which states that our behaviour is the result of conscious choices that we make between different alternatives, is known as
- A. Maslow's hierarchy of needs
 - B. Vroom's expectancy model
 - C. McClelland's motivational needs
 - D. Heifetz's activity model
 - E. Herzberg's hygiene and motivational factors

SECTION B: OPEN-ENDED QUESTIONS (80 MARKS)

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

QUESTION 1

In order to make subordinates perform better, managers can use different types of reward systems. Assuming you are a manager in an accounting firm, you are required to:

- a. Define a reward system. (1 Mark)
 - b. Explain intrinsic and extrinsic rewards. (2 Marks)
 - c. List **SIX** examples each of intrinsic and extrinsic rewards that your subordinates could receive from doing their jobs. (12 Marks)
 - d. State **TWO** extrinsic rewards you could give to your subordinates. (2 Marks)
 - e. State **THREE** benefits of management by objectives (MBO). (3 Marks)
- (Total 20 Marks)**

QUESTION 2

The following are extracts from the financial position and income statement of TYX Limited for 2014 and 2015

	1 Jan 2014	31 Dec 2014	1 Jan 2015	31 Dec 2015
	₦	₦	₦	₦
Share capital of ₦1 each	200,000	200,000	200,000	200,000
Share premium	100,000	100,000	100,000	100,000
Accumulated profits	500,000	600,000	600,000	750,000
Bank loans	200,000	600,000	600,000	350,000

	2014	2015
	₦	₦
Profit Before Taxation	210,000	294,000
Taxation	75,000	100,000
Profit after taxation	135,000	194,000
Interest charges on bank loans	30,000	25,000
Dividend	45,000	45,000
Sales	5, 800, 000	6,670,000

- a. You are required to compute the following ratios:
 - i. Return On Equity
 - ii. Return On Capital Employed
 - iii. Net Profit Percentage
 - iv. Earnings Per Share
 - v. Dividend Per Share

(10 Marks)

- b. Nike Kenny is a student of a state-owned polytechnic in Yobe. She planned to save ₦5,000 each year out of the emolument she collects from the work study club of a school. How much will she have at the end of the tenth year, if interest on her savings is 6% compounded semi- annually?

(4 Marks)

- c. Agency conflicts are the differences in the interests of a company's owners and managers. However, several remedies have been recommended to lessen this age long managerial problem.

Required:

Explain briefly **THREE** of these remedies

(6 Marks)

(Total 20 Marks)

QUESTION 3

- a. High unemployment rate is a challenge in any economy. Attempts have been made to classify unemployment so as to resolve it. State and explain briefly **FIVE** categories of unemployment. (10 Marks)
- b. State the implications of a fall in the value of a nation's currency. (4 Marks)
- c. Explain briefly the following business terms:
- i. Fiscal policy
 - ii. Monetary policy
 - iii. Monopoly
 - iv. Downsizing
 - v. De-layering
 - vi. Outsourcing
- (6 Marks)
(Total 20 Marks)

QUESTION 4

- a. State **FOUR** characteristics of a perfectly competitive market (4 Marks)
- b. Explain the term monopolistic competition and state its **SIX** main features. (8 Marks)
- c. Many businesses expand beyond their national markets and have competitors all over the world.
Explain **FOUR** reasons for internationalisation of markets and competition. (8 Marks)
(Total 20 Marks)

QUESTION 5

- a. Corporate financial objectives may be expressed as maximising shareholders' wealth, as well as profit or growth in earnings.
State and explain briefly the weaknesses of **THREE** commonly-used corporate financial objectives. (14 Marks)
- b. State briefly the features of the following operational techniques:
- i. Mathematical logic
 - ii. Game theory
 - iii. Mathematical optimisation
- (6 Marks)
(Total 20 Marks)

QUESTION 6

Effective communication skills are essential to any manager or professional accountant in the 21st century.

- a. List **FIVE** methods of communication and state **FIVE** benefits of using e-mail.
(10 Marks)
 - b. Explain briefly the advantages and disadvantages of video conferencing.
(10 Marks)
- (Total 20 Marks)**

MULTIPLE CHOICE SOLUTIONS - SECTION A

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

EXAMINER'S REPORT

There are twenty multiple-choice questions in section A which test candidates understanding of the various aspects of the syllabus.

All the candidates attempted these questions and performance was good. About 60% of the candidates scored above 50% of the marks allotted to the questions. For improved performance in future, candidates are advised to cover the syllabus.

MARKING GUIDE

20 correct options x 1 mark = 20 marks

SECTION B: SOLUTION 1

- (a) A reward system is the system of extrinsic rewards that an organization could give its employees.
- (b) Intrinsic rewards are rewards that are within the control of an individual. While extrinsic rewards are outside the control of the individual.

(c) Examples of intrinsic rewards

- Pride in doing the work
- A sense of responsibility
- A sense of achievement in doing the work
- A sense of recognition for doing the work
- Enjoying the status that the job provides
- Personal satisfaction from doing the work

Examples of Extrinsic rewards

- The award of a company vehicle
- Basic pay (the size of a pay increase)
- Cash bonuses and incentive payments
- Subsidised loans
- Pension benefits
- Rewards from employers in form of share options or a gift of some shares
- Free medicare

(d) The two significant extrinsic rewards I could give my subordinates are:

- Promotion and advancement
- Increased remuneration or pay

(e) Benefits of MBO:

- i) Ensures that team members are clear about their work and how it benefits the whole organization.
- ii) Enables employees and managers to distinguish between tasks that are necessary and those that do not contribute to the organisation's objectives.
- iii) Helps managers control teams and provides a robust reference point for team briefings, goal setting, performance appraisal, delegation and feedback.
- iv) Provides a sense of purpose for individuals.
- v) Improves communication.
- vi) Easier performance evaluation.

EXAMINER'S REPORT

The question tests candidates understanding of reward system and other motivation concepts.

About 80% of the candidates attempted the question and performance was above average. More than 60% of those that attempted the question had a good

knowledge of the requirements of the question, however, they could not clearly distinguish between intrinsic and extrinsic rewards. For improved performance, candidates should pay attention to the clarifications made in the ICAN Study Text and Pathfinder.

MARKING GUIDE

	Marks	Marks
(a) Explaining briefly intrinsic and extrinsic rewards	2	
(b) Listing of SIX examples each of intrinsic and extrinsic rewards	12	
(c) Definition of reward system	1	
(d) Stating TWO significant extrinsic rewards	2	
(e) 3 benefits of MBO	<u>3</u>	<u>20</u>

SOLUTION 2

(a)

	Ratios		2014	2015
i.	Return On Equity (ROE)	$\frac{\text{PAT/Equity}}{100\%} \times$	$135/850 \times 100\%$	$194/975 \times 100\%$
			15.88%	19.90%
ii.	Return On Capital Employed (ROCE)	$\frac{\text{PBIT/Capital Employed}}{100\%} \times$	$\frac{(210 + 30)}{(1250)} \times 100\%$	$\frac{(294 + 25)}{(1450)} \times 100\%$
			$240/1250 \times 100\%$	$319/1450 \times 100\%$
			19.2%	22%
iii.	Net Profit	$\frac{\text{Net Profit/ Sales}}{100\%} \times$	$210/5800 \times 100\%$	$294/6670 \times 100\%$
			3.62%	4.40%
iv.	Earnings Per Share (EPS)	$\frac{\text{Profit After Tax/No of Shares Issued}}$	$\text{₦}135/200$	$\text{₦}194/200$
			$\text{₦}0.675$	$\text{₦}0.970$
v.	Dividend Per Share(DPS)	$\frac{\text{Dividend /No of Shares Issued}}$	$\text{₦}45/200$	$\text{₦}45/200$
			$\text{₦}0.225$	$\text{₦}0.225$

i.	<u>Working</u>	<u>2014</u>	<u>2015</u>
	Average equity	$\frac{800 + 900}{2}$	$\frac{900 + 1,050}{2}$
		= <u>850</u>	= <u>975</u>
ii.	Average capital employed	$= \frac{1,000 + 1,500}{2}$	$= \frac{1,500 + 1,400}{2}$
		= 1,250	= 1,450

(b)
$$FVIFA = k \left[\frac{\left(1 + \frac{r}{m}\right)^{n \cdot m} - 1}{r/m} \right]$$

$$= 5,000 \left[\frac{\left(1 + \frac{0.06}{2}\right)^{2 \times 10} - 1}{0.06/2} \right]$$

$$= 5,000 \left[\frac{(1.03)^{20} - 1}{0.03} \right]$$

$$= 5,000 \left[\frac{1.806 - 1}{0.03} \right]$$

$$= 5,000 \left[\frac{0.806}{0.03} \right]$$

$$= 5,000 \times 26.97$$

$$= \text{N}134,350$$

c) Methods of reducing agency problem include:

- i. Devising a remuneration package for executive directors and senior managers that gives them incentive to act in the best interest of the shareholders.
- ii. Constituting an effective board of a large number of independent or non-executive directors. These directors should be able to act in the best interest of the shareholders.

- iii. Independent or non-executive directors should be empowered to take decisions 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 fixing the remuneration packages for executive directors and other senior managers.

EXAMINER'S REPORT

The question tests candidates understanding of financial ratios, time value of money and agency conflicts.

About 90% of the candidates attempted the question but performance was below average. 50% of the candidates that attempted the question did not have a good knowledge of its requirements.

For improved performance in future examination, candidates are advised to use ICAN Study Text and Pathfinder as guide.

MARKING GUIDE

		Marks	Marks
i.	Stating and inserting correct variables in the formula		
	2 x $\frac{1}{4}$ mark	$\frac{1}{2}$	
	Correct answer	2 x $\frac{1}{2}$ mark	1
ii.	Stating and inserting correct variables in the formula		
	2 x $\frac{1}{4}$ mark	$\frac{1}{2}$	
	Correct answer	2 x $\frac{1}{2}$ mark	1
iii.	Stating and inserting correct variables in the formula		
	2 x $\frac{1}{2}$ mark	1	
	Correct answer	2 x $\frac{1}{2}$ mark	1
iv.	Stating and inserting correct variables in the formula		
	2 x $\frac{1}{2}$ mark	1	
	Correct answer	2 x $\frac{1}{2}$ mark	1
v.	Stating and inserting correct variables in the formula		
	2 x $\frac{1}{2}$ mark	1	
	Correct answer	2 x $\frac{1}{2}$ mark	1
	<u>Workings</u>		
	Calculation of average equity	2 x $\frac{1}{4}$ mark	$\frac{1}{2}$
	Calculation of average capital employed	2 x $\frac{1}{4}$ mark	$\frac{1}{2}$
			<u>10</u>

(b)	Stating correct formula	1	
	Inserting correct variables in the formula	2	
	Correct answer	<u>1</u>	4
(c)	3 methods of reducing agency problem (2 marks each)	<u>6</u>	
			20

SOLUTION 3

Categories of unemployment

- i. **Transitional unemployment**
This happens when an employee has left one job in order to start another. The time gap between leaving a job and starting another is transitional unemployment. For example, a teacher might leave a job at one school in order to start at another in three months' time. During the three months, unless one of the schools pays him, he is transitionally unemployed.
- ii. **Frictional unemployment**
This is short-term unemployment when individuals are dismissed from their work or rendered redundant.
- iii. **Structural unemployment**
This arises from a significant change in the structure of the economy which causes a decline and collapse of industries that used to be major employers.
- iv. **Technological unemployment**
This occurs when technological changes dispense with some categories of workers.
- v. **Regional unemployment**
This occurs in a particular region of the country. Levels of unemployment can vary from one region to another, especially when there is low mobility of labour. For instance where individuals are reluctant to move to other regions to find work.
- vi. **Seasonal unemployment**
This is unemployment, often within a particular industry, because the demand by firms for labour is higher at some times of the year than at the other. For example, the demand for agricultural labour might be seasonal.
- vii. **Cyclical unemployment**
When the national economy is growing, demand for labour increases and unemployment should fall. When the economic business and finance cycle go into recession, the demand for labour falls and the rate of unemployment

increases. Governments try to deal with cyclical unemployment by managing the economy and trying to achieve real economic growth.

- (b) Implications of a fall in the value of a nation's currency are:
- i. Her currency becomes cheaper relative to other currencies.
 - ii. Exports from the country therefore become relatively cheaper.
 - iii. Imports from other countries become relatively more expensive.
 - iv. When exports go up and imports fall, the balance of payments position in goods and services improves.
 - v. A very substantial change in foreign currency exchange rates will be needed to rectify a very large disequilibrium in international payments.

(c) **Fiscal policy**

Fiscal policy is government policy on taxation, spending and government borrowing. Government spending is a part of national income, but in order to spend a government must raise the money in tax, and borrow any excess of spending over tax revenue.

A government might also try to encourage investment by the private sector. It could do this by offering special tax incentives or subsidies.

Monetary policy

Monetary policy involves trying to establish monetary conditions that will be favourable to economic growth. Government is expected to encourage long-term economic growth by keeping the rate of inflation within limits. The rate of inflation should be managed through control over interest rates.

Monopoly

Monopoly means supply by a single person or firm. It exists only if there are no substitutes for the product and the supplier is able to prevent other firms from entering the market.

Downsizing

Downsizing means a deliberate reduction in the size of a business organisation. It means that its business activities are conducted by a smaller number of people. Technological change makes downsizing possible, because tasks that were previously performed by humans can now be performed by machine or computer.

De-layering

De-layering means removing one or more levels of management in the organization structure. It could mean removing middle management layer, leaving senior managers, front-line managers and supervisors. De-layering is enhanced by high-quality communications, provided that senior management can delegate sufficient authority to junior managers, and expect junior managers to meet their responsibilities.

Outsourcing

Outsourcing means arranging for other business organisations to perform some tasks, instead of having to employ individuals to do the tasks internally, as part of the organisation's own activities.

EXAMINER'S REPORT

The question tests candidates understanding of business environment with emphasis on unemployment, exchange rate policy and other business related terms.

About 95% of the candidates that sat for the paper attempted the question and performance was above average.

The commonest pitfall is the inability of the affected candidates to clearly explain the implication of a fall in the value of national currency. This is a direct consequence of inadequate preparation for the examination.

For improved performance in future examinations, candidates are advised to use the ICAN Study Text and the Institute's Pathfinder.

MARKING GUIDE

	Marks	Marks
(a) Any 5 categories of unemployment x 2marks	10	
(b) Any 4 implications of a fall in the value of a nation's currency x 1	4	
(c) Brief explanation on each of the 6 business related terms x 1	<u>6</u>	20

SOLUTION 4

- a. Characteristics of a perfectly competitive market include:
 - i. A large number of buyers and sellers, none of whom can dominate the market.
 - ii. An undifferentiated and homogenous product so that buyers are indifferent as to who they buy from.
 - iii. Perfect information about factors affecting price leading to rational consumer behaviour.

- iv. No barriers to firms entering or leaving the market.
 - v. Sellers are price takers.
- b. Monopolistic competition applies where many sellers produce similar goods but try to differentiate their products from those of other firms. For example they might do this using advertising or by changing features of the product. Each producer can set price and quantity without affecting the marketplace as a whole.

Features of monopolistic competition include the following:

- i. Many producers and consumers
 - ii. Knowledge is widespread, but not perfect
 - iii. Products are differentiated by firms to distinguish them from the products of other firms
 - iv. Producers have some control over prices of their own product
 - v. Barriers to entry and exit do exist, but, are low
 - vi. Brand loyalty exists, making demand less sensitive to price
 - vii. Firms engage in some form of marketing
- c. Reasons for internationalisation of markets and competition can be summarised as follows:
- i. Business entities succeed by gaining competitive advantage in their markets. One way of achieving competitive advantage is by reducing costs. Costs can be reduced by economies of scale. Expanding business operations into the markets of other countries creates a bigger volume of sales. This provides an opportunity for achieving economies of scale and lower unit costs.
 - ii. Markets in many countries are converging and national differences might be fairly small. When customer needs and demands are similar in different countries, an entity should be able to sell a fairly standard product in all of those countries.
 - iii. By setting up operations in other countries or currency blocs, an entity can avoid the currency risk of exporting to those countries. By producing and selling its products within the same country or currency bloc, there is no risk of variations in the exchange rate. In contrast, if products are exported from one country to another with a different currency, the exporter is exposed to the risk of losses from fluctuations in the exchange rate of the two currencies.

- iv. Business entities could use the competitive advantage gained from their own country to compete successfully in other countries.
- v. Business entities often need to adopt a global strategy to compete effectively against rival entities that are pursuing the same strategy.
- vi. In some cases, a company might choose to set up new operations within an economic trading bloc, to overcome the difficulties in exporting goods into the bloc due to import control and other regulations. For example, a Japanese or USA corporation wanting to sell goods into Europe might set up a subsidiary in the Eurozone in order to get round the difficulties of exporting from their home country.

EXAMINER'S REPORT

The question tests candidates' understanding of business environment with special emphasis on markets and industries.

About 90% of the candidates attempted the question, but performance was below average. Inadequate preparation appeared to be the major pitfall of the candidates.

Candidates are advised to prepare adequately for improved performance in future examinations.

MARKING GUIDE

	Marks	Marks
(a) Any 4 characteristics of a perfectly competitive market x 1	4	
(b) (i) Brief explanation of monopolistic competition	2	
(b) (ii) Any 6 features of monopolistic competition x 1	6	
(c) Any 4 reasons for internationalisation of markets and competition x 2	<u>8</u>	<u>20</u>

SOLUTION 5

- (a) Three commonly-used financial objectives are to maximise:
 - i. Shareholders' wealth
 - ii. Profitability
 - iii. Growth in earnings per share.

- 1. Maximising shareholders' wealth weaknesses include:

- (a) Absence of time period for setting targets for wealth maximisation

- (b) Difficulty in measurement of wealth creation, targets for dividend payments and share price growth.
 - (c) Share prices are often affected by general stock market sentiment, and short-term increases or falls in share prices.
 - (d) The main financial objective of a company is to maximise shareholders' wealth but there are practical difficulties in selecting a suitable measurement for growth in shareholders' wealth.
2. Weaknesses of using Profit Maximisation as a financial objective include:
- (a) Difficulty in determining the period over which profit performance should be measured.
 - (b) Emphasis on short-term profits might jeopardize long term profitability.
 - (c) Profit maximization in the short term might not accommodate innovation and business risks that are essential for long term success.
 - (d) Profit maximization may not be real when share capital is increased. Total profits might increase due to the larger investment but in absolute terms, profit per share might fall.
3. Growth in Earnings Per Share (EPS)
- Problems with using EPS growth as a financial objective
- (a) It might be possible to increase EPS through borrowing and debt capital. If a company needs more capital to expand its operations, it can raise the money by borrowing. In this case, EPS may not reflect operational efficiency.
 - (b) Tax relief is available on the interest charges, and this reduces the effective cost of borrowing. Shareholders benefit from any growth in profits after interest, allowing for tax relief on the interest, and EPS increases.
 - (c) Higher financial gearing (the ratio of debt capital to total capital) can expose shareholders to greater financial risk. As a consequence of higher gearing, the share price might fall even when EPS increases.
- b) **Mathematical logic** – Mathematical logic is integral to most of the other operational techniques. It is used to reflect the relationships between the various components, variables and parameters within something that is being modeled. The logic is constructed so as to include an 'objective

function' with which different solutions can be evaluated and constraints that restrict feasible values are tested.

Game theory – This involves studying mathematical models of conflict and cooperation to help make strategic decisions. Rules are specified which represent the various choices of action available and help determine what the potential and likely outcomes of various courses of action will be. A number of different game theory styles exist including:

Zero-sum games – this is where one person's gain is another's loss – frequently used by military strategists.

Many-person' (or non-zero-sum) games – these are used to study economic behaviour where the objective is that, for the greater good, it pays for parties to cooperate – e.g. in a bargaining situation.

Mathematical optimization – In broad terms, mathematical optimization is a technique used in management science, mathematics and computer science to select the optimal solution from a set of available alternatives. The solution is derived by either maximizing (e.g. profit) or minimizing (e.g. cost) a real function by systematically selecting input values from within a feasible range.

EXAMINER'S REPORT

The question tests candidates understanding of corporate financial objective.

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

For improved performance in future examinations, candidates are advised to make use of the ICAN Study Text and Pathfinder as guide.

MARKING GUIDE

	Marks	Marks
(a) State the 3 correct financial objectives 3 x 1 mark	3	
For stating and briefly explaining:		
i. Wealth maximisation objective	4	
ii. Maximising profit	4	
iii. Growth in EPS	<u>3</u>	14
(b) Stating briefly the 3 features x 2marks		<u>6</u>
		<u>20</u>

SOLUTION 6

Effective communication skills are essential to any manager or professional accountant in the twenty-first century.

(a) Methods of communication

1. Face-to-face discussion
2. Discussion by telephone
3. Video conferencing
4. E-mail
5. Web sites
6. Fax messages
7. Formal speeches or lectures
8. Public address systems
9. Notices on a notice board
10. Communication in electronic form
11. Communication in written form, such as reports, letters, notes (memoranda), journals and magazines
12. Signs and symbols
13. Social media (WhatsApp, linkedin, Twitter, Instagram, SMS, Skype, Facebook, etc.)

Benefits of using email include:

1. An audit trail of messages is automatically retained (and can be for long periods). This can be valuable in disputes or for checking the thread of a conversation or client's order.
2. The sending and receiving of email is virtually instantaneous. This enables managers to communicate with colleagues and companies to communicate with clients or suppliers incredibly quickly.
3. Recipients can access emails anywhere and anytime at their convenience.
4. It could be used to reach many recipients simultaneously and cheaply
5. Easy to use and organize daily correspondence.
6. Low cost.
7. Environmentally friendly
8. It is a relatively secure means of communication.

(b) Advantages of video conferencing

1. It is the next best option when face-to-face meeting is impossible
2. It is a cost-effective solution where a live conversation is needed and non-verbal (i.e. visual) information is an important component of the conversation but a face-to face meeting is not possible.
3. Saves travel costs.

4. It facilitates productivity across dispersed workforces and teams – video conferencing helps ensure delegates capture the up to 80 percentage of communication consisting of non-verbal visual cues.
5. It enables individuals in distant locations to participate in meetings at short notice.
6. It makes available technology such as VoIP in conjunction with desktop video conferencing to enable low-cost face-to-face business meetings without leaving the desk.
7. It assists the facilitation of telecommuting (home working), enabling businesses to embrace diversity of workforce and flexible working. This helps improve work-life balance, particularly with the reduction in lengthy commutes.
8. It facilitates hiring and retention of top talents by extending the geographical scope of the early recruitment phase.
9. **Competitive advantage:**
 - Improved sharing of knowledge
 - Faster and more informed decisions that reduce time to market for new products and services
 - Improved relationships with suppliers and customers
 - Good public relations through promoting video conferencing as proof of environmental initiatives
10. Video messages and information can be recorded for reference purposes.

Disadvantages of video conferencing

1. **Eye contact:** Camera positioning and interaction are highly important yet frequently overlooked. Video conferencing can often give the incorrect impression that the remote participant is avoiding eye contact when in fact they are not.
2. **Appearance consciousness:** This describes the psychological problem where delegates change their behaviour or feel uncomfortable because they are on camera. The problem may well be exacerbated if the session is recorded. There has been some research performed that suggests that communication is in fact impaired by the addition of camera.

3. **Technology:** The video conference experience is entirely reliant on stable technology and communications links with large bandwidth. Unexpected variations in signal quality or technology issues can destroy the video conference unexpectedly.
4. **Limited non-commercial take-up:** Mass adoption and use of video conferencing in non-commercial environments remains relatively low due to the perceived complexity of systems, lack of common technology standards, highly variable bandwidth and quality of service in different countries and relative expense of commercial systems.
5. **Anxiety:** The stress and anxiety present in some participants due to appearing on camera can have a negative impact on their health and social wellbeing.
6. Problem of different time zones.
7. Insecurity – It could be hacked into, thus leading to non-confidentiality of discussions.

EXAMINER'S REPORT

The question tests candidates' understanding of communication in business.

About 90% of the candidates attempted the question and performance was above average. About 50% of them failed to provide solution from business communication's perspective.

Candidates are advised to make use of the ICAN Study Text and Pathfinder for improved performance in future examinations.

MARKING GUIDE

	Marks	Marks
(a) i. Any 5 methods of communication x 1 mark	5	
ii. Any 5 benefits of using email x 1 mark	5	
(b) Any 5 advantages of video conferencing x 1 mark	5	
Any 5 disadvantages of video conferencing x 1 mark	<u>5</u>	<u>20</u>

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION - MAY 2018

BUSINESS LAW

Time Allowed: 3¼ hours (including 15 minutes reading time)

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. A written Constitution is
 - A. Flexible
 - B. Rigid
 - C. Changeable
 - D. Amenable
 - E. Discretionary

2. Courts of coordinate jurisdiction are courts of
 - A. Equal status
 - B. Unequal powers
 - C. Customary courts
 - D. International courts
 - E. Court of first instance

3. Which court has original jurisdiction in company matters?
 - A. State High Court
 - B. National Industrial Court
 - C. Federal High Court
 - D. Magistrate Court
 - E. Supreme Court

4. Partnership is the relationship which subsists between persons carrying on business in common with a view to
 - A. Assisting other partners
 - B. Making and sharing profit
 - C. Ensuring accuracy
 - D. Establishing good business
 - E. Deceiving the public

5. The representative of a shareholder during the meeting of a company is a/an
- A. Member
 - B. Promoter
 - C. Proxy
 - D. Accountant
 - E. Lawyer
6. A company that is unable to pay its debts is
- A. Fluid
 - B. Floating
 - C. Bankrupt
 - D. Insolvent
 - E. Distressed
7. The body of general rules backed by sanctions, which governs the behaviour of people in a country or state is known as
- A. Ethics
 - B. Law
 - C. Ethical Codes
 - D. Contract
 - E. Trust
8. The Offence of taking someone's goods without his consent, coupled with the intention to permanently deprive the owner of such goods is called
- A. Trespass
 - B. Battery
 - C. Fraud
 - D. Stealing
 - E. False Pretence
9. The limit of cash payment or acceptance by a body corporate outside a financial institution under the Money Laundering (Prohibition) Act is
- A. ₦1,000,000.00
 - B. ₦2,000,000.00
 - C. ₦5,000,000.00
 - D. ₦7,500,000.00
 - E. ₦10,000,000.00
10. An electronic means that indicates that a person adopts the contents of an electronic message is
- A. E-signature
 - B. Computer signature
 - C. Rubber Stamp
 - D. Clone
 - E. Scan

11. A contract may be valid without consideration if it
 - A. Has exclusion term
 - B. Has warranty
 - C. Is by deed
 - D. Is implied
 - E. Is made express
12. The agency relationship created when a person, by his conduct, led a third party to believe that someone is his agent, is agency by
 - A. Intuition
 - B. Estoppel
 - C. Necessity
 - D. Cohabitation
 - E. Marriage
13. The duties of parties in tort are fixed by
 - A. Law
 - B. The parties
 - C. Contract
 - D. The Executive
 - E. Governor
14. Property in unascertained goods passes when the goods are
 - A. Produced
 - B. Ascertained
 - C. In the warehouse
 - D. Packaged
 - E. In transit
15. The party who has the option to purchase goods in a Hire Purchase Agreement is the
 - A. Hirer
 - B. Hiree
 - C. Owner
 - D. Insurance company
 - E. Bailee
16. The instruction given by the drawer to the drawee to stop the payment of a cheque is
 - A. Countermand
 - B. Injunction
 - C. Memo
 - D. Order
 - E. Signal

17. The party that accepts the offer in a general insurance contract is known as
 - A. Insurer
 - B. Insured
 - C. Agent
 - D. Broker
 - E. Intermediary

18. The period of time during which an employer retains the right to confirm or not to confirm the appointment of the employee is known as the period of
 - A. Protection
 - B. Redundancy
 - C. Overtime
 - D. Probation
 - E. Judicial Intention

19. The maker of a will is known as
 - A. Testator
 - B. Magistrate
 - C. Executor
 - D. Judge
 - E. Personal Representative

20. A Company may acquire its own shares in the following circumstances **EXCEPT** to
 - A. Eliminate fractional shares
 - B. Satisfy the claim of a dissenting shareholder
 - C. Ensure that the company's share price does not fall on the stock exchange
 - D. Comply with a court order
 - E. Settle or compromise a debt or claim asserted by or against the Company

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. The sources of Nigerian law are diverse, but all laws are interpreted by the courts.

Required:

- (i) State the **THREE** types of Received English Law; (3 Marks)

- (ii) State the parties to criminal proceedings and civil proceedings (3 Marks)

- b. A contract may possess all the elements of a valid agreement and still be unenforceable if such a contract is induced by a vitiating factor like misrepresentation.

Required:

- i. What is misrepresentation in contract? (2 Marks)
 - ii. State **TWO** types of misrepresentation. (2 Marks)
- c. Kofi bought a mobile phone from Adjua. Kofi later discovered that the phone was not functioning. Advise Kofi based on the following:
- i. When he was contemplating buying the phone, Adjua said it was in a perfect working condition, knowing this was untrue;
 - ii. Adjua told Kofi that the mobile phone was in a perfect working condition, basing this comment on the users' manual in the packet of the mobile phone;
 - iii. Adjua is a GSM engineer but still told Kofi, who was relying on his expert advice, that the phone was in a perfect condition. (6 Marks)
- d. There are **THREE** conditions under which agency of necessity may arise.

Required:

State **TWO** of the conditions

(4 Marks)
(Total 20 Marks)

QUESTION 2

- a. The shares of a Public Company are freely transferable.

Required:

State **FOUR** reasons for which a company may refuse to register a share transfer. (4 Marks)

- b. Ade and Bola are partners in a firm consisting of ten other partners. Ade solely manages the business of the firm while Bola is interested only in the profits of the business. In the course of managing the business of the firm, Ade made a payment of ₦10,000.00 for electricity and also incurred expenses on hotel bills while representing the firm in Tema, Ghana. Ade, who is now overwhelmed by the running of the firm, intends to introduce a friend into the business as a partner. In addition, Ade wants the business of the firm to be changed in order to attract more profit.

Required:

- i. What type of partners are Ade and Bola? Give reasons for your answer. (3 Mark)
 - ii. Advise Ade on the money he paid for the electricity, the hotel bills as well as the plan to introduce a new partner. (4 Marks)
 - iii. What must be done to change the business of the firm? (3 Marks)
- c. State the implication of the following in a contract of insurance:
- i. An applicant gives a proposal form to an insurance agent to complete for him. (2 Marks)
 - ii. The insurer gives the proposal form to the applicant to complete; (2 Marks)
 - iii. The applicant completes and submits the proposal form to the insurer. (2 Marks)
- (Total 20 Marks)**

QUESTION 3

- a. There are various tests of determining if a company is insolvent.
Required:
List and explain briefly **THREE** of these tests specified by the Companies and Allied Matters Act (CAMA 1990). (6 Marks)
- b. Company indebtedness could be by way of debentures.
Required:
State **THREE** types of debentures. (3 Marks)
- c. Adex Plc employed 'A' as a Company Secretary. 'A' hired luxury cars from Bee Enterprises, giving the impression that they were for the use of Adex Plc, but he used the cars for his own purpose. Bee Enterprises has sued Adex Plc.
Required:
- i. Advise Adex Plc. (5 Marks)
 - ii. Assuming that the Board of Directors of Adex Plc intends to remove 'A' as the Company Secretary, state **THREE** matters which the notice of removal must contain. (3 Marks)
- d. By S.401 of CAMA, the legal way to terminate the life of a company is by winding up.

Required:

State **THREE** ways by which a company may be wound up. (3 Marks)
(Total 20 Marks)

QUESTION 4

- a. Beny Limited was incorporated six months ago. The company is in real estate business. While preparing for incorporation, Ben and Nyom, who are now shareholders of the company, bought prime landed properties on behalf of the proposed company. They owe the vendors ₦100 million as the balance of the purchase price. The vendors are demanding for payment.

Required:

- i. Advise Ben and Nyom on their status in the transaction; (4 Marks)
- ii. Advise Beny Limited on the liability for the sum of ₦100 million. (8 Marks)
- b. An accountant may be an expert witness in a computer fraud case.

Required:

State **TWO** matters on which an accountant must satisfy the court in such a case. (4 Marks)

- c. State **FOUR** courts of coordinate jurisdiction (4 Marks)
(Total 20 Marks)

QUESTION 5

- a. A bill of exchange must conform with the requirements of the law (the Bills of Exchange Act 1990) before it could be valid.

Required:

Comment on the validity of the following Bills of Exchange:

- i. Please pay Kwame the sum of ₦1,000,000.00; (2 Marks)
- ii. Pay James ₦5,000.00, provided the receipt form at the foot hereof is duly signed; (2 Marks)
- iii. Pay Jossy ₦10,000.00 ten days after the death of his father. (2 Marks)
- b. An unpaid seller under a contract of sale of goods has two classes of rights, namely: rights against the goods and rights against the buyer.

Required:

State **THREE** rights of an unpaid seller over the goods. (6 Marks)

- c. As a general rule, all persons of full age may sue or be sued in tort.

Required:

State **FOUR** exceptions to the above mentioned general rule. (4 Marks)

- d. James, a Nigerian who is resident in U.S.A, intends to transfer a sum of 100,000 dollars to Nigeria for investment.

Required:

Advise James on the steps to be taken to avoid breaching the provisions of the Money Laundering (Prohibition) Act of 2011. (4 Marks)

(Total 20 Marks)

QUESTION 6

- a. The beneficiaries under a Trust have certain rights in a situation where the trustee does not administer the trust diligently.

Required:

State **FOUR** rights of a beneficiary against abuse of powers of a trustee. (6 Marks)

- b. One of the ways by which a contract of employment could be terminated is by dismissal of the employee.

Required:

(i) Differentiate between dismissal and interdiction. (4 Marks)

(ii) State **FOUR** reasons for the dismissal of an employee. (4 Marks)

- c. The owner of the goods in a contract of hire purchase has some rights against a third party who has acquired no good title to the goods under the agreement.

Required:

State **THREE** rights of the owner against a third party that has acquired no good title to the goods under a hire purchase contract. (6 Marks)

(Total 20 Marks)

SOLUTIONS - SECTION A

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

EXAMINER'S REPORT

SECTION A: MULTIPLE CHOICE QUESTIONS

The questions have a good spread over of the syllabus. All candidates attempted them and their performance was good.

SECTION B: OPEN –ENDED QUESTIONS

SOLUTION 1

- a. i The THREE types of Received English Law are:
- The Common Law of England;
 - Statutes of General Application; and
 - Doctrines of Equity
- ii. The parties to criminal proceedings are the State and the Defendant/Accused. The parties to civil proceedings are the Plaintiff and the Defendant.
- b. i A misrepresentation is an untrue statement made by one of the parties to a contract, which induced the party to whom it is made to enter into the agreement.
- ii. There are three types of misrepresentation namely:
- Fraudulent Misrepresentation;
 - Innocent Misrepresentation; and
 - Negligent Misrepresentation.
- c. i. The question relates to the type of misrepresentation in the statement Adjua made to Kofi that the mobile phone is in a perfect condition while he knew that this was untrue. Since Adjua made the statement with the knowledge of its falsity, it is a fraudulent misrepresentation. Therefore Kofi may ask for rescission of the contract.
- ii. The statement by Adjua that the mobile phone was in a perfect condition, based on the literature contained in the packet of the phone, is an innocent misrepresentation; This is so because Adjua did not know that the phone was not in good working condition.
- iii. Adjua, an engineer, offered professional advice to Kofi. He was under a duty to give an expert advice that would not cause a loss to Kofi. Since Adjua's statement turned out to be untrue, Adjua is liable for negligent misrepresentation. (2 Marks)
- d. Agency of necessity arises in emergency situations in which it is obligatory to prevent irreparable loss to the principal. The conditions are:
- i. It must be impossible to communicate with the owner of the goods to get his instructions;
- ii. There must be real or imminent commercial necessity; and
- iii. The agent must act in the best interest of the Principal.

EXAMINER'S REPORT

The question is on types of Received English Law; parties to Civil Criminal proceedings; misrepresentation; and types as well as agency of necessity.

80% of the candidates attempted the question, but about 60% passed.

	Marking Guide	Marks	Total
a. i.	State three types of English Law	3	
ii.	State the parties to criminal proceedings and civil proceedings	<u>3</u>	6
b. i.	Define misrepresentation	2	
ii.	State two types of misrepresentation	<u>2</u>	4
c. i.	Legal issue involved in fraudulent misrepresentation	2	
ii.	Adjua's statement in negligent misrepresentation	2	
iii.	Adjua is liable for negligent misrepresentation	<u>2</u>	6
d.	State two conditions for agency of necessity		<u>4</u>
	Total		<u>20</u>

SOLUTION 2

- a. A company may refuse to register a share transfer where:
- the shares are not fully paid-up;
 - the company disapproves of the transfer;
 - the company has a lien on the shares; or
 - a proper share transfer instrument has not been delivered to the company.
- b. i. Ade is a general/active partner. A general partner is that partner that is involved in the day to day management of the business as Ade. Bola is a dormant/sleeping partner. A dormant partner is interested only in the profits of the business. He does not participate in the management of the business as in the case of Bola.
- ii. The question relates to the right and duties of partners to one another. Ade should be indemnified by the other partners for the money he paid for both electricity and the hotel bills he incurred in Tema, Ghana. This is so because he made the payments in the ordinary and

proper conduct of the business of the firm. In addition, the payments are necessary for the preservation of the business of the firm.

On the plan to introduce a new partner by Ade, the position of the law is that no person may be introduced as a partner without the consent of all existing partners. Therefore, before Ade introduces a new partner, all the partners in the firm must give their consent.

- iii. On the desire of Ade to change the business of the firm, the position of the law is that no change may be made in the nature of the partnership business without the consent of all existing partners. This being so, the business of the firm could be changed only if Bola and the other ten partners give their consent.
- C
- i. Where an applicant gives a proposal form to an insurance agent to complete on his behalf, the insurance agent is deemed in law to be the agent of the applicant.
 - ii. Where the insurer gives the proposal form to the applicant to complete, the insurer is deemed in law to make an invitation to treat.
 - iii. Where the applicant completes and submits the proposal form to the insurer, the applicant is deemed to have made an offer for insurance contract to the insurer.

EXAMINER'S REPORT

The question covers areas for which a company may refuse share transfer; types of partners; liability for partner debts; change of partnership business; and formation of insurance contract.

60% of the candidates attempted the question and about 60% of them passed.

S/No.	Marking Guide	Marks	Total
a.	State four reasons for refusal of transfer of shares		4
b. i.	Ade is general partner involved in the firm's management	1½	
	Bola is a dormant/sleeping partner sharing in profits only	<u>1½</u>	3
ii.	Ade shall be indemnified for the firm's expenses	2	
	All partners must consent to admission of new partners	<u>2</u>	4
iii	All partners must consent to change in the firm's business		3
c. i.	Insurance agent is agent of the applicant	2	
ii.	Insurance proposal form is invitation to treat	2	
iii.	Applicant is offeror to the insurer	<u>2</u>	<u>6</u>
	Total		<u>20</u>

SOLUTION 3

a. The tests for insolvency of a company are:

- i. Inability to pay its debt exceeding ₦2,000:00 within three weeks after a demand for payment has been made;
- ii. The issuance by a court of a certified court process in respect of a judgment debt;
- iii. A court's determination, after taking into account any contingent or prospective liability of the company, that the company is unable to pay its debts; and
- iv. A situation in which the company's liabilities exceed its assets.

b. The types of debentures are:

- i. Perpetual Debenture;
- ii. Convertible Debenture;
- iii. Secured Debenture;
- iv. Naked Debenture; and
- v. Redeemable Debenture.

c. i. The position of the law is that a Company Secretary has ostensible authority to bind the company in all matters of administration.

In this case, Ade who is the Company Secretary of Adex Plc has ostensible or apparent authority to enter into a contract and the contract will be binding on the company.

Therefore, by hiring cars from Bee Enterprises and giving the impression that the cars were for the use of Adex Plc, Adex Plc is liable to Bee Enterprises for the cost of the hire. See: *Panorama Development (Guildford) Ltd v Fidelis Furnishing Fabrics Ltd*.

ii. The matters which the notice to remove 'A' as the Company Secretary of Adex Plc. must contain are:

- That the board intends to remove 'A' as the Company Secretary;
- The grounds on which it intends to remove 'A' as the Company Secretary;
- That 'A' as Company Secretary has at least 7 working days to make his defence; and
- That 'A', as Company Secretary, has an option to resign his office within a period of 7 working days.

d. A Company may be wound up in any of the following ways:

- By the Federal High Court;
- Voluntarily by the Company via a resolution; and
- Subject to the supervision of the Court

EXAMINER'S REPORT

The question tests candidates' understanding of corporate insolvency; types of debentures; ostensible authority of a company secretary; removal of company secretary; and types of winding up of a company.

75% of the candidates attempted the question of which about 65% passed.

Marking Guide

	Marks	Total
(a) State and explain three tests of company insolvency		6
(b) State three types of debenture		3
(c)i. Legal issue involved is company secretary's ostensible or apparent authority	4	
Advice: Bees Enterprises will succeed in suit	<u>1</u>	5
ii. State three matters on notice to remove company secretary		3
(d) State three ways to wind up a company		<u>3</u>
Total		<u>20</u>

SOLUTION 4

a. i. Ben and Nyom were promoters. This is because they undertook the formation of Beny Limited "with reference to a given project and set it going" by taking the necessary steps to buy landed properties for it to facilitate its business of real estate - S.61, Companies and Allied Matters Act.

ii. Beny Limited will be liable for the balance of the purchase price of ₦100 million if it ratifies the purchase contract which Ben and Nyom entered into on its behalf prior to its formation.

However, prior to ratification by the company, Ben and Nyom who acted on behalf of the company shall be liable to pay the money and be entitled to the benefits of the property.

b. As an expert witness in a computer fraud case, an accountant must satisfy the court that:

- i. He is an expert on the subject matter;
- ii. The document sought to be tendered was generated in the ordinary course of the business, that is, the issue in the case; and

- iii. The document is either the original or the certified true copy of the computer generated printout.
- c. Four courts of coordinate jurisdiction are:
 - i. Federal High Court;
 - ii. High Court of a State or High Court of the Federal Capital Territory;
 - iii. Sharia Court of Appeal;
 - ii. Customary Court of Appeal; and
 - iii. The National Industrial Court

EXAMINER'S REPORT

The question covers promoters and liability for pre-incorporation contract; accountants' satisfaction of court in computer fraud cases and courts of coordinate jurisdiction.

70% of the candidates attempted the question of which only 30% passed.

Candidates' commonest pitfall was lack of knowledge of the law on computer fraud cases.

Marking Guide	Marks	Total
(a) i. Ben and Nyom were promoters of the company		4
ii. Beny Limited will be liable for the debt of ₦100million if it ratifies the pre-incorporation contract		
	4	
Prior to ratification by the company, Ben and Nyom will be liable to pay the debt	<u>4</u>	8
(b) State two matters an Accountant must satisfy as an expert witness in court		4
(c) State four courts of coordinate jurisdiction		<u>4</u>
Total		<u>20</u>

SOLUTION 5

- c. i. One of the requirements of a valid bill is that the instruction to pay must be couched in an imperative tone. It should not be a request but a command.

The instruction to pay Kwame is valid notwithstanding the word 'please', which is a word of courtesy. The instruction is a command.
- ii. The instruction to pay in a valid bill should not be conditional. In this instance, since instruction to pay James is based on a condition that James should sign a receipt, the bill is invalid.

- iii. A valid bill should set a definite time for payment or a determinable future time.

In this question, the time for payment is indeterminable because the time Jossy's father will die is indeterminable.

Therefore, this is not a valid bill.

- b. An unpaid seller has the following rights against the goods:

- i. Right of Lien: A seller's right of lien is a right in equity to withhold goods until the price is paid. This right exists only when the seller has actual possession of the goods either as principal or as agent. This right can be exercised when the goods are sold without any stipulation as to credit.
- ii. Right of Withholding Delivery: A seller may withhold delivery of the goods where neither ownership nor possession has passed to the buyer; and
- iii. Stoppage of goods in transit: An unpaid seller has the right to stop goods *in transitu* before they are actually received by the buyer.

(6 Marks)

- c. The exceptions to the general rule that all persons of full age can sue and be sued in tort are:

- i. The President or Governor of a State cannot be sued in their private capacity whilst in office;
- ii. Judges have judicial immunity for acts done in their judicial capacities;
- iii. Corporations – companies can sue and be sued in their corporate names and can be held vicariously liable;
- iv. Ambassadors and High Commissioners;
- v. Husband and wife or master/servant relationship: There is presumed vicarious liability and they are not expected to sue each other; and
- vi. Insane persons or persons with mental disability.

- d. The money Laundering (Prohibition) Act 2011 allows the transfer of up to 10,000 dollars without declaration. Since James intends to transfer a sum of 10,000 dollars, to Nigeria from the United States, James must transfer the money through a financial institution who must make a report in writing to the Central Bank of Nigeria and Securities and Exchange Commission.

EXAMINER'S REPORT

The question covers tests for validity of Bills of Exchange, the right of an unpaid seller of goods; liability for torts and exemption thereto; and procedures for transfer of foreign currency under Money Laundering (Prohibition) Act.

About 55% of the candidates attempted the question and passed rate was 40%. Candidates missed the law on transfer of money under Money Laundering (Prohibition) Act. They are advised to study ICAN Study Text.

Marking Guide

	Marks	Total
(a)i Valid bill must be an instruction or command	1	
Kwame's request is a command and thus valid, notwithstanding the word 'please'	<u>1</u>	2
ii. Conditional instruction to pay James is invalid	1	
iii. Valid bill must be time-bound	<u>1</u>	2
Instruction to pay Jossy is invalid because it is not time bound		2
(b) State three rights of unpaid seller (2 marks each)		6
(c) State four exceptions to persons that may sue or be sued in tort		4
(d) Legal issue is limit to transfer of funds under Money Laundering (Prohibition) Act; and	1	
Notice to regulatory bodies for approval to transfer funds	<u>3</u>	<u>4</u>
Total		<u>20</u>

SOLUTION 6

- a. The rights of the beneficiary against the abuse of power of a trustee are the rights
- of action for accounts of money had and received.
 - to compel tracing of trust property.
 - to apply for an order of injunction in situations where there is evidence that a trustee is about to become bankrupt or insolvent.
 - of personal action where trust property has been fraudulently transferred from the trust.
- b. i. A contract of employment can be terminated by dismissal in a situation where the employee commits a serious and grave offence. Dismissal is the removal of an employee without formalities by the employer.
- Interdiction, on the other hand, is the suspension of an employee pending the determination of the allegation against him. If at the end of the matter, the employee is found not culpable, he will be reinstated.

- ii. Reasons for an employee's dismissal are:
- Act or conduct likely to bring the employer into disrepute;
 - Where the servant's practices or conduct expose the master to loss of public confidence;
 - Gross immorality;
 - Absenteeism without leave or permission, which amounts to an abandonment of duties; and
 - Gross misconduct, which may include insubordination, habitual drunkenness, gross negligence, willful disobedience of lawful orders and so on.
- c. The owner of the goods in a contract of hire purchase has the following rights against the third party who has no good title to the goods under the hire purchase agreement:
- i. Recovery of the goods through peaceful means or by an action for detinue i.e. a demand for its return and the subsequent refusal to do so by the third party;
 - ii. Recovery of the goods or a right to sue for conversion or damages;
 - iii. Damages for conversion of the goods where a third party has interfered with the owner or the hirer's possession or use of the goods; and
 - iv. An action for negligence against the third party and consequent recovery of damages.

EXAMINER'S REPORT

The question covers the remedies of beneficiaries against trustees for abuse of powers, distinctions between dismissal and interdiction, reasons for dismissal of an employee; and the rights of an owner against third parties without title to goods in hire purchase transactions.

About 50% of the candidates attempted the question, but only 30% of them passed.

The candidates did not have sufficient knowledge of Trusteeship and Hire Purchase. They are advised to study ICAN Study Text.

Marking Guide		Marks	Total
(a)	State four rights against abuse of power by Trustee (1½ marks each)		6
(b)i.	Dismissal is removal of employee by employer from office for grievous offence without formalities	2	

ii.	Interdiction is temporary suspension of employee by employer for pending issue	<u>2</u>	4
iii.	State four reasons for employee dismissal		4
(c)	State three rights of owner against third party with defective title under Hire Purchase (2 marks each)		<u>6</u>
	Total		<u>20</u>