

**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA**



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# **PATHFINDER**

**MAY 2016 FOUNDATION EXAMINATION**

Question Papers  
Suggested Solutions  
Plus  
Marking Guide  
Examiners' Reports

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# THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION – MAY 2016

QUANTITATIVE TECHNIQUES IN BUSINESS

Time Allowed: 3 hours

SECTION A:

MULTIPLE-CHOICE QUESTIONS

(20 Marks)

INSTRUCTIONS: 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 company expects to produce and sell 150,000 units of its product during the first year with this figure growing by 3%% per annum. Then the number of units to be sold in year 5 is
  - A. 153.798
  - B. 163,798
  - C. 173,798
  - D. 183,798
  - E. 193,798
2. A store holding a clearance sale advertises that all prices have been discounted by 20%. if a certain article is on sale for N28.00. What was its price before the sale?
  - A. ₦15
  - B. ₦25
  - C. ₦35
  - D. ₦45
  - E. ₦55
3. The demand function for an item is given by  $p = 32q - q^2$ . Find the elasticity of demand at  $q = 4$ 
  - A. -0.17
  - B. 1.00
  - C. 1.11
  - D. 1.17
  - E. 1.20

4. A line with a negative slope passes through the point (2, 4). If its x-intercept value is thrice the y-intercept value, then the slope-intercept form of the equation of the line is
- A.  $y = \frac{1}{3} + \frac{14}{3}x$
- B.  $y = \frac{14}{3} - \frac{x}{3}$
- C.  $y = \frac{1}{3} - \frac{14}{3}x$
- D.  $y = \frac{14}{3} + \frac{x}{3}$
- E.  $y = \frac{14}{3} - x$
5. A man plans to start saving in June. He plans to set aside ₦3,500 in June and to increase this amount by ₦275 in each of the subsequent months. In April of the following year, he would have set aside
- A. ₦6,025
- B. ₦6,205
- C. ₦6,250
- D. ₦6,502
- E. ₦6,520
6. The revenue function of a company is  $R = 48x + 3x^2$ , and the cost function is  $C = x^2 + 46x + 180$ . where x is the number in units of item produced and sold.  
Obtain the break-even quantity.
- A. 8
- B. 9
- C. 10
- D. 11
- E. 12
7. Which of the following diagrams is useful for estimating the mode of a grouped frequency distribution?
- A. Component bar chart
- B. Pie chart
- C. z-chart
- D. Histogram
- E. Ogive

8. The mean of a certain number of observations is 40. If two items with values 50 and 64 are added to this data, the mean rises to 42. The number of items in the original data is
  - A. 12
  - B. 13
  - C. 14
  - D. 15
  - E. 16
  
9. Which of the following statistics is affected by extreme values in a data distribution?
  - A. Mode
  - B. Range
  - C. Median
  - D. Mean
  - E. Variance
  
10. Which of the following does NOT give an indication of the degree of clustering around the value of an array?
  - A. Variance
  - B. Mean
  - C. Standard deviation
  - D. Range
  - E. Quartile deviation
  
11. In a QTB examination, where the maximum possible mark in a question is 20 marks and the Coefficient of Variation is given as 25%, find the variance if the mean score is 12 marks.
  - A. 3
  - B. 9
  - C. 12
  - D. 15
  - E. 18
  
12. The difference between the median and the range of the set of numbers: 18, 25, 48, 26, 36, 55, 42, 12, 38, 27, 64, 58, 20, 58, 30, 40, is
  - A. -19
  - B. -17
  - C. -15
  - D. 6
  - E. 25

13. Which of the following is NOT true about expected values?
- The worth of a decision can be evaluated as the expected value of outcomes where probabilities are assigned to different outcomes
  - Expected value is evaluated as the weighted-variance of possible outcomes
  - Use of expected values is a technique for comparing risk and return of different decisions or options
  - The expected average value is calculated by multiplying the probability of each possible outcome by the value of the outcome
  - Information can be analyzed where risk can be assessed in terms of probabilities of different outcomes
14. If a coin and an unbiased die are tossed together, what is the probability of obtaining a tail and a number greater than 3?
- 0.25
  - 0.33
  - 0.35
  - 0.50
  - 0.75
15. The plot of a Time Series as a graph is called
- Histogram
  - Ogive
  - Pie chart
  - Historigram
  - Z-chart
16. Which of the following is used to measure the degree of association between two variables?
- Regression
  - Percentiles
  - Quartiles
  - Correlation
  - Coefficient of variation
17. A company takes stock for 5 months in each year. The stock figures of materials for the most recent three years are as tabulated below:

	January	March	May	July	September
Year 1	76	84	90	84	86
Year 2	86	94	100	94	96
Year 3	96	104	110	104	106

Determine the trend stock for month 6.

- A. 84
- B. 85
- C. 86
- D. 87
- E. 88

18. The daily sales record of a company with their corresponding probabilities are tabulated as follows:

Daily Sales	Probability
0	0.15
1	0.30
2	0.12
3	0.25
4	0.11
5	0.07

The probability of total sales of 6 in two consecutive days is

- A. 0.1039
  - B. 0.1309
  - C. 0.1930
  - D. 0.3019
  - E. 0.3109
19. A company makes two products X and Y. It takes  $2\frac{1}{4}$  hours to make one unit of x and  $3\frac{3}{4}$  hours to make one unit of Y. If only 18,000 direct labour hours are available, then the production time constraint is expressed as
- A.  $3.75x + 2.25y \leq 18,000$
  - B.  $2.25x + 3.75y \leq 18,000$
  - C.  $3.75x + 2.25y \geq 18,000$
  - D.  $2.75x + 3.75y \geq 18,000$
  - E.  $3.75x + 2.25y = 18,000$
20. In a simple queue, if the arrival rate is 5 customers in 15 minutes and the service rate is 8 customers in 12 minutes. the traffic intensity or utilization factor is
- A. 0.25
  - B. 0.50
  - C. 0.55
  - D. 0.65
  - E. 1.00

**SECTION B:****OPEN - ENDED QUESTIONS****(80 Marks)****INSTRUCTION:****ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION****QUESTION 1**

- a. A company plans to introduce a new product into the market. 6,000 units are to be produced in the first year with an annual growth rate of 3.5%. Selling price is to be set at ₦1,050 per year with an annual growth rate of 6.5%.

**Required:**

If the production costs are to be pegged at ₦850 in the first year with an annual growth rate of 5%, calculate the profit earned in year 5.

**(10 marks)**

- b. An aluminum manufacturing company in Lagos incurs a daily total cost of ₦5,000 for one unit of production. To produce 4 units, the company spends ₦30,000 as its total cost.

**Required:**

- i. Draw a graph to depict the above information.  
**(3 marks)**
- ii. Use your graph above to estimate the number of units to be produced to incur a total cost of ₦70,000.  
**(2 marks)**
- iii. Deduce
  - The daily fixed costs of the company from the graph above **(1 mark)**
  - From the above, obtain the equation representing the company's activity  
**(3 marks)**
- iv. Comment on the results obtained in (iii) above. **(1 mark)**

**(Total 20 marks)**

**QUESTION 2**

- a. A barber invests ₦100,000 for 5 years. At the end of the investment period, he receives a cash transfer of ₦120,600 as final settlement of the investment.

**Required:**

Use logarithm (to base 10) to determine the compound interest rate on the investment.  
**(10 marks)**



- b. i. The Students Union of a University plans to have an end-of-year party for all its members. The party is scheduled to take place at a major hotel that can take up to 500 persons. The hotel was to charge ₦800 per person. At this gate fee, the hotel expects to sell 400 tickets. But market research postulates that for every ₦40 increase or reduction in the ticket price, the demand will fall or increase by 16.

**Required:**

If the variable cost per student for the dinner is ₦210, determine the Marginal Revenue (MR) function. (6 marks)

- ii. JANG PLC. produces and sells two products G and H. G and H respectively make contributions of ₦10 and ₦15. The company wishes to maximize its profit. 4,150 units and 3,175 units of G and H respectively, are to be sold. Direct labour hours per unit are 2.5 hours and 1½ hours respectively, for G and H while machine hours per unit are 45 minutes and 3 hours for G and H respectively. Total direct labour hours available and total machine hours available are respectively 18,000 hours and 10,000 hours.

**Required:**

Derive the following constraints: the direct labour, machine time, sales demand for G, sales demand for H and Non-negativity. (4 marks)

(Total 20 marks)

### QUESTION 3

The annual expenditures (₦'000) of a family from 2000 to 2009 were as follows:

Year	Expenditure (₦'000)
2000	600
2001	610
2002	580
2003	590
2004	480
2005	560
2006	550
2007	620
2008	490
2009	530

Required:

- a. Setting year 2000 to 0, fit the least squares line for the annual expenditures. (15 marks)
- b. Forecast what the expenditure will be in the years
- i. 2012 (2½ marks)
- ii. 2016 (2½ marks)
- (Total 20 marks)

#### QUESTION 4

- a. A gambler plays a game of chance in which he has 60% chance of winning. If he wins, he collects ₦1,800 but if he loses he pays ₦2,300.

Required:

If he loses alternate games,

- i. Obtain the sample spaces respectively for 12 games and 14 games (2 marks)
- ii. Calculate his expected returns for 12 games and 14 games. (6 marks)
- iii. Advise the gambler if he initially staked ₦1000 (2 marks)

b.

- i. A house built in Ikoyi increased in value by 8% in year 1, 25% in year 2, 35% in year 3, 43% in year 4 and 22% in year 5.

Required:

If the house cost ₦10,000.000 to build,

- Estimate its value at the end of 5 years. (3 marks)
  - Calculate the average growth rate over the 5-year period. (3 marks)
- ii. A company's Demand/Supply situations together with unit transportation costs are as shown below:

						Supply
Factory A	4	7	5	3	2	700
Factory B	3	6	7	5	4	850
Factory C	7	3	6	4	5	1,250
Demand	400	550	500	700	650	

Required:

Identify the initial feasible tableau using the Least Cost Method.

(4marks)  
(Total 20 Marks)

### QUESTION 5

- a. The marginal cost of producing a particular item is given by  $3q^2 - 40q + 600$ .

**Required:**

Find the

- i. Total cost function  $C(q)$ , if the cost of producing 2 items is 1,660  
(7 marks)
- ii. Cost of producing 50 items  
(3 marks)

- b. The weights of bags of Pando Yam produced by Swallow Company limited are normally distributed with mean 3,020 grams and standard deviation 4 grams.

**Required:**

If a bag is picked at random, what is the probability that it weighs

- i. Less than 3,012 grams? (4 marks)
- ii. Between 3,012 grams and 3,021.6 grams? (6 marks)

Show all the relevant normal distribution diagrams.

(Total 20 marks)

### QUESTION 6

- a. The quarterly sales figures of company ABC Plc. for 3 years are as recorded below:

Sales	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Year 1	30	34	37	41
Year 2	45	49	54	57
Year 3	59	66	70	74

**Required:**

Calculate:

- i. The moving averages (9 marks)
- ii. The centered moving average for Quarter 3, Year 1. (1 mark)

b.

- i. The following moving average analysis is obtained for the quarterly sales of a bakery based on additive model

Quarter 1	Trend	Actual Sales in the Quarter	Variation (Actual – Trend)
Year 1: Q <sub>3</sub>	29.375	29	-0.375
Year 1: Q <sub>4</sub>	33.125	33	-0.125
Year 2: Q <sub>1</sub>	37.125	37	-0.125
Year 2: Q <sub>2</sub>	41.250	41	-0.250
Year 2: Q <sub>3</sub>	45.000	46	1.000
Year 2: Q <sub>4</sub>	47.875	48	0.125
Year 3: Q <sub>1</sub>	53.000	51	-2.000
Year 3: Q <sub>2</sub>	57.125	58	0.875

Required:

Calculate the seasonal adjustment for each quarter. (6 marks)

- ii. An electrical bulb making company runs a production line that contains 760 bulbs of the same wattage. These bulbs fail on regular basis according to the following probability distribution:

Life (months)	Probability of failure (P)
1	0.27
2	0.56
3	0.17

Required:

If the cost of replacing a bulb is ₦60, determine the following:

- The life span (2 marks)
  - The average number of replacements in the period (1 mark)
  - The average monthly cost of replacing the bulbs. (1 mark)
- (Total 20 Marks)

## Formulae

### PROBABILITY

$A \cup B = A \text{ or } B$

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

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

#### Rules of Addition

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

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

#### Rules for Multiplication

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

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

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

### Quadratic Equations

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

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

### DESCRIPTIVE STATISTICS

#### Arithmetic Mean

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

#### Standard Deviation

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

### INDEX NUMBERS

Price relative =  $100 * P_1 / P_0$

Quantity relative =  $100 * Q_1 / Q_0$

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

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

### TIME SERIES:

Additive Model      Series = Trend + Seasonal + Random

Multiplicative Model      Series = Trend \* Seasonal \* Random

## LINEAR REGRESSION AND CORRELATION

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

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

Where

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

and

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

or solve

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

Coefficient of Correlation

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

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

## FINANCIAL MATHEMATICS

Compound Interest (Values and Sums)

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

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

Annuity

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

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

Perpetuity

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

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

## Annuity Table

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

Where  $r$  = discount rate

$n$  = number of periods

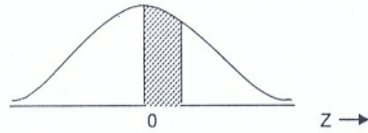
*Discount rate (r)*

*Periods*

	<i>S</i>										
(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									



## SOLUTION TO MCQ SET 1

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

## WORKINGS

1. 1<sup>st</sup> year = 150,000  
n<sup>th</sup> year =  $150,000 \times (1.0375)^{n-1}$   
 $\therefore 5^{\text{th}} \text{ year} = 150,000 \times (1.0375)^4 = \underline{\underline{\text{N}173,798.}}$  (C)

2. Let Cost Price be x

$$\text{Discount} = r\% \text{ of } x = \frac{r}{100} \bullet x = 0.01rx$$

$$\text{Sales Price} = x - 0.01rx$$

$$\text{SP} = x(1 - 0.01r)$$

$$X = \frac{SP}{1 - 0.01r} = \frac{28.00}{1 - (0.01)20}$$

$$X = \frac{28.00}{0.8} = 35 \quad \text{(C)}$$

3.  $P = 32q - q^2$

$$\frac{dp}{dq} = 32 - 2q$$

At  $q = 4$ ,  $\frac{dq}{dp} = 32 - 2(4) = 24$

At  $q = 4$ ,  $p = 32(4) - 4^2 = 128 - 16 = 112$

$$\text{Elasticity, } e = \frac{dp}{dq} \times \frac{p}{q} = \left| \frac{p/q}{dp/dq} \right| = \frac{112/4}{24} = \frac{28}{24} = 1.17 \quad \text{(D)}$$

4.  $\frac{x}{a} + \frac{y}{b} = 1$

But  $a = 3b$

$$\therefore \frac{x}{3b} + \frac{y}{b} = 1 \Rightarrow x + 3y = 3b$$

$$\Rightarrow 2 + 3(4) = 3b \Rightarrow 3b = 14 \Rightarrow b = \frac{14}{3}$$

$$\therefore a = 3\left(\frac{14}{3}\right) = 14$$

$$\text{hence } \frac{x}{14} + \frac{y}{\frac{14}{3}} = 1 \Rightarrow \frac{x}{14} + \frac{3y}{14} = 1 \Rightarrow x + 3y = 14$$

$$\therefore y = \frac{14}{3} - \frac{x}{3} \quad \text{(B)}$$

**ALITER**

Let the y intercept = c

x intercept = 3c

$$\text{slope} = m = -\frac{c}{3c} = -\frac{1}{3}$$

then, equation of the line is

$$y - y_1 = m(x - x_1)$$

$$y - 4 = -\frac{1}{3}(x - 2)$$

$$3y - 12 = -x + 2$$

$$3y = -x + 2 + 12$$

$$3y = -x + 14$$

$$y = \frac{-x}{3} + \frac{14}{3}$$

**(B)**

5. It's an AP such that  $T_n = a + (n - 1)d$ ,  
 where  $a = \text{N}3,500$ ,  $d = \text{N}275$  and  
 $n = \text{June 2017 to April 2018} = 11 \text{ months}$   
 $T_{11} = a + d(11 - 1) = \text{N}3,500 + \text{N}275 \times 10 = \text{N}6,250$  (C)

6.  $R = c$  at break even point  
 $x^2 + 46x + 180 = 48x + 3x^2$   
 $3x^2 - x^2 + 48x - 46x - 180 = 0$   
 $2x^2 + 2x - 180 = 0$   
 $x^2 + x - 90 = 0$   
 $(x + 10)(x - 9) = 0$   
 $x = -10 \text{ or } 9$   
 $x$  cannot be negative  
 $\therefore x = 9$   
 i.e break even quantity is 9 units. (B)

8.  $Mean = \frac{\sum x}{n} = 40$   
 $\sum x$   
 $= 40n$   
 $\frac{40n + 50 + 64}{n + 2} = 42$   
 $40n + 114 = 42n + 84$   
 $2n = 30$   
 $n = 15$  (D)

11.  $C \text{ of } V = \frac{s}{x} \Rightarrow s = \left(\frac{-}{x}\right) C \text{ of } V$   
 $\therefore \text{variance} = s^2 = \left(\frac{-}{x} \cdot C \text{ of } V\right)^2$   
 $= (12 \times 0.25)^2 = 9$  (B)

12. Arranging in ascending orders  
 $12, 18, 20, 25, 26, 27, 30, 36, 38, 40, 42, 48, 55, 58, 58, 64$   
 $\text{Range} = 64 - 12 = 52$   
 $\text{Median position} = \frac{16^{th}}{2} \text{ and } \left(\frac{16}{2} + 1\right)^{th} = 8^{th} \text{ and } 9^{th}$   
 $\text{Median} = \frac{36 + 38}{2} = \frac{74}{2} = 37$   
 $\text{Median} - \text{Range} = 37 - 52 = -15$  (C)

14.

	1	2	3	4	5	6
H	H,1	H,2	H,3	H,4	H,5	H,6
T	T,1	T,2	T,3	T,4	T,5	T,6

$$n(S) = 12$$

$$P(\text{a tail and no. greater than 3}) = P((T,4); (T,5); (T,6))$$

$$= \frac{3}{12} = \frac{1}{4}$$

$$= 0.25 \quad (A)$$

$$17. \quad \text{The trend stock for month} = \frac{84 + 86 + 86 + 94 + 100}{5}$$

$$= \frac{450}{5} = 90 \quad (E)$$

18. Day 1 Day 2

$$1 \text{ and } 5 \rightarrow 0.30 \times 0.07 = 0.0210$$

$$2 \text{ and } 4 \rightarrow 0.12 \times 0.11 = 0.0132$$

$$3 \text{ and } 3 \rightarrow 0.25 \times 0.25 = 0.0625$$

$$4 \text{ and } 2 \rightarrow 0.11 \times 0.12 = 0.0132$$

$$5 \text{ and } 1 \rightarrow 0.07 \times 0.30 = 0.0210$$

$$\underline{\underline{0.1309}} \quad (B)$$

$$19. \quad 2\frac{1}{2}x + 3\frac{3}{4}y \leq 18000$$

$$2.25x + 3.75y \leq 18000 \quad (B)$$

$$20. \quad \lambda = \text{arrival rate} = \frac{5}{\frac{15}{60}} = \frac{5}{0.25} = 20$$

$$\mu = \text{service rate} = \frac{8}{\frac{12}{60}} = \frac{8}{0.2} = 40$$

$$\text{Traffic intensity, } T = \frac{\lambda}{\mu} = \frac{20}{40} = 0.5 \quad (B)$$

### EXAMINER'S REPORT

The questions are adequate (in content and in standard) for the level of the examination. They enjoy a reasonable spread over the syllabus. In spite of these inherent features of the questions, the candidates did not demonstrate the expected understanding of the requirements of the questions which was why the performance of about 60% of the candidates in this section of the examination was below average.

Candidates should try to cover the syllabus fairly well to be sure of better performance in future.

## SOLUTION TO THEORY

### SOLUTION 1

- a. Units produced and sold in year 1 = 6000  
if the growth rate per annum = 1.035, then the  
units produced and sold in year 5 =  $6000 (1.035)^4 = 6885$   
Selling price in year 1 = ~~₦~~1050  
If the growth rate per annum = 1.065, then the  
selling price in year 5 = ~~₦~~ $[(1050 \times (1.065)^4)] = \text{₦}1350.79$   
Production costs in year 1 = ~~₦~~850  
If the growth rate per annum = 1.05, then the  
production costs in year 5 = ~~₦~~ $[850 \times (1.05)^4] = \text{₦}1033.18$   
profit in year 5 = ~~₦~~ $[6885(1350.79 - 1033.18)] = \text{₦}6,885 \times 317.61$   
 $= \text{₦}2,186,744.85$

b. Explanation

i.

- The graph to be drawn involves 2 points (1,15000) and (4,30000). This gives a straight line passing through the two points with total costs as **dependent variable** and number of units produced as **independent variable**.
- Read the units produced when the total costs is 100 (i.e. N100,000)

ii. The daily fixed cost of the company is the y-intercept of the above graph.

iii. Use the two given points plus any point (x,y) to determine the equation of the straight line

**OR**

deduce the slope of the graph and combine this with any of the two given points to obtain c in  $y = mx + c$  (Note: this is the general equation of a straight line with slope m and constant c ; c in this case will be equal to the fixed costs obtained in (ii) above).

• Actual graphing – the solution proper + marking scheme

- (i) - Let y (in thousands) represent the total cost and x to be the number of units produced.

Thus, the two points given are A(1,15) and (4,30).

The graph is as shown with it intersecting the y-axis at  $y = 10$ .

- Total cost of ₦70,000 means  $y = 70$   
If  $y = 70$ , then  $x = 12$  as shown on the graph.  
 $\therefore$  12 units were produced at a total cost of ₦70,000

- (ii) - Since the graph cuts the y-axis at  $y = 10$ ,

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Q16.

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then, the fixed cost of the company comes to ~~₦~~10,000

- The equation for the straight line drawn is obtained as follows:

From the graph, slope (or gradient) = 5

Considering point A(1,15) and any arbitrary point P(x,y),

then  $y = m(x - x_1) + y_1 \Rightarrow$

$y = 5(x - 1) + 15 \Rightarrow$

$y = 10 + 5x$  as the equation of the straight line

- (iii) This equation shows that, the fixed cost is given as  $y = 10$  i.e. ~~₦~~10,000 which is the same as obtained in (ii) above.

### Marking Guide

	Marks	Marks
1		
a. Correct growth rate per annum for units produced and sold (i.e. 1.035)	½	
Correct expression for units produced and sold in year 5 [i.e. $6,000(1.035)^4$ ]	½	
Correct answer (i.e. <del>₦</del> 6,885)	1	
Correct growth rate per annum for selling price (i.e. 1.065)	½	
Correct expression for selling price in year 5 [i.e. $1,050(1.065)^4$ ]	½	
Correct answer (i.e. ₦1,350.79)	1	
Correct growth rate per annum for production cost (i.e. 1.05)	½	
Correct expression for production cost in year 5 [i.e. $850(1.05)^4$ ]	½	
Correct answer (i.e. <del>₦</del> 1,033.18)	1	
Correct subtraction of year 5 selling price production cost (i.e. $1,350.79 - 1,033.00$ )	1	
Correct answer (i.e. 317.61)	½	
Correct expression for profit in year 5 (i.e. $6,885 \times 317.61$ )	½	
Correct answer for profit (i.e. <del>₦</del> 2,185,744.85)	2	
	<hr/>	10

### ALITER

a. Correct annual growth rate for units sold (i.e. 1.035)	½	
Correct annum growth rate for selling price (i.e. 1.065)	½	
Correct annual growth rate for production cost (i.e. 1.05)	½	
Correct units sold for years 2, 3, 4, and 5 respectively (i.e. 6,210.00, 6,427.00, 6,052.00, and 6,885.00) [½ mark each]	2	
Correct selling price for years 2, 3, 4, and 5 respectively (i.e. 1118.25, 1190.94, 1268.35, and 1350.79) [½ mark each]	2	
Correct production cost for years 2, 3, 4, and 5 respectively (i.e. 892.50, 937.13, 983.98, and 1033.18) [½ mark each]	2	
Correct profit for years 1, 2, 3, 4, and 5 respectively (i.e. 1,200,000.00; 1,401,907.50; 1,631,236.87; 1,891,629.24; and 2,186,744.85) [½ mark each]	2½	
	<hr/>	10



b. i.	Correct identification of point (1,15) or (1, 15000)	$\frac{1}{2}$	
	Correct identification of point (4,30) or (4, 30000)	$\frac{1}{2}$	
	Correct plotting of straight line graph	<u>2</u>	3
b.ii.	Correct expression for total cost of 70,000 (i.e. $y = 70$ or $y = 70,000$ )	$\frac{1}{2}$	
	Correct tracing of $y = 70,000$ or $y = 70$ to the line on the graph	$\frac{1}{2}$	
	Correct tracing of point of intersection of $y = 70,000$ with the line to $x = 12$ on the graph	$\frac{1}{2}$	
	Correct answer (i.e. $x = 12$ )	<u><math>\frac{1}{2}</math></u>	2
iii.	• Correct tracing of where the graph cuts y- axis at $y = 10$ or $y = 10,000$ on the graph	$\frac{1}{2}$	
	Correct answer for the fixed costs (i.e. <del>₦</del> 10,000)	<u><math>\frac{1}{2}</math></u>	1
	• Correct calculation of slope or gradient from the graph (i.e. slope = $\frac{20}{4} = 5$ )	<u>1</u>	
	Correct formula for the equation of a line [i.e. $y - y_1 = m (x - x_1)$ ]	$\frac{1}{2}$	
	Correct substitution into the formula	$\frac{1}{2}$	
	Correct answer for the equation of the straight line (i.e. $y = 10 + 5x$ )	<u>1</u>	3
iv.	Correct comment	<u>1</u>	
		<u>20</u>	

## EXAMINER'S REPORT

The question tests candidates' understanding of production, cost and profit concepts and their skills in the use of tables and graphs to compute production levels, costs and profit associated with business operation/activities in a company or firm setting.

About 45 percent of the candidates attempted the question and their performance was poor.

Most of the candidates showed wobbled understanding of Part (a) of the question and obtained solutions that are at variance with the required solution as suggested above. It, therefore, appears that this category of candidates jumped at attempting this question with a shallow understanding of its requirements

Candidates are, therefore, advised to study questions critically so as to understand their solution requirements before deciding or rushing to attempt them.

## SOLUTION 2

- a. For compound interest, we have

$$\text{Amount} = \text{principal} (1 + r)^n$$

$$\text{i.e } A = P(1 + r)^n$$

Substituting, we have

$$120,600 = 100,000 (1 + r)^5$$

$$\therefore (1 + r)^5 = \frac{120,600}{100,000} = 1.206$$

Using logarithm to base 10 gives

$$5 \log (1 + r) = \log_{10} (1.206)$$

$$= 0.081347$$

$$\therefore \log_{10} (1 + r) = \frac{0.081347}{5} = 0.0163$$

$$1 + r = \text{anti log of } 0.0163 = 1.0382$$

$$\therefore r = 0.0382$$

$\therefore$  The compound interest rate is 3.82%

- b. (i). Let the demand curve be  $P = a - bQ$

where  $P$  = sales price

$Q$  = quantity demanded

$a$  = sales price when the quantity demand is zero

$b$  = change in sales price divided by change in quantity sold

Since demand is 400 if the sales price is ₦800 and demand falls by 16 units for every ₦40 increase

$$\therefore \text{No of increases before demand falls to zero} = \frac{400}{16} = 25$$

$$\therefore 25 \text{ increases lead to } (25 \times \text{₦}40) \text{ or } \text{₦}1000$$

$$\therefore \text{the price at which the demand would be zero} = \text{₦}800 + \text{₦}1000 = \text{₦}1,800$$

i.e  $a = \text{₦}1,800$  and

$$b = \frac{40}{16} = \text{₦}2.50$$

$$\therefore \text{Demand curve is given as } P = 1,800 - 2.5Q$$

$$\text{Revenue curve is given as } Q (1,800 - 2.5Q)$$

$$R = 1,800Q - 2.5Q^2$$

$$\therefore \text{Marginal Revenue function (MR)} = \frac{dR}{dQ} = 1,800 - 5Q$$

- (ii). if  $g$  and  $h$  respectively represent numbers of units of products G and H, then the

$$\text{direct/labour constraint is } 2.8g + 1.5h \leq 1,800$$

$$\text{Machine line constraint is } 0.75g + 3h \leq 10,000$$

$$\text{Constraint for sales demand for product G is } g \leq 4,150$$

$$\text{Constraint for sales demand for product H is } h \leq 3,175$$

$$\text{Non-negativity constraints are } g \geq 0 \text{ and } h \geq 0$$

## Marking Guide

	Marks	Marks
a.		
Correct substitution into the compound interest formula [i.e. $120,600 = 100,000(1 + r)^5$ ]	1	
Correct simplification [i.e. $(1 + r)^5 = 1.206$ ]	2	
Correct expression for $\log_{10} (1 + r)^5 = \log_{10} 1.206$ [i.e. $5\log_{10} (1 + r) = \log_{10} 1.206$ ]	1	
Correct $\log_{10}$ of 1.206 (i.e. 0.081347)	1	
Correct expression for $\log_{10}(1 + r) = 0.0163$	1	
Correct anti-log of 0.0163 (i.e. 1.0382)	1	
Correct expression for $(1 + r) = 1.0382$	1	
Correct answer for r (i.e. $r = 0.0382$ )	1	
Correct compound interest rate (i.e. 3.82%)	1	
	<hr/>	10
b.i.		
Correct formula for demand curve (i.e. $p = a - bQ$ )	1	
Correct number of increases before demand falls to zero (i.e. $\frac{400}{16} = 25$ )	$\frac{1}{2}$	
Correct cost of 25 increases (i.e. $25 \times \text{N}40 = \text{N}1000$ )	1	
Correct price at which demand would be zero (i.e. $\text{N}800 + \text{N}1,000 = \text{N}1,800 = a$ )	1	
Correct value for b (i.e. $b = \frac{400}{16} = \text{N}2.50$ )	$\frac{1}{2}$	
Correct demand curve (i.e. $P = 1,800 - 2.5Q$ )	$\frac{1}{2}$	
Correct expression for revenue curve [i.e. $R = PQ = (1,800 - 2.5Q)Q$ ]	$\frac{1}{2}$	
Correct revenue curve (i.e. $R = 1,800Q - 2.5Q^2$ )	$\frac{1}{2}$	
Correct marginal revenue function (i.e. $MR = 1,800 - 5Q$ )	$\frac{1}{2}$	
	<hr/>	6
<b>ALITER</b>		
b.i.		
Correct formula for price function using equation of line (i.e. $p - p_1 = m(Q - Q_1)$ )	1	
Correct expression for $p_2$ (i.e. $800 + 40 = 840$ )	$\frac{1}{2}$	
Correct expression for $Q_2$ (i.e. $400 - 16 = 384$ )	$\frac{1}{2}$	
Correct calculation of slope (i.e. $m = -\frac{5}{2}$ )	1	
Correct substitution into price formula (i.e. $p - 800 = -\frac{5}{2}Q - 400$ )	$\frac{1}{2}$	
Correct simplification	$\frac{1}{2}$	
Correct demand/price functions (i.e. $p = 1,800 - 2.5Q$ )	$\frac{1}{2}$	
Correct expression for revenue function [i.e. $R = PQ = (1,800 - 2.5Q)Q$ ]	$\frac{1}{2}$	
Correct revenue curve (i.e. $R = 1,800Q - 2.5Q^2$ )	$\frac{1}{2}$	
Correct marginal revenue function (i.e. $MR = 1,800 - 5Q$ )	$\frac{1}{2}$	
	<hr/>	6
b.ii.		
Correct Direct Labour constraint (i.e. $2.5g + 1.5h \leq 18,000$ )	1	
Correct machine hour constraint (i.e. $0.75g + 3h \leq 10,000$ )	1	
Correct sales demand for product g constraint (i.e. $g \leq 4,150$ )	$\frac{1}{2}$	
Correct sales demand for product h constraint (i.e. $h \leq 3,175$ )	$\frac{1}{2}$	
Correct non-negativity constraint for g (i.e. $g \geq 0$ )	$\frac{1}{2}$	
Correct non-negativity constraint for h (i.e. $h \geq 0$ )	$\frac{1}{2}$	
	<hr/>	4
Total		<hr/> <hr/> 20

## EXAMINER'S REPORT

This question tests candidates' understanding of (a) compound interest analysis and (b) derivation of (i) marginal revenue function from total revenue function and (ii) constraint functions associated with specified business activity

About 60 percent of the candidates attempted the question and performance was fair.

Some of the candidates had no clue to the solution to Part (b)(i) of the question as presented above and hence they didn't attempt it.

Candidates' are advised to be familiar with the requirements of questions so that they can be guided in their choice of questions as partial solution attempts of questions can lead to loss of marks and poor examination performance as it was the case in this question

### SOLUTION 3

a.

Year	$x$	$y$	$x^2$	$xy$
2000	0	600	0	0
2001	1	610	1	610
2002	2	580	4	1160
2003	3	590	9	1770
2004	4	480	16	1920
2005	5	560	25	2800
2006	6	550	36	3300
2007	7	620	49	4340
2008	8	490	64	3920
2009	9	530	81	4770
	45	5610	285	24590

Let the regression model be  $y = a + bx$

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2} = \frac{10(24,590) - (45)(5,610)}{10(285) - (45)^2}$$

$$= \frac{24,590 - 252,450}{2,850 - 2025}$$

$$= \frac{-6,550}{825}$$

$$= -7.94$$

$$a = \bar{y} - b\bar{x} = 56 - (-7.94)(4.5) = 596.73$$

$$\therefore y = 596.73 - 7.94x$$

b. (i) In 2012,  $x = 12$  and  $y = 596.73 - 7.94(12) = 501.45$

i.e  $y = \text{N}501,450$

(ii) In 2016,  $x = 16$  and  $y = 596.73 - 7.94(16) = 469.69$

i.e = ~~N~~469,690

## Marking Guide

	Marks	Marks
a. Correct x column (setting year 2000 to zero)	1	
Correct $\sum x$ (i.e. 45)	$\frac{1}{2}$	
Correct $\sum y$ (i.e. 5,610)	1	
Correct $x^2$ column ( $-\frac{1}{2}$ for each error)	1	
Correct $\sum x^2$ (i.e. 285)	1	
Correct $xy$ column ( $-\frac{1}{2}$ for each error)	$3\frac{1}{2}$	
Correct $\sum xy$ (i.e. 24,590)	1	
Correct substitution into b formula	1	
Correct simplification	$\frac{1}{2}$	
Correct further simplification (i.e. $\frac{-6,550}{825}$ )	$\frac{1}{2}$	
Correct answer for b (i.e. $-7.94$ )	1	
Correct substitution into a formula	1	
Correct answer for a (i.e. 596.73)	1	
Correct least squares line (i.e. $y = 596.73 - 7.94x$ )	1	
	<hr/>	15
b.i. Correct value for $x$ in year 2012 (i.e. $x = 12$ )	$\frac{1}{2}$	
Correct substitution in the least squares line	$\frac{1}{2}$	
Correct value of $y$ (i.e. $y = 501.45$ )	1	
Correct expenditure for year 2012 (i.e. ₦501,450)	$\frac{1}{2}$	
	<hr/>	$2\frac{1}{2}$
ii. Correct value of $x$ in year 2016 (i.e. $x = 16$ )	$\frac{1}{2}$	
Correct substitution in the least squares line	$\frac{1}{2}$	
Correct value of $y$ (i.e. $y = 469.69$ )	1	
Correct expenditure for year 2016 (i.e. ₦469,690)	$\frac{1}{2}$	
	<hr/>	$2\frac{1}{2}$
Total		<hr/> <u>20</u>

## EXAMINER'S REPORT

The question tests candidates' skills in the fitting of least squares line for a given data and in the use of such fitted line for prediction or forecasting.

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

## SOLUTION 4

(a)

- (i) 12 games – WL WL WL WL WL WL  
14 games – WL WL WL WLWL WL WL

(ii) Expected returns

For 12 games

$$(0.6 \times 1800 \times 6) - (0.4 \times 2300 \times 6) = \text{N}960$$

For 14 games

$$(0.6 \times 1800 \times 7) - (0.4 \times 2300 \times 7) = \text{N}1,200$$

- (iii) The gambler should not play less than 14 games because that is when he/she can make some gain.

- b. (i) - This obeys the Geometric Mean property.  
 $\therefore$  Its value at the end of 5 years  
 $= \text{N}10,000 \times 1.08 \times 1.25 \times 1.35 \times 1.43 \times 1.22$   
 $= \text{N}31,795,335$

- The average growth rate over the 5-year period

$$= \sqrt[5]{\frac{31,795,335}{10,000,000}}$$

$$= (3.1795335)^{\frac{1}{5}}$$

$$= 1.26$$

- . The average growth rate over the 5 – year period is 26%.

(ii) The initial feasible tableau using the least cost method

						Supply
Factory A	4 -	7 -	5 -	3 50	2 650	700 50 0
Factory B	3 400	6 -	7 450	5 -	4 -	850 450 0
Factory C	7 -	3 550	6 50	4 650	5 -	1250 700 0
Demand	400 0	550 0	500 450 0	700 650 0	650 0	2800

## Marking Guide

	Marks	Marks
a.i. Correct sample space for 12 games	1	
Correct sample game for 14 games	1	
	<hr/>	2
ii. Correct expected gain for 12 games (i.e. $\text{N}0.6 \times 1,800 \times 6$ )	1	
Correct expected loss for 12 games (i.e. $\text{N}0.4 \times 2,300 \times 6$ )	1	
Correct expected returns for 12 games (i.e. $\text{N}6,480 - \text{N}5,520 = \text{N}960$ )	1	
Correct expected gain for 14 games (i.e. $\text{N}0.6 \times 1,800 \times 7$ )	1	
Correct expected loss for 14 games (i.e. $\text{N}0.4 \times 2,300 \times 7$ )	1	
Correct expected returns for 14 games (i.e. $\text{N}7,560 - \text{N}6,440 = \text{N}1,120$ )	1	
	<hr/>	6
iii. Correct advice (i.e. not to play less than 14 games)	1	
Correct reason (point of making some gains)	1	
	<hr/>	2
b.i. • Correct annual increase rate for years 1, 2, 3, 4, and 5 respectively (i.e. 1.08, 1.25, 1.35, 1.43, 1.22) [ $\frac{1}{2}$ mark each]	$2\frac{1}{2}$	
Correct estimated value at the end of year 5 (i.e. $\text{N}31,795,335$ )	$\frac{1}{2}$	
	<hr/>	3
• Correct expression for average growth rate over 5-year period		
i.e. $\sqrt[5]{\frac{31,795,335}{10,000,000}}$	$\frac{1}{2}$	
Correct simplification [i.e. $(3.1795335)^{\frac{1}{5}}$ ]	$\frac{1}{2}$	
Correct answer (i.e. 1.26)	1	
Correct average growth rate over 5-year period (i.e. 26%)	1	
	<hr/>	3
ALITER		
b.i. • Correct value of the house at the end of year 1 (i.e. 10,800,000)	$\frac{1}{2}$	
Correct value of the house at the end of year 2 (i.e. 13,500,000)	$\frac{1}{2}$	
Correct value of the house at the end of year 3 (i.e. 18,225,000)	$\frac{1}{2}$	
Correct value of the house at the end of year 4 (i.e. 26,061,750)	$\frac{1}{2}$	
Correct value of the house at the end of year 5 (i.e. 31,795,335)	1	
	<hr/>	3
• Correct substitution of the annual growth rate for years 1, 2, 3, 4, and 5 into the geometric mean formula	$\frac{1}{2}$	
Correct simplification (i.e. $\sqrt[5]{3.1795335}$ )	$\frac{1}{2}$	
Correct answer (i.e. 1.260)	1	
Correct average growth rate over 5-year period (i.e. 26%)	1	
	<hr/>	3



b.ii.	Correct allocation of 650 against the transportation cost of 2 along Factory A row	1	
	Correct allocation of 50 against the transportation cost of 3 along Factory A row	$\frac{1}{2}$	
	Correct allocation of 400 against the transportation cost of 3 along Factory B row	$\frac{1}{2}$	
	Correct allocation of 450 against the transportation cost of 7 along Factory B row	$\frac{1}{2}$	
	Correct allocation of 550 against the transportation cost of 3 along Factory C row	$\frac{1}{2}$	
	Correct allocation of 50 against the transportation cost of 6 along Factory C row	$\frac{1}{2}$	
	Correct allocation of 650 against the transportation of 4 along Factory C row	$\frac{1}{2}$	
		<hr/>	4
	Total		<hr/> <hr/> 20

#### EXAMINER'S REPORT

The question tests candidates' understanding of probability analysis, expected value/returns computations in game situation and identification of feasible solution in transportation problem using the least cost method.

About 40% of the candidates attempted the question and performance was poor.

There is virtually no part of the question where candidates who attempted it demonstrated more than a fair understanding of the requirements of the question. This seems to suggest that candidates failed to pay adequate attention to the topics covered by this question.

Candidates are, therefore, advised to read widely and ensure that they attach adequate attention to every area of the syllabus when preparing for future examinations.

## SOLUTION 5

a. (i)  $C(q) = \int [3q^2 - 40q + 600] dq = q^3 - 20q^2 + 600q + k$

When  $q = 2$ , then  $q(2) = 1.1600 = 8 - 80 + 1200 + k$

$\therefore k = 53291$

**i.e.**  $C(q) = q^3 - 20q^2 + 600q + 532$ .

(ii)  $C(50) = 50^3 - 20(50^2) + 600(50) + 532$ .

$= 125000 - 50000 + 30000 + 532$

$= \text{N}105,532$

b. (i) 3012 grams is below the mean  $\Rightarrow Z = \frac{x - \mu}{\sigma}$

$$= \frac{3012 - 3020}{4}$$

$$= -2$$

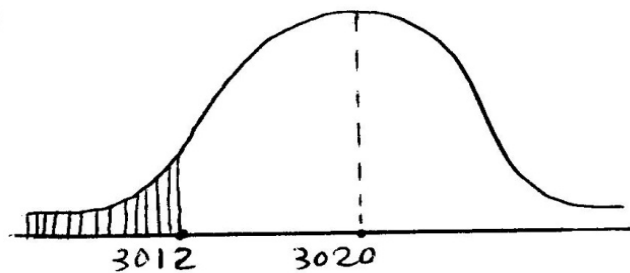
That is, 3012 grams is 2 **standard deviations** below the **mean** (fig b(i))

$\therefore$  From the table,  $Z = 2$  gives 0.4772 or 47.72% of the distribution to be within two **standard deviations** below the **mean**

$\therefore P(Z < -2) = 0.5 - 0.4772 = 0.0228$

$\therefore$  The probability of a bag of Pando yam being less than 3012 grams is **0.0228**

b(i)



(ii) - 3012 grams is below the **mean**:

$$Z = \frac{x - \mu}{\sigma} = \frac{3012 - 3020}{4} = -2$$

- 3021.6 grams is above the **mean**

$$Z = \frac{3021.6 - 3020}{4} = +\frac{1.6}{4} = 0.4$$

We are interested in the area of the normal curve between 2 **standard deviations** below the **mean** and 0.4 **standard deviation** above the **man**.

(fig b(ii))

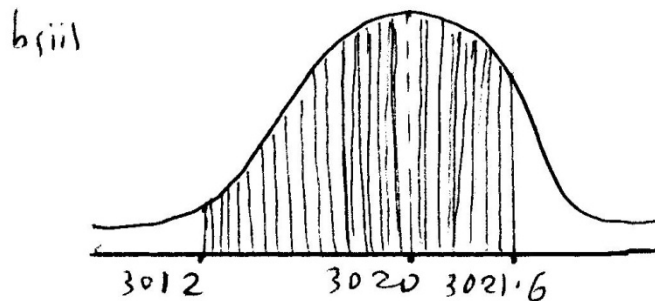
∴ From the table

$Z = -2$  (below the **mean**), probability = 0.4772

$Z = 0.4$  (above the **mean**), probability = 0.1554

This gives the total probability as **0.6326**

That is , there is a 0.6326 or 63.23% chance that a bag of Pando yam picked at random will lie between 3012 grams and 3021.6 grams.



## Marking Guide

	Marks	Marks
a.i. Correct expression for total cost function		
i.e. $c(q) = \int (3q^2 - 40q + 600) dq$	1	
Correct integration i.e. $c(q) = q^3 - 20q^2 + 600q + k$	2	
( ½ mark for each term)	1	
For $C(2) = 1,660$	1	
Correct substitution of $q=2$ and $C(2) = 1,660$ into $C(q)$	1	
Correct value of $k$ (i.e. $k = 532$ )	1	
Correct total cost function [i.e. $C(q) = q^3 - 20q^2 + 600q + 50$ ]	1	
	<hr/>	7
ii. Correct substitution of $q = 50$ into $C(q)$		
i.e. $c(50) = 50^3 - 20(50)^2 + 600(50) + 532$	1	
Correct simplification of $C(50)$		
(i.e. $125,000 - 50,000 + 30,000 + 532$ )	1	
Correct answer (i.e. N105,532)	1	
	<hr/>	3

b.i.	Correct substitution into $z$ formula (i.e. $z = \frac{3,012 - 3,020}{4}$ )	1	
	Correct value of $z$ (i.e. $z = -2$ )	$\frac{1}{2}$	
	Correct normal distribution diagram with required area shaded (i.e. $z < -2$ )	$\frac{1}{2}$	
	Correct value of $z = 2$ from standard normal distribution table (i.e. 0.4772)	1	
	Correct probability of $z < -2$ [i.e. $p(z < -2) = 0.0288$ ]	1	
		<hr/>	4
ii.	Correct substitution into $z$ formula (i.e. $z = \frac{3,012 - 3,020}{4}$ )	$\frac{1}{2}$	
	Correct value of $z$ (i.e. $z = -2$ )	$\frac{1}{2}$	
	Correct substitution into $z$ formula (i.e. $z = \frac{3,021.6 - 3,020}{4}$ )	$\frac{1}{2}$	
	Correct value of $z$ (i.e. $z = 0.4$ )	$\frac{1}{2}$	
	Correct normal distribution diagram with required area shaded (i.e. $-2 < z < 0.4$ )	1	
	Correct value of $z = 2$ from standard normal distribution table (i.e. 0.4772)	1	
	Correct value of $z = 0.4$ from standard normal distribution table (i.e. 0.1554)	1	
	Correct probability of $-2 < z < 0.4$ [i.e. $p(-2 < z < 0.4) = 0.6326$ ]	1	
		<hr/>	6
	Total		<hr/> <hr/> 20

## EXAMINER'S REPORT

This question tests candidates' ability to:

- Derive firm's total cost relations from its marginal cost relations using the calculus concept of integration; and
- Use the normal distribution analysis for probability computations.

About 65 percent of the candidates attempted the question and performance was fair. Some candidates were unable to derive the required total cost function from the given marginal cost function using the concept of integration as done in the suggested solution above, a failure that translated into substantial loss of marks in Part (a) of the question.

## SOLUTION 6

a.

C <sub>1</sub> Quarter	C <sub>2</sub> sales	C <sub>3</sub> 4.quarter total	C <sub>4</sub> moving average (= $c_3 \div 4$ )	Centred Moving Total (C <sub>5</sub> )	Centred moving average (= $c_5 \div 2$ )
1	30				
2	34				
		142	35.5		
3	37			35.5 + 39.25 = 74.75	<u>37.375</u>
		157	39.25		
4	41			82.25	41.125
		172	43		
5	45			90.25	45.125
		189	47.25		
6	49			98.50	49.250
		205	51.25		
7	54			106.00	53.000
		219	54.75		
8	57			113.75	56.875
		236	59		
9	59			122.00	61.000
		252	63		
10	66			130.25	65.125
		269	67.25		
11	70				
12	74				

- (i). moving averages are shown in column 4
- (ii). the centered moving average for Quarter 3 is 37.375

## ALITER

Year $C_1$	Quarter $C_2$	Sales $C_3$	4 Quarter moving Totals $C_4$	(2 x 4) Quarter Moving Totals $C_5$	Centre 4 – Quarter moving average ( $C_6 = C_5 \div 8$ )
1	1	30	-	-	
	2	34		-	
			142		
	3	37		299	37.375
			157		
	4	41		329	41.125
			172		
2	1	45		361	45.125
			189		
	2	49		394	49.250
			205		
	3	54		424	53.000
			219		
	4	57		455	56.875
			236		
3	1	59		488	61.000
			252		
	2	66		525	65.125
			269		
	3	70		-	-
			-		
	4	74		-	-

The centred moving average for Quarter 3, Year 1 is **37.375**

Variation	Q <sub>1</sub>	Q <sub>2</sub>	Q <sub>3</sub>	Q <sub>4</sub>	Total
Year 1			-0.375	-0.125	
Year 2	-0.125	-0.250	1.000	0.125	
Year 3	-2.000	0.875			
Average Adjustment	-1.063	0.313	0.313	0.0	-0.437
	0.10925	0.10925	0.10925	0.10925	0.437
Seasonal adjustment	-0.95375	0.42225	0.42225	0.10925	0

a. life (in months(x)      probability of failure(p)      px

1	0.27	0.27
2	0.56	1.12
3	0.17	0.51

Life span = 1.90

- Average number of bulbs replaced =  $\frac{760}{1.9} = 400$

- Average monthly cost =  $400 \times \text{N}60 = \text{N}24,000$

### Marking Guide

	Marks	Marks
a.i. Correct 4-quarter moving total column with correct placement ( -½ for each error)	3	
Correct 4-quarter moving average column with correct placement ( -½ for each error)	3	
Correct centred moving average i.e. Trend column with correct placement ( -½ for each error)	3	
	<u>3</u>	

9

**ALITER**

Correct 4-quarter moving total column with correct placement ( -½ for each error)		3	
Correct 2 x 4 quarter moving average column with correct placement ( -½ for each error)		3	
Correct centred 4 <sup>th</sup> quarter moving average i.e. Trend column with correct placement ( -½ for each error)		3	9
ii. Correct value for the centred moving average for quarter 3 (i.e. 37.375)			1
b.i. Correct arrangement of variations		1	
Correct average of variations in Q <sub>1</sub> , Q <sub>2</sub> , Q <sub>3</sub> and Q <sub>4</sub> (i.e. – 1.063, 0.313, 0.313, 0.0) [ ½ mark each]		2	
Correct sum of averages over the 4 quarters i.e. -0.437		½	
Correct adjustment for each quarter i.e. $\frac{0.437}{4} = 0.10925$		1	
Correct sum of adjustments over the 4 quarters i.e. 0.437		½	
Correct seasonal adjustment which is computed by adding the average for each quarter to the adjustment for each quarter (i.e. -0.95375, 0.42225, 0.42225, 0.10925)		1	6
ii. • Correct $p.x$ for month 1 (i.e. 0.27)		½	
Correct $p.x$ for month 2 (i.e. 1.12)		½	
Correct $p.x$ for month 3 (i.e. 0.51)		½	
Correct average life span (i.e. $\sum px = 1.90$ )		½	2
• Correct expression for average number of bulbs replaced (i.e. $\frac{760}{1.9}$ )		½	
Correct answer (i.e. 400)		½	1
• Correct expression for average monthly cost of replacing the bulbs (i.e. 400 x 60)		½	
Correct answer (i.e. ₦24,000)		½	
		1	
Total			<u>20</u>

**EXAMINER'S REPORT**

This question tests candidates' skills in the computation of:

- Trend values from quarterly business data; and
- Seasonal adjustment for quarterly data

It also tests candidates' understanding of replacement analysis.

About 68% of the candidates attempted the question and performance was good



THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA  
**FOUNDATION LEVEL EXAMINATION – MAY 2016**

**BUSINESS AND FINANCE**

**Time Allowed: 3 hours**

**SECTION A:                      MULTIPLE –CHOICE QUESTIONS    (20 Marks)**

**INSTRUCTIONS:        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 entity that does not have any strategic ambition to gain a position in the larger market environment is called ..... Strategy
  - A.     Leader
  - B.     Challenger
  - C.     Follower
  - D.     Sole Trader
  - E.     Nicher
  
2.     “Organisation structure” is the framework wherein the activities of people within the organisation are co-ordinated and managed. The following are common forms of business organisation structures **EXCEPT**
  - A.     Entrepreneurial structure
  - B.     Functional structure
  - C.     Divisional structure
  - D.     Matrix structure
  - E.     Boundary structure
  
3.     The following are **TRUE** about Not-For-Profit Organisations **EXCEPT**
  - A.     They exist for purposes other than making profit
  - B.     They operate within the funding and cash available
  - C.     They are wholly or partly funded from non-government sources
  - D.     The operating surplus is retained for the organisation
  - E.     They will aim to operate at a surplus
  
4.     Which of the following is **NOT** a Non-Governmental Organisation?
  - A.     Women in Management and Business
  - B.     University of Lagos
  - C.     Access to Education for Children
  - D.     Action Aid International Nigeria
  - E.     Lagos Digital Village

5. It is often assumed that the main objective of a company should be to maximise the wealth of its shareholders, Johnson, Scholes and Whittington state that the objective of an entity should be to .....
- Fulfil 'stakeholder' expectations
  - Fulfil 'stakeholder' values
  - Fulfil 'shareholder' expectations
  - Fulfil 'government' expectations
  - Fulfil 'stakeholder' thinking
6. Unemployment that results from a 'slump' in the economy can be described as
- Frictional unemployment
  - Seasonal unemployment
  - Residual unemployment
  - Cyclical unemployment
  - Recessional unemployment
7. The aim of market skimming is to .....
- Build customer demand
  - Offer an attractive price
  - Increase sales volume
  - Maximise the gross profit per unit sold
  - Penetrate the market
8. The following are sources of short-term funds, **EXCEPT**
- Bank Overdraft
  - Trade Payables
  - Operating Leases
  - Lease Finance
  - Debt Factoring

9. ABC Limited is considering investing in a project with the following financial data.

Year	£
0	(350,000)
Profit before depreciation:	
1	200,000
2	195,000
3	90,000
4	75,000

The project life span is **FOUR** years and has no residual value at the end of the **FOUR** years. Calculate the ARR.

- 25%
- 30%
- 32%
- 33%
- 35%

10. Which of the following is **NOT** part of Porters' Model of Strategic Management?
- A. The Strategic goal for a company should be to achieve a superior long-term return on investment
  - B. Strategy must offer a unique value proposition for the customer
  - C. There should also be a distinctive value chain
  - D. The selected strategy will not involve some trade-offs
  - E. There should be continuity of strategic direction
11. Which of the following is **NOT** a source of financing?
- A. Bank overdrafts
  - B. Short-term bank loans
  - C. Suppliers
  - D. Proceeds of disposal of fixed assets
  - E. Operating leases
12. Which of the following is **NOT** a function of a stock exchange?
- A. Provide a system in which shares can be traded in a regulated manner
  - B. Enforce rules of business conduct on market participants
  - C. Ensure availability of shares and bonds to be traded by investors
  - D. Ensure that there is an efficient system for providing new financial information about companies to investors in the market
  - E. Provide a system for recording information about the prices at which shares are bought and sold and making them available to participants
13. It is usual for accountants to associate public interest with the following matters **EXCEPT**
- A. Detecting and reporting any serious misdemeanour or crime
  - B. Protecting health and public safety
  - C. Preventing the public from being misled by a statement or action of an individual or an organisation
  - D. Protecting health and personal safety
  - E. Revealing the existence of any conflict of interests of those individuals who are in a position of power or influence
14. The general public might consider that it has a stake or interest in major companies, because the actions of these companies can affect society as a whole. Areas of public concern may include any of the following **EXCEPT**
- A. Public health, especially in the case of food manufacturers and manufacturers of drugs and medicines
  - B. Protection of the environment, reducing pollution, and creating 'sustainable businesses'
  - C. Corruption in business practices
  - D. The exploitation of the consumer through misleading descriptions of goods
  - E. Excess profit made by these companies

15. A role of management in building a team is to provide ..... to teams and workgroups, so that the team can be successful.
- A. Supervision
  - B. Coordination
  - C. Leadership
  - D. Control
  - E. Motivate
16. In work places, as in all aspects of living, people must communicate. What are the **TWO** ways of exchanging information?
- A. Formal and informal communication
  - B. Telephone and fax messages
  - C. Television and newspapers
  - D. Television and print media
  - E. Email messages and mobile phones
17. An example of informal communication is
- A. Grapevine
  - B. Buzz
  - C. Pipeline
  - D. Noise
  - E. Uproar
18. 'Leadership motivates the people to work and not the power of money'. This concept is related to the
- A. Autocratic model
  - B. Custodial model
  - C. Supportive model
  - D. Collegial model
  - E. Collective bargaining
19. Which of the following is most likely to be a result of competition?
- A. Development of new products
  - B. Reduction in product quality
  - C. High prices
  - D. More monopolies
  - E. Market regulation
20. Job satisfaction ..... relates to absenteeism and labour turnover
- A. Positively
  - B. Negatively
  - C. Directly
  - D. Elastically
  - E. Indirectly

**SECTION B: OPEN-ENDED QUESTIONS**

**(80 MARKS)**

**INSTRUCTION: ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION**

**QUESTION 1**

Financial management is about planning and controlling the financial affairs of an organisation, to ensure that it achieves its objectives, particularly financial objectives.

- a. Explain the meaning of financial engineering in the light of the above. (5 Marks)
  - b. State and explain briefly **THREE** main financial objectives of an organisation. (15 Marks)
- (Total 20 Marks)**

**QUESTION 2**

- a. Businesses need to establish a strategy for achieving and subsequently sustaining competitive advantage.

**You are required to:**

Define and explain briefly the types of competitive advantage.

(5 Marks)

- b. Porter's generic strategies for competitive advantage, has suggested three strategies for sustaining competitive advantage over rival firms and their products or services.

**You are required to:**

Identify and explain these **THREE** strategies.

(15 Marks)

**(Total 20 Marks)**

### QUESTION 3

- a. Professional Accountants and Managers' attitude to ethics and ethical issues are based on their backgrounds, experiences, culture, religion and individual values.

Explain the **FIVE** fundamental principles of professional ethics established in the ICAN Code of Conduct and Guide for members. (10 Marks)

- b. Explain the concepts:

- i. Social ecology
- ii. Ecological footprint
- iii. Sustainable development
- iv. Social footprint

(10 Marks)

**(Total 20 Marks)**

### QUESTION 4

- a. National income, gross national product and gross domestic product are all measures of total economic activity for a particular country during a given time period, usually one year.

**Required:**

Identify and explain **TWO** broad approaches to the measurement of total economic activity during a given time period. (5 Marks)

- b. The terms "Demand and Supply" refer to the behaviour of people as they interact with **ONE** another in the markets.

**Required:**

Explain the terms

- i. Demand
- ii. Supply
- iii. Market Pricing Mechanism

(15 Marks)

**(Total 20 Marks)**

### QUESTION 5

- a. A workgroup is a group of employees who act with a common purpose and a sense of identity.

**Required:**

List and explain briefly **TWO** types of workgroups. (5 Marks)

- b. Bruce Tuckman (1965) provided an analysis of how small teams develop and change character over time. The appropriate form of team leadership changes as the team goes through each new stage of development.

**Required:**

List and explain briefly **FIVE** stages of team development. (15 Marks)

**(Total 20 Marks)**

### QUESTION 6

- a. List **FIVE** disadvantages of accounting rate of return. (5 Marks)

- b. Gidado Nigeria Limited is considering **TWO** mutually exclusive projects with the following project data:

	<b>Project A</b>	<b>Project B</b>
	<b>₦</b>	<b>₦</b>
Year 0	(40,000)	(140,000)
1	24,000	74,000
2	16,000	56,000
3	15,000	55,000

The company's cost of capital is 16%.

You are required to advise Gidado on the better project to accept using the NPV and IRR methods. (15 Marks)

**(Total 20 Marks)**

## MULTIPLE CHOICE SOLUTIONS

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

### Solution to MCQ Question 9

$$\text{Average Rate of Return (ARR)} = \frac{\text{Average profit}}{\text{Average investments}} \times 100\%$$

$$\begin{aligned}\text{Profit for the period after depreciation} &= (200,000 + 195,000 + 90,000 + 75,000 - 350,000)/4 \\ &= \underline{\underline{52,500}}\end{aligned}$$

$$\begin{aligned}\text{Average investment} &= (\text{initial investment} + \text{residual value})/2 \\ &= (350,000 + 0)/2 \\ &= \underline{\underline{175,000}}\end{aligned}$$

$$\begin{aligned}\text{ARR} &= \frac{52,500}{175,000} \times 100\% \\ &= \underline{\underline{30\%}}\end{aligned}$$



## EXAMINER'S REPORT

Section A tests all the areas of business and finance concepts and principles.

The performance of the candidates that took the paper was average. The major pitfall was that the candidates displayed inadequate knowledge of basic business concepts and principles.

Candidates are advised to cover the syllabus for better performance in subsequent examinations.

### SECTION B: ESSAY QUESTIONS

#### SOLUTION: QUESTION 1

(a) **Meaning of Financial Engineering**

Financial engineering involves the use of mathematical techniques to solve financial problems. It involves the use of tools and knowledge drawn from the fields of statistics, economics, computer science and applied mathematics to address current financial issues and devise new and innovative financial products.

Financial engineering is sometimes referred to as quantitative analysis and is primarily used by investment banks, insurance agencies, hedge funds and commercial banks.

Financial engineering can also be used to refer to strategies adopted by companies to maximise profits or other metrics through:

- i. Derivatives that address unusual risks faced by a party in a transaction;
- ii. Instructing a purchase or sale in a way that better addresses the interests of the buyer or seller.
- iii. Using new methods to compute the fair value of new or existing financial instruments.

(b) The financial objective of an organisation can be expressed in a number of different ways, and each of them has its advantages and weaknesses or limitations with each of them. Three commonly-used financial objectives are to maximise:

- Shareholder wealth
- Profits
- Growth in earnings per share.

i. **Maximising shareholder wealth**

The overall objective of a company might be stated as maximising the wealth of its owners. Shareholders' wealth is increased by dividend payments and a higher share price. Corporate strategies are therefore desirable if they result in higher dividends, a higher share price, or both.

There are some problems with assuming that the financial objective of a company should be shareholders wealth maximisation. The considerations here include:

- Setting the time period for wealth maximisation.
- Measuring the wealth creation and dividing the wealth created into the portion for dividend payments and share price growth.

- Consideration of share prices which are often affected by general stock market sentiment, and short-term increases or falls in a share price might be caused by investor attitudes rather than any real success or failing of the company itself.

The objective of maximising shareholder wealth is generally accepted as a sound basis for financial planning, but is not practical in terms of actually setting financial performance targets and measuring actual performance against the target. Other financial objectives might therefore be used instead, in the expectation that if these objectives are achieved, shareholder wealth will be increased by an optimal amount.

## ii. **Maximising profits**

A company might express its main financial objectives in terms of profit maximisation and targets can be set for profit growth over a strategic planning period, as profit after tax is what is distributable to the company's owners.

Profit growth objectives have the advantage of simplicity. When a company states that its aim is to increase profits by 20% per year for the next three years, the intention is quite clear and easily understood – by managers, investors and others.

The main problem with an objective of maximising profits is to decide the time period over which profit performance should be measured.

- Short-term profits might be increased only by taking action that will have a harmful effect on profits in the longer term. For example, a company might avoid replacing ageing equipment in order to avoid higher depreciation and interest charges, or might avoid investing in new projects if they will make losses initially – regardless of how profitable they might be in the longer term.
- It is often necessary to invest now to improve profits over the longer term. Innovation and taking business risks are often essential for long-term success. However, longer-term success is usually only achieved by making some sacrifices in the short term.

In practice, managers often focus on short-term profitability, and give insufficient thought to the longer term because:

- Their remuneration might depend on meeting annual performance targets. Annual cash bonuses, for example, might be dependent on making a specified minimum amount of profit for the year.
- Managers often do not expect to remain in the same job for more than a few years; therefore short-term achievements might mean more to them than longer-term benefits after they have moved on to a different position or job.
- Profits can be increased by raising and investing more capital. When share capital is increased, total profits might increase due to the bigger investment, but the profit per share might fall. This is why a company's financial objective might be expressed in terms of profit per share or growth in profit per share.

## iii. **Maximising growth in earnings per share**

The most common measure of profit per share is earnings per share (EPS). The financial objective might be to increase the earnings per share each year and possibly to grow EPS by a target amount each year for the next few years. If there is growth in EPS, there

will be more profits to pay out in dividends per share, or there will be more retained profits to reinvest with the intention of increasing earnings per share even more in the future. EPS growth should therefore result in growth in shareholder wealth over the long term.

However, there are some problems with using EPS growth as a financial objective. 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. 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. However, 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.

### Marking Guide

		Marks
(a)	i. Description of the term attracts	2
	ii. Further detailed explanation of the meaning and what it entails	<u>3</u> <u>5</u>
(b)	i. Stating the three main financial objectives properly attracts 2 marks each	6
	ii. Detailed explanation of each of the three main financial objectives attracts 3 marks each	<u>9</u>
Total		<u>20</u>

### EXAMINER'S REPORT

This question tests the ability of candidates on their understanding of the basics of financial engineering and financial objectives of an organisation.

About half of the candidates that attempted this question scored average marks.

Many of the candidates could not clearly explain the features of the three main financial objectives of an organisation.

Candidates are therefore advised to read and have a good understanding of this aspect of the syllabus.

## SOLUTION 2

- (a) Competitive advantage is the ability of an entity to do something which other organisations cannot do, or doing something far better than other organisations. It means offering something better to customers than competitors. Competitive advantage gives organisations superior performance in the market place. Having some competitive advantage over rival firms is essential. Without it, there is no reason why customers should buy the company's product instead of the products of a competitor. Essentially, competitive advantage arises from customers' perception of value for money being offered through the product/service on sale.

Types of competitive advantage include the following:-

1. Cost Competitive advantage;
2. Product;
3. Niche; and
4. Sustainable competitive advantages

**Cost Competitive advantage** is when a company is able to utilize its skilled workforce, inexpensive raw materials, controlled costs, and efficient operations to create maximum value to consumers. Walmart uses the cost advantage strategy by providing a very large selection and low prices via its retailer strength and size. Costs can be kept at a minimum in many different ways. Some companies like Nissan, have years of experience producing cars in a very cost-effective manner. Other companies use offshore manufacturing to keep the costs of their products down. The current trend is for companies to cut down on the extras they offer to customers

Companies can also use product design and reengineering to create efficient cost-effective products. Product design is important to companies that use cutting-edge technology. Intel is able to keep microchip processor prices down by continually improving product design that utilizes advancements in the field.

### **Product/Service Differentiation**

Another way that companies can have competitive advantage in the marketplace is through product/service differentiation. If a company's product or service has a valuable offering for its customers, then loyalty and product/service differentiation can occur. Costs competitive advantage can easily disappear with the introduction of a new competitor or new technology. If a company offers a unique product or service, it is harder to maintain an edge in the market based on price alone. The company must offer something to the customer beside just a low price.

Some companies offer excellent product reliability, such as Honda, an American-made image, such as Harley-Davidson, a valuable brand name, such as Rolex or even excellent service, such as Mercedes-Benz. For companies to excel in this area of competitive advantage, they must constantly look for ways to create new products and innovations that solve customers needs and wants.

**Niche strategy** is built around serving a particular target fully. It is an arrangement whereby an entity decides to serve a little segment of the market instead of serving a wide market area.

Instead of being a “jack of all trade and master of none”, the firm decides to concentrate its areas of operation in a little market area. This enables the firm to serve its customers in a special way far better than it could have done if serving a very broad area. The firm is also able to develop its competences in this narrow area.

A sustainable competitive advantage is a competitive advantage that is all enduring. It stands the test of time. The capability must be sustainable only if it persists over time, that is, it cannot easily be eroded by competitors. This is the test of sustainability.

A sustained or sustainable competitive advantage occurs when a firm implements a value-creating strategy that is grounded in its own unique resources, capabilities and core competencies of which other companies are unable to duplicate the benefits or find it too costly to imitate. A firm is assured of a competitive advantage only after other's efforts to duplicate its strategy have failed.

In general, the sustainability of a competitive advantage is a function of three factors namely:-

- (i) The rate of core competence obsolescence due to environmental changes.
- (ii) The availability of substitutes for the core-competence, and
- (iii) The inimitability of the core competence.

- (b) Porter's three strategies for sustaining competitive advantage over rival firms and their products or services are:
- i. Cost leadership strategy
  - ii. Differentiation strategy
  - iii. Focus strategy

**i. Cost leadership strategy**

Cost leadership means being the lowest-cost producer in the market. The least cost producer is able to compete effectively on price, by offering its products at a lower price than rival products. It can sell its products more cheaply than competitors and still make a profit. Companies with a cost leadership strategy must have excellent systems of cost control and should continually plan for further cost reductions (in order to remain the cost leader in the market). The source of their competitive advantage is low cost and they must never lose sight of this fact.

The success of a cost leadership strategy is based on offering products at the lowest price, which means that in order to make a reasonable profit the company must sell large quantities of the product. Total profits usually come from selling large volumes at a low profit margin per unit.

**ii. Differentiation strategy**

Porter defines differentiation strategy as making a product different from rival products in a way that customers can recognise. Customers might be willing to pay a higher price for the product, because they value its different features. Companies pursuing a differentiation strategy need to offer products and services that are perceived as better

or more suitable than those of their competitors. To deliver better products and services usually requires investment and innovation.

Companies with a differentiation strategy cannot ignore cost. They should keep costs under control and try to reduce costs, so that they can offer more value to customers and retain their competitive advantage. However, they are not trying to be the least-cost producers. It is more important for a successful differentiation strategy that products should give more benefits to the customer, even if this means having to spend more to deliver the product.

**iii. Focus strategy**

Focus strategy is concentrating on selling the company's product to a particular segment of the market and to a particular type of customer in a segmented market.

Cost leadership strategy and a differentiation strategy can be pursued in a market that is not segmented. Within a market segment, a company might seek competitive advantage through:

- Cost leadership within the market segment, or
- Product differentiation within the market segment.

**Marking Guide**

(a)	i. Definition and brief explanation of the term 'competitive advantage' attracts	Marks
	ii. Stating the four types of competitive advantage properly attracts ½ mark each (½mark x 4)	1
	iii. Brief explanation of the four types of competitive advantage attracts ½ mark each (½ mark x 4)	2
		<u>2</u> <u>5</u>
(b)	i. Correct identification of the three Porter's generic strategies for competitive advantage attracts 1 mark each	3
	ii. Proper and brief explanation of the three strategic attract 4 marks each	12
		<u>15</u>
	Total	<u>20</u>

**EXAMINER'S REPORT**

The question tests the ability of candidates to:

- (a) Define and explain the types of competitive advantage
- (b) Identify and explain Porter's generic strategies for competitive advantage.

Less than 50% of the total candidates that wrote this examination attempted this question suggesting that students were avoiding this aspect of the syllabus.

The performance was poor with the major pitfall being inadequate understanding of the subject matter.

Candidates are advised to cover the entire syllabus and not indulge in speculating aspects of the syllabus that could come under examination.

### **SOLUTION 3**

(a) The ICAN Code of Conduct and Guide for members requires professional accountants to comply with the following fundamental principles:

- Integrity
- Objectivity
- Professional competence and due care
- Confidentiality
- Professional behaviour
- Technical standards.

#### **Integrity**

An accountant must be honest and straightforward in his professional and business dealings. This includes a requirement for 'fair dealing' and a requirement to be truthful.

#### **Objectivity**

An accountant must not allow his professional or business judgment to be affected by:

- bias (personal prejudice)
- conflicts of interest
- undue influence from others: for accountants in business, this includes undue pressure from the employer (senior management).

Accountants should try to apply the principle of objectivity in all the work that they do.

#### **Professional competence and due care**

An accountant has a duty to maintain his professional knowledge and skills at a level that enables him to provide a competent professional service to his clients or employer. This includes a requirement to keep up to date with developments in areas of accounting that are relevant to the work that he does. Accountants should also act in accordance with relevant technical and professional standards when doing their work for clients or employer.

#### **Confidentiality**

Accountants must respect the confidentiality of information obtained in the course of his/her work. This applies to the confidentiality of information within the firm or employer's organisation, as well as to confidentiality of information about clients (for accountants in professional practice).

However, there are some circumstances when the disclosure of confidential information is permitted or even required by law. For example, a money deposit bank may be required by a law court to disclose the accounting statement of its customer, if need be, in a litigation.

### **Professional behaviour**

Accountants are required to observe relevant laws and regulations, and to avoid any actions that could discredit the accountancy profession. This requirement covers advertising by accountants, which must be truthful and must not disparage or ridicule the services provided by 'rival' firms.

### **Technical standards**

A professional accountant should perform his professional tasks in accordance with the relevant technical and professional standards. Technical and professional standards include:

- Standards issued by IFAC (such as International Standards on Auditing) or a similar national regulatory body.
- International Financial Reporting Standards (IFRSs).
- Standards and regulations of the member's professional accountancy body.
- Relevant legislations.

#### **(b) i) Social ecology**

The social ecologists are critics of the Western capitalist approach to environmentalism. Social ecologists argue that the environmental crisis has been caused by companies seeking growth, profits and economic self-interest. Nothing fundamental has changed. Companies are still trying to get bigger and more profitable, even though they use environmental ideology to express their plans and ambitions.

They argue that the environmental crisis cannot be averted without a radical change in human society. The following comments are illustrative of the thinking of social ecologists.

- Environmental problems are caused by companies that seek continued growth in size and profits.
- The structure of society and the future of the environment are closely linked.
- That most environmentalists focus wrongly, on improving technology to improve the environment, or even on restricting population size. These environmentalists are focusing on symptoms of the environmental problems, not its root causes; so they will not find any lasting solution.
- A truly 'green' entrepreneur cannot possibly survive in today's capitalist culture, because by using ecologically/environmentally sound methods, they would be at a disadvantage to more ruthless rivals who will produce at a lower cost.

#### **ii) Environmental footprint (ecological footprint)**

An environmental footprint or ecological footprint means the impact that an entity has on the environment, in terms of:

- The amount of raw materials that it uses to make its products or services, where the raw materials are subject to depletion (raw materials that can be renewed, but where the current total rate of consumption exceeds the total current rate of renewal).
- Non-renewable resources that it uses to make its products or services



- The quantity of wastes and emissions that it creates in the process.

In the past, it was accepted that in order to grow, companies (and economic activity as a whole) had to increase their environmental footprint. It has now been recognised that the world cannot go on increasing its environmental footprint.

Many leading companies are looking for ways to reduce the size of their own particular footprint and 'tread more softly'. Reducing an environmental footprint involves the development and implementation of policies for:

- Better (more efficient) resource management, and using different resources
- 'Green' procurement policies
- Waste minimisation and waste management (for example, policies on reducing pollution and recycling waste).

### iii) **Sustainable development**

A problem with accounting for sustainable development is to identify what 'sustainable development' actually means. A generally-accepted definition provided by the Brundtland Report (for the World Commission on Environment and Development, 1987) is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

However, there are practical difficulties with this definition which includes:

- Identifying the needs of the present: These are more than simply survival needs, because current levels of consumption are, in many parts of the world, well above survival level.
- Identifying the needs of future generations: Are these just survival needs? If so, there is presumably an assumption that economic wealth will decline.
- Identifying over what time period should the needs of future generations be measured: In theory, future needs should be measured into the long-term future. However, companies and governments plan for the future over much shorter time frames.
- Identifying the needs of all people in all societies. How is sustainability measured in terms of individual countries or regions of the world?

Since companies plan for the future and report their performance within fairly short time frames, reporting for sustainable development by companies is likely to focus on relatively short-term measures of sustainability.

### iv) **Social footprint**

A social footprint is the effect of economic activity on society and people. In general, economic activity is seen as providing benefits for society, although some companies are much more 'people-friendly' than others. Some companies, for example, use child labour and/or pay subsistence-level wages to their workers.

Companies might seek to measure the contribution of their activities towards society in terms of:

- Total number employed or increase in the total number of employees.
- The proportion of the total work force employed in different parts of the world.
- The proportion of the total work force that is female or from different ethnic groups.
- Health and safety at work (for example, numbers of employees injured each year per 1,000 of the work force).

## MARKING GUIDE

	Mark
a	
I. Stating the five fundamental principles of professional ethics as stated in ICAN code of conduct and guide for members attracts $\frac{1}{2}$ mark each	$2\frac{1}{2}$
ii Well stated explanations of the five principles attracts $1\frac{1}{2}$ marks each ( $1\frac{1}{2} \times 5$ )	<u><math>7\frac{1}{2}</math></u>
	<u>10</u>
b Proper explanation of each concept attracts $2\frac{1}{2}$ marks each ( $2\frac{1}{2} \times 4$ )	<u>10</u>
Total	20

## EXAMINER'S REPORT

The question tests the ability of candidates to:

- (a) Properly state the role of professional accountants in business and society with particular reference to fundamental principles of ethics.
- (b) Identify and explain the impact of non financial factors on investment decision especially in relation to social and environmental issues.

The question was well attempted but performance was average. The major pitfall of candidates was their inability to properly explain the concepts relating to social and environmental issues.

Candidates are advised to pay closer attention to key concepts in the subject.

## SOLUTION 4

Broad approaches to the measurement of total national income are:

(a)

### **Expenditure approach**

One way of measuring economic activity is to calculate the total amount of spending that has been in the economy. This includes spending on consumption by individuals and firms, spending on capital investment and government spending.

### **Income approach**

Another way of measuring economic activity is to calculate the total income that has been earned by everyone in the economy during the period, such as income earned by individuals and profits earned by companies.

### Output approach

The output approach of measuring economic activity is to measure the value of output by all industries and other economic activity. This includes service industries as well as agricultural, mining, construction and manufacturing industries.

(b)

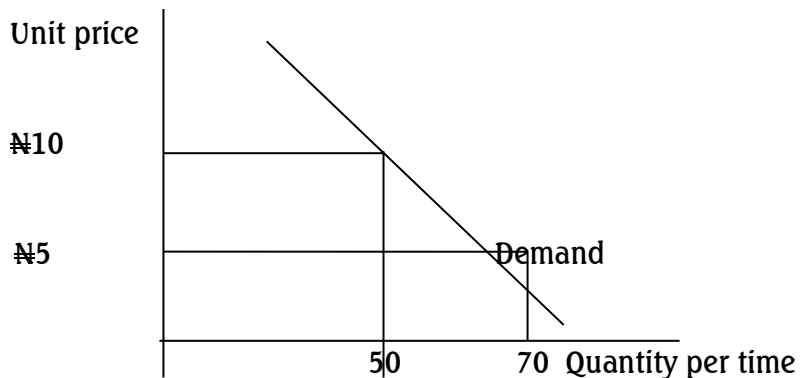
#### i) Demand

Demand refers to the number of units of particular good or service that customers buy at a given selling price. Price change causes a change in demand.

The law of demand says that:

- a decrease in price leads to an increase in demand; and
- an increase in price leads to a fall in demand.

Demand for a good or service is the total demand from all participants in a market. This can be represented as a plot of quantity demanded against price. Such plots are known as demand curves. A simple demand curve is shown below.



This curve shows that the demand for the good in a particular time is 50 units when the price is N10 per unit but would increase to 70 units when the price is N5 per unit.

Demand curves are downward sloping from left to right. A change in price causes demand to move along the curve.

#### ii) Supply

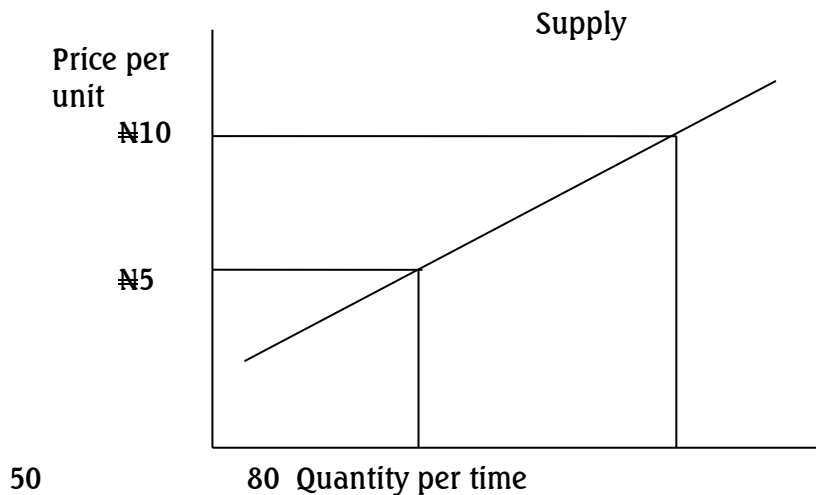
Supply refers to the quantity of the product (or service) that suppliers are willing to sell at any given sales price.

The law of supply says that:

- the quantity of a good that suppliers are willing to sell rises when the price of the good rises; and
- the quantity of a good that suppliers are willing to sell falls when the price of the good falls.

Supply is the total supply from all businesses. Higher prices will attract more suppliers into the market and encourage existing suppliers to produce more. Lower prices will deter some suppliers, and might drive some out of business if the price fall results in losses.

This can be represented as a plot of the quantity that suppliers are willing to supply at a given price and such plots are known as supply curves. A simple supply curve is shown below.



Suppliers are only willing to supply 50 units at a price of ₦5. However, if the price increases to ₦10 suppliers would supply 80 units.

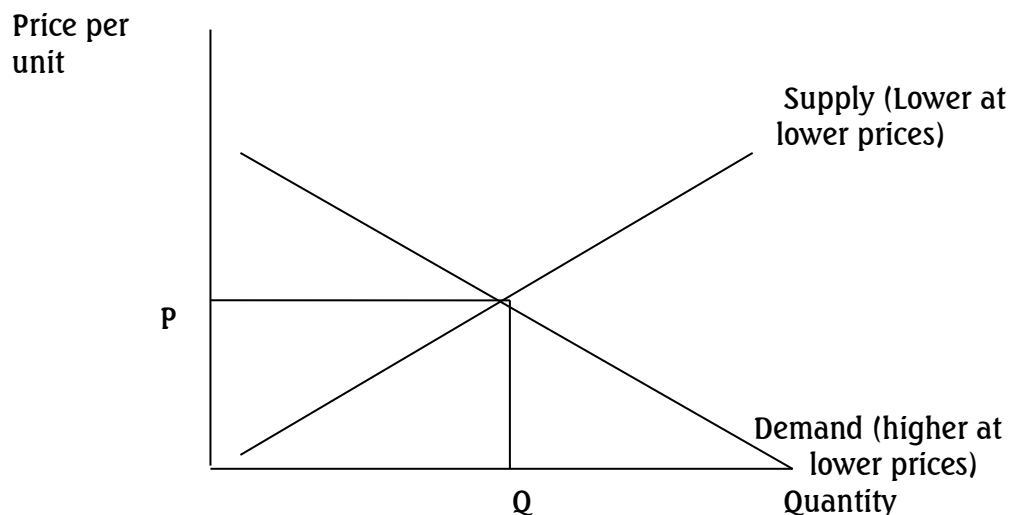
Supply curves are upward sloping from left to right. A change in price causes supply to move along a curve.

iii)

### Market pricing mechanism

The sales price for a product in a market is determined by the interaction of demand and supply. This is known as the market price mechanism.

A simple graph of supply and demand is shown below. In this diagram, the equilibrium price level is the sales price that would become established in the market if the factors that affect supply or demand did not change. Here the price would be ₦P and the total sales demand for the product would be Q units.



Occasionally, sales demand for a product might rise to such a high level that producers in the market are unable to meet the demand in full. Until production capacity can be increased, this situation could result in very large price rises and very high profit margins for producers.

#### Marking Guide

A	Mark
i Identification of two broad approaches to the measurement of total economic activity during a given time period attracts 1 mark each	2
ii Brief explanation of two approaches identified attracts 1½ marks each	<u>3</u>
	<u>5</u>
B Proper explanation of each of the three concepts indicated in this part of the question attracts 5 marks each (3 x 5)	<u>15</u>
Total	<u>20</u>

#### EXAMINER'S REPORT

The question which was in two parts test candidates understanding of the measurement of total economic activity in a given time period and three out of several economic concepts.

The performance level of all the candidates that attempted the question was average.

Many of the candidates appear not to have fully understood the requirements of the question. Candidates are admonished to prepare adequately before examination and ensure that the syllabus is covered fully.

#### SOLUTION 5

- (a) A workgroup is a group of employees who act with a common purpose and a sense of identity. There are two types of workgroup:
- informal workgroups, and
  - formal workgroups.

##### **Informal workgroups**

An informal workgroup is a group of employees that does not have a formal or an official identity. It is a group of individuals who get on well with each other and interact socially. They might have lunch together regularly, or might talk about personal interests and family matters over a cup of tea or coffee. Some informal groups might meet together outside work, on a social basis.

Informal workgroups often develop a collective attitude to their work. This attitude might be positive, or it could be hostile to management. Also they can be important because of the way they communicate with each other.

### **Formal workgroups**

Formal workgroups are created in order to organise work in an organisation. The employer establishes workgroups to perform specific roles or functions. Each workgroup has a number of jobs to be performed, and employees are appointed to fill the job vacancies. When one employee leaves his job, another person is appointed in his place, and the formal workgroup continues unchanged.

Employees work together in their workgroups, each performing their own job within the group. The workgroup has a formal leader (a manager or supervisor), and will develop its own characteristics and 'culture'.

(b) Bruce Tuckman's (1965) five stages of team development are:

- i) Forming
- ii) Storming
- iii) Norming
- iv) Performing
- v) Dorming (also called adjourning, de-forming and mourning).

**i) Forming**

In the initial stage of the existence of a team is forming. The team is a collection of individuals, but their individual roles and responsibilities within the team are unclear. There is a high level of dependence on the team leader for guidance and direction. The team leader must therefore direct the team members, and tell them what to do.

**ii) Storming**

The second stage in team development is storming. During this stage, decisions do not come easily. There is usually conflict between team members, and the attitudes, norms and preconceptions of individuals are challenged by other team members. Team members compete with each other for status and position within the team. There may be cliques and factions, and power struggles between them.

However, there is an improvement in the clarity of the purpose of the team and its goals. The role of the leader is to act as coach to the team members, and to encourage them to focus on the team's tasks rather than on relationships and emotional issues. The leader also encourages team members to find compromises in order to settle conflicts.

**iii) Norming**

During the norming stage of team development, the team develops norms of behaviour and operations. The roles of the team members become clear. The way in which decisions are taken is also established. Major decisions are taken by the team collectively, with all team members contributing to the decision-making process. Commitment to the tasks of the team and team unity is strong. The team leader can use a participative style of management, so that team members take on greater responsibility for decisions.

**iv) Performing**

Performing is the fourth stage of team development. During this period the team operates at its full potential. The team members are strategically aware and they understand why the team exists and what it is trying to achieve. The team members are also able to get on with their jobs without interference from the team leader, and do not need to be told what to do. The role of the team leader is to delegate new tasks and

oversee performance. Disagreements may occur between team members, but these are resolved in a friendly and constructive way.

**v) Dorming (adjourning)**

There are various ways of describing the fifth stage of team development:

- The group may break up, having achieved its purpose. The members of the team may feel a sense of loss, and the break-up of the team may be stressful for them, particularly if it is unplanned and unexpected.
- Alternatively, the team may lose its efficiency, and might lose its ability to make good decisions. Members of the team may share common views that ignore developments in their business environment and changing circumstances. Keeping the group in existence becomes the prime objective of the team members, rather than achievement of the team's work objectives. It may be necessary to break up the team.

**MARKING GUIDE**

		<b>Mark</b>
<b>A</b>	i Listing the two types of workgroups attracts 1 mark each	<b>2</b>
	ii Proper explanation of the two workgroups attracts 1½ marks each	<b><u>3</u></b> <b><u>5</u></b>
<b>B</b>	i Listing the five stages of team development attracts 1 mark each	<b><u>5</u></b>
	ii Proper explanation of each of the five stages of team development so listed attracts 2 marks each (5 x 2)	<b>10</b>
	<b>Total</b>	<b><u>15</u></b>

**EXAMINER'S REPORT**

The question tested candidates understanding of group behaviour in organisations and teams development.

Candidates' performance was above average. The performance of candidates that attempted this question indicates that they have a good knowledge of its requirements.

## SOLUTION 6

- (a) Five disadvantages of accounting rate of return (ARR)
- It is based on accounting profits, and not cash flows.
  - Accounting profits are unreliable measure. For example, the annual profit and the average annual investment can both be changed simply by altering the rate of depreciation and the estimated residual value.
  - It ignores the timing of the accounting profits.
  - It does not take risk into consideration as profits are considered over the entire life of the project.
  - The decision to set minimum target ARR is not based on any rational economic basis. Any such minimum target accounting return is a subjective target, with no economic or investment significance.
  - It does not consider the size of investment as it is a relative measure rather than absolute measure.
  - It is not useful to evaluate the projects where investment is made in two or more installments at different times.

(b) **Gidado Nigeria Limited**

<b>Project A</b>						
Year	Item	Cashflows	DF@16%	PV	DF@20%	PV
		₦				₦
0	Initial investment	(40,000)	1	(40,000)	1	(40,000)
1	Net cashflows	24,000	0.862	20,688	0.833	19,992
2	Net cashflows	16,000	0.743	11,888	0.694	11,104
3	Net cashflows	15,000	0.641	<u>9,615</u>	0.579	<u>8,685</u>
			NPV	<u>2,191</u>		<u>( 219)</u>

The IRR Method is computed as follows:

$$\begin{aligned}
 \text{IRR} &= 16 + \frac{2,191}{2,191 + 219} \times (20 - 16) \\
 &= 16 + \frac{2,191}{2,410} \times 4 \\
 &= 16 + 0.31 \\
 &= \underline{\underline{16.31\%}}
 \end{aligned}$$

<b>Project B</b>						
Year	Item	Cashflows	DF@16%	PV	DF@20%	PV
		₦				₦
0	Initial investment	(140,000)	1	(140,000)	1	(140,000)
1	Net cashflows	74,000	0.862	63,788	0.833	61,642
2	Net cashflows	56,000	0.743	41,608	0.694	38,864
3	Net cashflows	55,000	0.641	<u>35,255</u>	0.579	<u>31,845</u>
			NPV	<u>651</u>		<u>( 7,649)</u>



The IRR Method is computed as follows:

$$\begin{aligned}\text{IRR} &= 16 + \frac{651}{651 + 7,649} \times (20 - 16) \\ &= 16 + \frac{651}{8,300} \times 4 \\ &= 16 + 0.31 \\ &= \underline{\underline{16.31\%}}\end{aligned}$$

These are mutually exclusive projects meaning that you cannot accept both projects, the selection criterion will be based on project with higher NPV or higher IRR but where there is conflict between both methods, we will choose project with higher NPV.

## DECISION RULES

### PV

The **decision rule** is that, ignoring other factors such as risk and uncertainty, and non-financial considerations, a project is worthwhile financially if the NPV is positive or zero. It is not worthwhile if the NPV is negative.

### IRR

A company might establish the minimum rate of return that it wants to earn on an investment. If other factors such as non-financial considerations and risk and uncertainty are ignored:

- When IRR is equal to or higher than the minimum acceptable rate of return, then such a project should be undertaken.
- When IRR is lower than the minimum required return, then such a project should be rejected.

Since PV and IRR are both methods of DCF analysis, the same investment decision should normally be reached using either method.

### Conclusion and summary

On the basis of PV, Project A should be accepted because it yielded a higher NPV compared to Project B.

Also, on the basis of IRR, Project A should be accepted as it has a higher IRR than Project B and both IRR are higher than cost of capital.

Therefore, project A should be accepted since the projects are mutually exclusive.

## MARKING GUIDE

	Mark
a	
Listing of five advantages of accounting rate of return attracts 1 mark each	5
b	
i. Calculation of NPV for each of the two projects attracts 3 marks each	<u>6</u>
ii. Calculation of IRR for each of the two projects attracts 3 marks each	6
iii. Correct advice with reasons based on the calculated NPV and IRR attracts	3
Total	<u>15</u>

## EXAMINER'S REPORT

The question tests candidates understanding of investment appraisal using NPV and IRR methods. Majority of the candidates attempted the question and their performance was below average.

Candidates that attempted this question appear not to have fully grasped the method needed in answering questions on internal rate of return.

Candidates are advised to have a mastery of all investment appraisal methods and the entire syllabus to ensure a more satisfactory performance in future examinations.

# THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

FOUNDATION LEVEL EXAMINATION - MAY 2016

## FINANCIAL ACCOUNTING

Time Allowed: 3 hours

**SECTION A: PART 1                      MULTIPLE CHOICE QUESTIONS                      (20 Marks)**

### INSTRUCTIONS    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 bases is used in preparation of financial statements?
  - A. Break up basis
  - B. Cash basis
  - C. Accrual basis
  - D. Modified cash basis
  - E. Commitment basis
  
2. During the preparation of bank reconciliation statement, some transactions were discovered to have caused the difference between the cashbook balance and the bank statement balance. Which of the following will be required for cashbook adjustment?
  - A. Uncredited lodgement
  - B. Cheque paid in by the company but dishonoured
  - C. Amount incorrectly debited by the bank to the account
  - D. Amount incorrectly credited by the bank to the account
  - E. Cheque issued to Mr. Mohammed by the company but not yet presented in the bank
  
3. In the statement of financial position, equity is best described as
  - A. Market value of the shares of the owners
  - B. Issued capital and reserves
  - C. Issued capital and loan notes
  - D. Revenue and gains
  - E. Expenses and losses
  
4. Ajonibode runs a business as a sole trader and the following information relates to the business:  
On January 1, 2015, the net assets of the business were ₦1675,000.  
During the year to December 31, 2015, the business made a profit of ₦625,000 and Ajonibode took out ₦550,000 in drawings.

Due to a shortage of cash in the business, he paid in additional capital of ₦100,000 in early December 2015.

What is the net assets of the business as at December 31, 2015?

- A. ₦1.675,000
- B. ₦1,850,000
- C. ₦2,300, 000
- D. ₦2,400,000
- E. ₦2, 950,000

5. Which of the following will be the effect of taking of a loan from the bank by an entity?

- A. Increase in both liabilities and equity
- B. Decrease in assets and increase in liabilities
- C. Decrease in both liabilities and equity
- D. Increase in both assets and liabilities
- E. Increase in assets and decrease in liabilities

6. Which of the following is **NOT** part of the cost of inventories, in relation to IAS 2 Inventories?

- A. The purchase price
- B. Import duties
- C. Transport cost
- D. Handling costs
- E. Selling costs

7. A company purchased a non-current asset for ₦4,500,000. The company's Accountant recorded the transaction in the company's books by debiting the purchases account. Raise journal entry to correct the error.

- |    |                                     |            |
|----|-------------------------------------|------------|
| A. | Dr. Purchases Account Cr            | ₦4,500,000 |
|    | Cash                                | ₦4,500,000 |
| B. | Dr. Non Current Assets Account      | ₦4,500,000 |
|    | Cr Cash                             | ₦4,500,000 |
| C. | Dr. Purchases Account               | ₦4,500,000 |
|    | Cr Non Current Assets Account       | ₦4,500,000 |
| D. | Dr. Non Current Account             | ₦4,500,000 |
|    | Cr Purchases Account                | ₦4,500,000 |
| E. | Dr. Non-Current Register Account Cr | ₦4,500,000 |
|    | Non-Current Asset Account           | ₦4,500,000 |

8. Which of the following contains a permanent record of all transactions?
- Sales Day Book
  - Invoice
  - Ledger
  - Debit Note
  - Purchases Day Book
9. A business marked-up its cost by 50%. This would mean a Gross Profit of
- $66\frac{2}{3}\%$  on the market price
  - $66\frac{2}{3}\%$  on the selling price
  - 50% on the selling price
  - $33\frac{1}{3}\%$  on the cost price
  - $33\frac{1}{3}\%$  on the selling price
10. The bank column in the cash book shows a credit balance of ₦50,000. This means
- A total payment of ₦50,000
  - A gross receipt of ₦50,000
  - A balance of ₦50,000 in the bank
  - An overdraft of ₦50,000
  - A balance of ₦50,000 cash

Use the following information to answer questions 11 and 12

Receivables Control Account					
		N'000			N'000
2015	Bal. b/d	26,000	2015	Bal. b/d	1,700
Jan. 1			Jan. 1		
	Sales	152,600		Bank	131,100
	Dishonoured Cheque	7,000		Discount	6,900
				Returns	2,600
				Purchases Ledger	7,200
	Bal. c/d	1,840		Bal. c/d	37,940
		<u>187,440</u>			<u>187,440</u>
Feb. 1	Bal. b/d	37,940	Feb. 1	Bal. b/d	1,840

11. The balance of ₦1,840,000 represents the
- Amount necessary to balance the account
  - Amount due to the customers
  - Amount due from the customers
  - Amount due from cash sales
  - Amount due from sales

12. The item "Purchases Ledger - ₦7,200,000" means
- A. Cash Purchases during the period
  - B. Credit purchases during the period
  - C. Receivables set off against payables
  - D. Cash Payable
  - E. Cash Receivable
13. The excess of expenditure over income in a Not-For-Profit organisation is
- A. Accumulated fund
  - B. Working capital
  - C. Deficit
  - D. Surplus
  - E. Accruals
14. Purchases in accounting refers to goods bought for
- A. Repairs
  - B. Owners use
  - C. Resale
  - D. Office use
  - E. Permanent use
15. Carriage inwards are
- A. Credited to the cost of sales
  - B. Debited to the cost of sales
  - C. Credited to the profit or loss
  - D. Debited to the profit or loss
  - E. Debited to equity
16. Olojuede limited failed to record ₦120,000 wages. The error committed is that of
- A. Omission
  - B. Commission
  - C. Principle
  - D. Compensation
  - E. Original entry
17. Which of the following reflects the effect of a reduction in the allowance for doubtful debts?
- A. Reduction in net profit
  - B. Reduction in cash balance
  - C. Reduction in gross profit
  - D. increase in gross profit
  - E. increase in net profit

18. Which of the following is a capital expenditure?
- Purchase of inventories
  - Purchase of motor vehicle for sale
  - Subscription paid
  - Extension of building
  - Repair of generator
19. State the journal entries required to remove the goodwill recognised on the admission of a new partner in a partnership
- Dr Partners' Accounts                      Cr Profit or Loss
  - Dr Partners' Account                      Cr Asset Revaluation Account
  - Dr Goodwill Account                      Cr Asset Revaluation Account
  - Dr Profit of Loss Account                      Cr Partners' Account
  - Dr. Partners' Accounts                      Cr Goodwill Account
20. Which of the following will **NOT** be regarded as investing activity in relation to IAS 7 statement of cash flows?
- Dividend received
  - Cash paid to acquire property, plant and equipment
  - Cash paid to acquire equities in other entities
  - Cash payment to supplier of goods and services
  - Proceed from sale of property, plant and equipment

## SECTION B:

**INSTRUCTION:**            **ANSWER ANY FOUR OUT OF SIX QUESTIONS IN THIS SECTION**                      **(80 MARKS)**

### QUESTION 1

- Define a Trial Balance and explain its purpose.
  - Mention **FOUR** errors that the trial balance will not reveal. (2 Marks)
- (2 Marks)

The following balances were extracted from the books of Arewa & Sons on December 31, 2015.

	<b>₦'000</b>
Payables	49,260
Allowances for receivables	2,330
Expenses	95,520
Salaries	41,545
Wages	72,050
Purchases	321,870
Bank Overdraft	65,980
Accumulated depreciation	10,000
Discount allowed	9,262
Revenue	637,285
Equipment	95,000
Capital	29,265

On investigation, you discovered the following:

- (i) Receivables amounting to ~~₦~~75,980,000 have been omitted.
- (ii) Receivables amounting to ~~₦~~2,800,000 have been written off as bad debt, but no posting had been made thus rendering the entry a single entry.
- (iii) Discount received shown in the cashbook and totaling ~~₦~~4,065,000 had not been posted to the general ledger.
- (iv) The figure of wages should have been ~~₦~~122,050,000.
- (iv) Drawings amounting to ~~₦~~29,730,000 have been omitted.

**You are required to:**

- i. Prepare journal entries to correct the errors (5 Marks)
  - ii. Prepare the trial balance after effecting the corrections (11 Marks)
- (Total 20 Marks)

## QUESTION 2

The following is a summary of the receipts and payments for the year to March 31, 2016 of ABUBA Social Club:

<b>Receipts:</b>	<b>₦'000</b>
Club subscriptions	255,000
Donation	22,500
Christmas dance	12,750
Bar takings	405,000



<b>Payments:</b>	<b>₦'000</b>
Rates	13,500
General expenses	393,000
Bar purchases	277,500
Christmas dance expenses	2,2500

Other relevant information at the beginning and end of the year is as follows:

	April 1 2015	March 31 2016
	₦'000	₦'000
Subscriptions due	13,500	9,000
Subscriptions paid in advance	750	1,500
Rates owing	6,750	7,500
Bar inventory	30,000	37,500
Club premises (cost N750,000,000)	300,000	270,000
Furniture (cost N150,000,000)	45,000	30,000
Bank balance	24,000	33,000

You are required to prepare:

- Club's Bar Trading Account for the year ended March 31, 2016. (3 Marks)
- The Income and Expenditure Account for the year ended March 31, 2016. (8 Marks)
- The Statement of Financial Position as at March 31, 2016. (9 Marks)

(Total 20 Marks)

(Show workings)

### QUESTION 3

The following balances were extracted from the books of Uche and Sons as at September 30, 2015.

	<b>₦'000</b>
Capital at October 1, 2014	90,428
Purchases	776,400
Revenue	1,045,800
Salaries and Wages	66,880
Rent and rates	28,004
Receivables	144,600
Bad Debts	3,768

Drawings	19,004	
Allowances for Receivables	7,404	
Bank	5,632	
Payables	68,616	
Cash	668	
Inventories at October 1, 2014	164,218	
Motorcycle (at cost)	14,400	
Accumulated depreciation on motorcycle	4,200	Additional
Bank interest received	1,756	Information
<b>Comments at September 30, 2015</b>		
(i) Commission at September 30, 2015 was valued at	₦198,000	₦12,000
(ii) Rent prepaid at September 30, 2015 amounted to	₦3,200	₦0
(iii) Depreciation is to be provided on the motorcycle at the rate of 20% of cost per annum.		
(iv) Salaries and wages outstanding at September 30, 2015 amounted to	₦6,024	₦0
(v) Commission not yet due but already received at the trial balance date was	₦800	₦0
(vi) Additional irrecoverable debts of	₦2,840	₦0
(vii) Bank interest of	₦100	₦0
(viii) Allowances for receivables are to be adjusted to 5% of receivables.		
(ix) Drawings by the owner of goods costing ₦1,600,000 and cheques of	₦2,400	₦0

Using extended trial balance, you are required to prepare:

- Statement of profit or loss of Uche & Sons for the year ended 30 September, 2015.
  - Statement of financial position of Uche & Sons as at 30 September, 2015.
- (Total 20 Marks)**

#### QUESTION 4

The trial balance of CLAVELL ENTERPRISES includes the following items:

	₦
Receivables ledger control account	115,440
Payables ledger control account	80,901
Suspense account (debit balance)	3,310

The following information is available.

- (i) The total of debit balances in the receivables ledger account is ~~₦116,374~~ and the total of credit balances is ~~₦1,234~~.
- (ii) The total of credit balances in the payables ledger account is ~~₦80,412~~ and the total of debit balances is ~~₦1,111~~.
- (iii) The receivables ledger account includes a debit balance of ~~₦700~~ for Entity C, and the accounts payable ledger includes a credit balance of ~~₦800~~ relating to Entity C. Only the net amount will eventually be paid.
- (iv) Included in the credit balances in the receivables ledger account is a balance of ~~₦600~~ in the name of P Quinn. This arose because a sales invoice for ~~₦600~~ had earlier been posted in error from the sales day book to the debit of the account of M Quinn in the accounts payable ledger.
- (v) An allowance of ~~₦300~~ granted to a customer for some damaged goods had been omitted from the appropriate account in the receivables ledger account. This allowance had been included in the receivables ledger control account.
- (vi) An invoice for ~~₦456~~ had been entered in the purchases day book as ~~₦654~~.
- (vii) A cash receipt from a credit customer for ~~₦345~~ had been entered in the cash book as ~~₦245~~.
- (viii) The purchases day book had been overcast by ~~₦1,000~~.
- (ix) The bank balance of ~~₦1,700~~ had been included in the trial balance, in error, as an overdraft.
- (x) The debit balance on the insurance account in the nominal ledger of ~~₦3,456~~ has been included in the trial balance as ~~₦3,546~~.

**Required:**

- a. Prepare a reconciliation of the receivable ledger control account and the receivables ledger balances. (8 Marks)
- b. Open a suspense account and post the entries required to clear this account. (4 Marks)
- c. Reconcile the payables ledger control account and the payables ledger balances. (8 Marks)

**(Total -20 Marks)**

**QUESTION 5**

Mr. Mala, the Proprietor of a small bookshop has requested you to prepare his accounts. He did not keep complete records of account. From his passbook, note book, bank statements and oral information obtained during a meeting with him, you put together the following figures for the year ended December 31, 2015:

	January 1, 2015	December 31, 2015
	₦'000	₦'000
Cash in hand	400	890
Bank overdraft	18,000	14,000
Furniture & Fittings	2,000	2,000
Delivery van	3,600	3,600
Inventories	20,400	22,400
Trade receivables	12,400	9,800
Trade payables	9,120	8,400
Bills payables	2,210	2,200
Bills receivables	3,100	3,200

During the year Mr. Mala used part of the inventories for domestic affairs which was agreed at ₦1,200,000. He drew cash for private expenses at frequent intervals. He estimated his drawing in cash at ₦2,800,000 for the year. He also agreed with the following suggestions:

- (i) To write off irrecoverable debts of ₦300,000 owed by a customer who died in May, 2015.
- (ii) To charge a notional rent of ₦1,000,000 per annum for the shop premises owned by him.
- (iii) To allow 15 percent per annum depreciation on furniture and fittings and 20 percent per annum on delivery van.

**You are required to:**

- a. Ascertain Mr. Mala's bookshop's profit or loss for the year ended December 31, 2015. (8 Marks)
  - b. Prepare the statement of financial position of the bookshop at December 31, 2015. (12 Marks)
- (Total 20 Marks)**
- (Show workings)

## QUESTION 6

Given below are items of "Revenue" and "Capital" expenditure.

- (i) A number of new cars that had recently been cleared by a motor car dealing company.
- (ii) Two new motor boats acquired by a ferry service agency.
- (iii) Vacant houses owned by an estate developing company in respect of which negotiations are ongoing for assistance for their sale to prospective landlords.
- (iv) New buildings acquired for the purpose of holding the items of plant and machinery belonging to a detergent manufacturing company.
- (v) Cost of acquiring a leasehold property for office use.
- (vi) Granites purchased by an engineering contractor for use at a construction site.
- (vii) Cost of rehabilitating a dilapidated housing unit owned by an estate developer.
- (viii) Repairs to plant and machinery in a manufacturing company.

### Required:

- a. For each of the above, state whether it is a "Revenue" or "Capital" expenditure. (4 Marks)
- b. State how each will be recognised in the statement of profit or loss and the statement of financial position as the case may be. (12 Marks)
- c. State how the non-current assets register will be affected by any of the transactions. (4 Marks)

**(Total 20 Marks)**

### **SECTION A – MULTIPLE CHOICE ANSWER**

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

### **EXAMINER'S REPORT**

The Multiple Choice Questions cover the whole syllabus. All Candidates attempted the questions and performance was above average.

## SECTION B – THEORY

### SOLUTION 1

- (a) A trial balance is a summary of balances in the ledgers at a particular time.

It is extracted to test the arithmetical accuracy of the entries in the ledgers. Extracting the trial balance is the first step in preparing the Financial Statements (i.e. Statement of profit or loss and Statement of Financial position).

- (b) Errors the Trial Balance will not reveal are:

- (i) Error of Omission
- (ii) Error of Commission
- (iii) Error of Original Entry
- (iv) Error of Principle
- (v) Error of Complete Reversal of entries
- (vi) Compensating Error

- ci) **Journal Entries to correct the errors**

	Dr. N'000	Cr. N'000
1) Receivables Suspense Being Receivables omitted now corrected	75,980	75,980
2) Allowance for Bad debts Suspense Being Recognition of bad debt written off	2,800	2,800
3) Payables Ledger Discount received Being posting of discount received to the general ledger	4,065	4,065
4) Wages Suspense Being correction of wages amount understated	50,000	50,000
5) Drawings Suspense Being correction of drawings previously omitted	29,730	29,730

c (ii) **Adjusted Trial Balance – 31 December 2015**

	Dr. N'000	Cr. N'000
Capital		29,265
Drawings	29,730	
Purchases	321,870	
Bank Overdraft		65,980
Salaries	41,545	
Wages	122,050	
Discount received		4,065
General Expenses	95,520	
Discount Allowed	9,625	
Equipment	95,000	
Accumulated Depreciation		10,000
Allowance for Bad Debts		2,330
Receivables	75,980	
Payables		45,195
Sales		637,285
Bad Debt	2,800	
	<u>794,120</u>	<u>794,120</u>

**Tutorials**

(i) **Initial Trial Balance**

	Dr. N'000	Cr. N'000
Payables		49,260
Allowances for irrecoverable receivables		2,330
General expenses	95,520	
Salaries	41,545	
Wages	72,050	
Purchases	321,870	
Bank overdraft		65,980
Accumulated depreciation		10,000
Discount allowed	9,625	
Revenue		637,285
Equipment	95,000	
Capital		29,265
Suspense	158,510	
	<u>794,120</u>	<u>794,120</u>



(ii) **Suspense Account**

	N'000		N'000
Balance b/d	158,510	Receivables	75,980
		Bad debt written off	2,800
		Wages	50,000
		Drawings	29,730
	<u>158,510</u>		<u>158,510</u>

**MARKING GUIDE**

	Marks	
1a. Trial Balance – Definition	1	
-Purpose	<u>1</u>	2
b. Errors that will not affect trial balance agreement		
- 4 entries at ½ mark each		2
C i. Journal entries-		
- 10 entries excluding narration at ½ mark each		5
ii. Adjusted trial balance		
- Title	1	
- 20 entries including working at ½ mark	<u>10</u>	<u>11</u>
TOTAL		<u>20</u>

**EXAMINER'S REPORT**

The question tests Candidates' knowledge of definition of trial balance and its purpose. They are also required to prepare adjusting correcting Journal Entries and Trial Balance after effecting the corrections.

Most Candidates attempted the question but performance was below average. Commonest pitfall is raising of incorrect journal entries resulting in drawing up incorrect trial balance. Narration to the journals were either not written or improperly constructed.

Candidates are advised to read up basic double entry principles involving adjustment of errors and preparing trial balance thereafter.

## SOLUTION 2

### ABUBA SOCIAL CLUB

#### a. BAR TRADING ACCOUNT FOR THE YEAR ENDED 31 MARCH, 2016

	₦'000	₦'000
Sales		405,000
Less: Cost of sales		
Opening inventory	30,000	
Purchases	<u>277,500</u>	
	307,500	
Closing inventory	<u>(37,500)</u>	<u>270,000</u>
Gross profit		<u>135,000</u>

#### b. Income and Expenditure Account for the year ended 31 March 2016.

	₦'000	₦'000
Income:		
Bar Gross Profit		135,000
Subscriptions (Wk i)		249,750
Donations		22,500
Christmas Dance Income	12,750	
Expenses	<u>2,250</u>	<u>10,500</u>
		417,750
Expenditure:		
Rates (Wk ii)	14,250	
General Expenses	393,000	
Depreciation Premises	30,000	
Furniture	<u>15,000</u>	<u>452,250</u>
Deficit		<u>(34,500)</u>

**ABUBA Social Club**  
**Statement of Financial Position as at 31 March, 2016**

	Cost	Acc. Depr.	Carrying Amount
	₦'000	₦'000	₦'000
<b><u>Non-Current Assets</u></b>			
Club premises	750,000	480,000	270,000
Furniture	150,000	120,000	30,000
	<u>900,000</u>	<u>600,000</u>	<u>300,000</u>
<b><u>Current Assets</u></b>			
Bar inventory		37,500	
Subscription outstanding		9,000	
Cash and Bank balances		<u>33,000</u>	
Total Current Asset			<u>79,500</u>
Total Assets			<u>379,500</u>
<b><u>Equity and Liabilities:</u></b>			
Accumulated Fund (Wk 3)			405,000
Deficit			(34,500)
Total Equity			370,500
<b><u>Current Liabilities:</u></b>			
Rates owing		7,500	
Subscription in advance		<u>1,500</u>	
Total Current Liabilities			<u>9,000</u>
Total Equity and Liabilities			<u>379,500</u>

**Working Notes**

<b>WK 1:</b>	<b>Subscription Account</b>		
	₦'000		₦'000
Subscription due b/f	13,500	Sub. in advance b/f	750
Income & Exp. (bal. fig)	249,750	Receipt & Payment	255,000
Sub. in advance c/d	<u>1,500</u>	Subscription due c/d	<u>9,000</u>
	<u>264,750</u>		<u>264,750</u>
Subscription due b/d	9,000	Sub. In advance b/d	1,500
<b>Wk 2:</b>	<b>Rates Account</b>		
	₦'000		₦'000
Receipt & Payment	13,500	Owing b/f	6,750
Owing c/d	<u>7,500</u>	Income & Exp. (bal. fig)	<u>14,250</u>
	<u>21,000</u>		<u>21,000</u>
		Bal. b/d	7,500

Wk 3:

# Statement of Affairs as at April 11, 2015

<u>Assets:</u>	₦'000	₦'000
Subscription due		13,500
Bar inventory		30,000
Bank balance		24,000
Club premises: Cost	750,000	
Accumulated Depr.	<u>(450,000)</u>	300,000
Furniture: Cost	150,000	
Accumulated Depr.	<u>(105,000)</u>	<u>45,000</u>
Total Assets		412,500
<u>Liabilities:</u>		
Subscription paid in advance	750	
Rates owing	<u>6,750</u>	
Total liabilities		<u>(7,500)</u>
Accumulated Fund		<u>405,000</u>

## MARKING GUIDE

	Marks
a. Bar Trading – 6 entries at ½ mark each	3
b. Income & Expenditure – Any 10 entries at ½ mark	5
c. SOFP – Any 16 entries at ½ mark each	8
Workings: Any 16 entries at ¼ mark each	4
	<u>20</u>
• SOFP is statement of financial position.	

## EXAMINER'S REPORT

The question tests candidates understanding of the preparation of financial statements of Not-for-Profit Organisation.

Most candidates attempted the question and performance was average. Some candidates could not correctly derive subscription figure that is accounted for in income and expenditure account.

Candidates should use the study text of the Institute to learn principles of preparation of financial statements of Not-for-Profit Organisations and practice past questions for better performance in future examinations.

**SOLUTION 3**

**Uche and Sons**  
**Extended Trial Balance as at September 30, 2015**

	Initial Trial Balance		Adjustment		Statement of Profit or Loss		Statement of Fin. Position	
	DR.	CR.	DR.	CR.	DR.	CR.	DR.	CR.
	₦'000	₦'000	N'000	N'000	N'000	N'000	N'000	N'000
Capital at October 1, 2014		90,428						90,428
Purchases	776,400			1,600	774,800			
Sales		1,045,800				1,045,800		
Salaries and wages	66,880		6,024		72,904			
Rent and rates	28,004			3,200	24,804			
Receivables	144,600			2,840			141,760	
Bad debts	3,768		2,840		6,608			
Drawings	19,004		4,000				23,004	
Allowances for Receivables		7,404	316					7,088
Bank	5,632			2,400			3,232	
Payables		68,616						68,616
Cash	668						668	
Inventories at October 1, 2014	164,248				164,248			
Motorcycle (at cost)	14,400						14,400	
Acc. Depr. on Motorcycle		4,200		2,880				7,080
Bank interest received		1,756		100		1,856		
Commission received		5,400	800			4,600		
Closing Inventory (SOFPI)			198,712				198,712	
Closing Inventory (SOPL)				198,712		198,712		
Prepaid rent			3,200				3,200	
Depr. On Motorcycle			2,880		2,880			
Accrued salaries and wages				6,024				6,024
Prepaid commission received				800				800
Accrued bank interest rec.			100				100	
Decrease in allowance for rec				316		316		
Profit for the year					205,040			205,040
	1,223,604	1,223,604	218,872	218,872	1,251,284	1,251,284	385,076	385,076

## MARKING GUIDE

Using extended Trial Balance to prepare Financial Statement	Marks
Available entries excluding totals 65	
Maximum obtainable = 60 entries at $\frac{1}{3}$ =	20

## EXAMINER'S REPORT

The question required candidates to prepare extended Trial Balance in columnar format showing initial trial balance, journal adjustments, posting to Statement of Profit or Loss and Statement of Financial Position of a Sole Trader.

Many Candidates attempted the question but performance was poor.

Most Candidates did not follow the instruction to use the Extended Trial Balance consequently resulting in loss of marks.

Candidates are advised to practice with past questions involving preparation of Extended Trial Balance to enhance their performance in future examinations.

## SOLUTION 4

ai. Receivables Ledger Control Account

	₦		₦
Balance c/d	115,440	Accounts payable ledger-Contra	700
		Corrected balance c/d	<u>114,740</u>
	<u>115,440</u>		<u>115,440</u>

ii. Reconciliation of Receivables Ledger control account and Receivable Ledger balances

	₦
Receivables ledger balances – Debit	116,374
Receivables ledger balances – Credit	<u>(1,234)</u>
	115,140
Centra entry	(700)
Credit balance error in P Quinn reversed	600
Allowances granted to customers earlier omitted	<u>(300)</u>
Balance as per receivables ledger control accounts	<u>114,740</u>

**b. Suspense Account**

	₦		₦
Balance b/d	3,310	Bank balance error (2 × 1700)	3,400
Insurance overcast	90	Cash account understated (345 – 245)	100
Payables	<u>100</u>		
	<u>3,500</u>		<u>3,500</u>

**c. i Payables Ledger Control Accounts**

	₦		₦
Purchases invoice overstated by	198		
M Quinns	600	Balance b/d	80,901
Purchases overcast	1,000		
Balance c/d	<u>79,103</u>		
	<u>80,901</u>		<u>80,901</u>

**ii. Reconciliation of Payables control account to Payables ledger account**

Opening payables credit balances	80,412
Opening payables debit balances	<u>(1,111)</u>
	79,301
Purchases invoice overstated (654 – 456)	<u>(198)</u>
Balance as per payables ledger control	<u>79,103</u>

**MARKING GUIDE**

**Marks**

**a. Reconciliation of receivables ledger control with receivables ledger balances**

8 entries at 1 mark per tick

8

**b. Suspense Accounts**

- 5 entries at ½ mark each

2½

Workings – 2 entries at ½ mark each

1

Total figure 1 entry @ ½

½

4

**c. Reconciliation of Payables ledger control with Payable ledger balances 8 entries @ 1 mark each**

8

**Total**

20

## EXAMINER'S REPORT

The question tests candidates' knowledge on how to reconcile control accounts with the individual ledger accounts.

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

Candidates failed the question because they did not have a good understanding of the difference between the entries/transactions affecting control accounts and the individual ledger accounts.

Control accounts include a summary of transactions in the day books that have occurred in the period, while ledger accounts are a separate account for each credit customer or credit supplier.

Reconciliation is necessary because of errors in the day books or individual accounts or both. The errors might include errors of addition, wrong posting of figures from day books or from individual customer's or supplier's balances. The correction to be made depends in which account the error is committed.

Candidates are advised to grasp well the principles of double-entry and study this area in the study text in-depth.

## SOLUTION 5

### MR. MALA'S BOOKSHOP

#### (a) Estimate of Mala's profit for the year ended 31 December 2015

	<b>N'000</b>	<b>N'000</b>
Networth as at 31 December 2015 (w1)		17,290
Less Net worth at 1 Jan 2015 (w1)		<u>12,570</u>
Increase in net worth		4,720
<b>Add:</b> Drawings of Inventory	1,200	
Drawing in cash and kind	<u>2,800</u>	<u>4,000</u>
		8,720
<b>Less:</b> Expenses not yet adjusted		
Bad debt written off	300	
Notional Rent	1,000	
Depreciation on Furniture & fitting	300	
Depreciation on Delivery Van	<u>720</u>	<u>2,320</u>
Net profit for year		<u><u>6,400</u></u>



**Mr. Mala's Bookshop**

**(b) Statement of financial position as at December 31, 2015**

	Cost	Acc. Depr.	Carrying Value
<b>Non-Current Assets:</b>	<b>₦'000</b>	<b>₦'000</b>	<b>₦'000</b>
Furniture & fittings	2,000	300	1,700
Delivery van	3,600	720	2,880
	<u>5,600</u>	<u>1,020</u>	4,580
<b>Current Assets:</b>			
Inventories		22,400	
Trade receivables	9,800		
Irrecoverable debt	<u>(300)</u>	9,500	
Bills receivables		3,200	
Cash in hand		<u>890</u>	
Total Current Assets			<u>35,990</u>
<b>Total Assets</b>			<u><b>40,570</b></u>
<b>Equity and Liabilities:</b>			
Equity at start			12,570
Additional capital introduced (notional rent)			1,000
Net profit for the year			6,400
Drawings			<u>(4,000)</u>
Equity at end			15,970
<b>Current Liabilities:</b>			
Trade payables		8,400	
Bills payables		2,200	
Bank overdraft		<u>14,000</u>	
Total Liabilities			<u>24,600</u>
<b>Total Equity and Liabilities</b>			<u><b>40,570</b></u>

**WORKING NOTES**

**W1 Calc. of Net Worth/Capital as at**

	1 Jan, 2015		31 Dec, 2015	
	₦'000	₦'000	₦'000	₦'000
Non-current assets:				
Furniture & Fittings		2,000		2,000
Delivery Vans		3,600		3,600
Current Assets:				
Inventory		20,400		22,400
Sundry receivables		12,400		9,800
Bills receivables		3,100		3,200
Cash in hand		<u>400</u>		<u>890</u>
		41,900		41,890

Less current liabilities:				
Sundry payables	9,120		8,400	
Bills Payables	2,210		2,200	
Bank Overdraft	<u>18,000</u>	(29,330)	<u>14,000</u>	(24,600)
Networth/capital		<u>12,570</u>		<u>17,290</u>

## MARKING GUIDE

	Marks
a. Estimate of Profit or Loss:	
12 entries at ½ mark each	6
b. Statement of Financial position	
20 entries at ½ mark each	10
Workings – Net worth/Capital: 16 entries at ¼	4
<b>Total</b>	<u><b>20</b></u>

## EXAMINER'S REPORT

The basic principle examined in this question is candidates' ability to prepare financial statements by first deducing the profit for the period from the difference in capital balances at the end and beginning of the period. This requires the application of the accounting equation where:

closing capital = opening capital + profit/(loss) for the period less drawings.

Over 80 percent of the candidates attempted this question and the performance was above average.

However, few candidates who failed the question did not apply the equation correctly. To obtain profit as the subject of the equation:

profit = closing capital + drawings – opening capital.

The ICAN Study Text is very explicit on how to prepare financial statements from incomplete records and single entries. Candidates are advised to Study the text in-depth.

## SOLUTION 6

- (a). Classification of expenditure into Revenue or Capital
- A number of new cars that had recently been cleared by a motor car dealing company - **Revenue Expenditure**
  - Two new motor boats acquired by a ferry service agency **Capital Expenditure**

- iii. Vacant houses owned by an estate developing company in respect of which negotiations are ongoing for assistance for their sale to prospective landlords – **Revenue Expenditure**
- iv. New buildings acquired for the purpose of holding the items of plant and machinery belonging to a detergent manufacturing company – **Capital Expenditure**
- v. Cost of acquiring a leasehold property for office use – **Capital Expenditure**
- vi. Granites purchased by an engineering contractor for use at a construction site. – **Revenue Expenditure**
- vii. Cost of rehabilitating a dilapidated housing unit owned by an estate developer – **Capital Expenditure**
- viii. Repairs to plant and machinery in a manufacturing company – **Revenue Expenditure**

b) Recognition of the items in the Financial Statement

S/N	Recognition in the statement of profit or loss	Recognition in the statement of financial position
i.	Treated as purchases and added as part of cost of sale	Recognised as unsold inventories (if any) as part of current assets
ii.	Only the portion consumed as depreciation during the year will be recognised as part of operating expenses	Recognised as part of non-current asset at its carrying amount (i.e. cost less accumulated depreciation)
iii.	Treated as Inventories and added as part of cost of sale	Recognised as unsold inventories (if any) as part of current assets
iv.	Only the portion consumed as depreciation during the year will be recognised as part of operating expenses	Recognised as part of non-current asset at its carrying amount (i.e. cost less accumulated depreciation)
v.	Only the portion consumed as depreciation during the year will be recognised as part of operating expenses	Recognised as part of non-current asset at its carrying amount (i.e. cost less accumulated depreciation)
vi.	Recognised as a direct expense in the statement of profit or loss	Only accrued or prepaid (if any) of such expenses will be recognised in the statement of financial position.
vii.	Only the portion consumed as	Recognised as part of non-current

S/N	Recognition in the statement of profit or loss	Recognition in the statement of financial position
	depreciation during the year will be recognised as part of operating expenses	asset at its carrying amount (i.e. cost less accumulated depreciation)
viii.	Recognised as an operating expenses in the statement of profit or loss	Only accrued or prepaid (if any) of such expenses will be recognised in the statement of financial position.

c) Effect of the items on non-current assets register

The non-current assets register will only be affected by items ii, iv, v and vii and their effect on the non-current asset register is that it will only increase the value of the non-current asset by their carrying amount (i.e. Cost – Accumulated depreciation).

## MARKING GUIDE

		Marks
-Identification of 8 cost at ½ mark each		4
-Recognition in Statement of profit or loss at ¾ mark each	6	
-Recognition in Statement of Financial position Position at ¾ mark each	<u>6</u>	
		12
Identification of 4 items that affect asset register @ ½ mark	2	
Treatment in non-current asset register at ½ mark	<u>2</u>	<u>4</u>
<b>Total</b>		<b><u>20</u></b>

## EXAMINER'S REPORT

The question examines candidates' ability to identify capital and revenue expenditures from a set of given items and their treatments in the financial statements and non-current assets register.

About 90 percent of the candidates attempted the question and performance was average. Many candidates did well in part 'a' of the question. In part 'b' performance was poor because the candidates suggested that capital expenditure should be treated only in statement of financial position without stating the effect of the depreciation charged in the statement of profit or loss.

Moreover, the effect of revenue items on profit or loss was correctly mentioned with failure to note the effect of the accrual concept in the statement of financial position.

Few candidates did not know the use of non-current asset register and the effect of capital items on the register.

Candidates are advised to pay attention to details of every aspect of the syllabus as enunciated in the Study Texts.

# THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA

## FOUNDATION LEVEL EXAMINATION – MAY 2016

### MANAGEMENT INFORMATION

Time Allowed: 3 hours

SECTION A:

MULTIPLE-CHOICE QUESTIONS

(20 Marks)

INSTRUCTIONS

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 company pays a manager a salary of ₦40,000 monthly when production is below 320 hours, when the production is between 320-640 hours two managers would be required. This type of cost is called
  - A. Fixed cost
  - B. Variable cost
  - C. Stepped variable cost
  - D. Stepped fixed cost
  - E. Semi-variable cost
2. Which **ONE** of the following is **NOT** included in the cost of inventory in storage?
  - A. Direct materials cost
  - B. Direct labour cost
  - C. Direct expenses
  - D. Period cost
  - E. Production overhead
3. Which of the following is similar to accounting for scrap value of abnormal gain?
  - A. Accounting for scrap value of abnormal loss
  - B. Accounting for scrap value of normal loss
  - C. Accounting for scrap value of normal gain
  - D. Accounting for scrap value of by-products
  - E. Accounting for scrap value of joint products
4. The formula which states that total contributions equal units of sales multiplied by contribution per unit is correct if Selling price
  - A. And fixed cost are constant
  - B. And variable cost are constant
  - C. Varies and variable cost is constant
  - D. Varies and fixed cost is constant
  - E. And variable cost vary

Direct Material	₦10
Direct labour hour	₦30/12 minutes
Budgeted production	1,000,000 units
Budgeted production overhead	₦2,000,000

5. The following data were extracted from the records of ABCYZ Limited in respect of its product YZ:

The absorption rate using Direct Labour is

- A. ~~₦2.00~~
  - B. ~~₦8.00~~
  - C. ~~₦12.00~~
  - D. ~~₦24.00~~
  - E. ~~₦40.00~~
6. The net profit was ₦2,650,000 using absorption costing and the closing inventory was 14,600 units. Production overhead absorption rate was ₦18.50 per unit. If the Non-production absorption rate was ₦14.00 per unit, then the net profit using marginal costing is
- A. ~~₦2,379,900~~
  - B. ~~₦2,445,600~~
  - C. ~~₦2,650,000~~
  - D. ~~₦2,854,400~~
  - E. ~~₦2,920,100~~
7. The following are functional budgets **EXCEPT**
- A. Sales budget
  - B. Production budget
  - C. Distribution budget
  - D. Cash budget
  - E. Selling cost budget
8. The budgetary system that requires each budgeting unit to justify all costs in each year rather than year-to-year cost change is called
- A. Incremental budget
  - B. Rolling budget
  - C. Flexible budget
  - D. Zero-based budget
  - E. Program planning budgetary system

9. A company budgets to sell 55,000 units of its products at ~~₦~~40 per unit for a variable cost of ~~₦~~15. If the fixed cost for the period is expected to be ~~₦~~340,000, then the contribution/sales ratio is
- 60.5
  - 61.5
  - 62.5
  - 63.5
  - 64.5
10. The functions of a Budget Committee include the following EXCEPT
- Establishment of budget procedures and time table
  - Installation of production capacity for the business
  - Revision and acceptance of budgets
  - Co-ordination of business forecasts
  - Review of performance report
11. A company manufactures a single product with a sales price of ~~₦~~1,000 and a marginal cost of ~~₦~~650. If the fixed cost is ~~₦~~685,300 per annum, then the number of units required to Break Even is
- 1950
  - 1,955
  - 1958
  - 1985
  - 1988
12. The intentional over estimation of expenses and/or under estimation of revenue in a budget is the definition of
- Budget slack
  - Sub-optimisation
  - Budget targets
  - Incremental budgeting
  - Budget setting
13. Which of the following is **NOT** an element of a control system?
- Behavioural capability
  - Input, process, output
  - Sensor
  - Comparator
  - Effector
14. Which of the following is **NOT** an output device for a computer system?
- Monitor
  - Printer
  - Pointer
  - Speaker
  - Projector



15. **THREE** categories of System Software are: Operating System Software, Utility Software and
- A. Communication Software
  - B. Application Software
  - C. Language Translator
  - D. Java
  - E. Editor
16. Information Technology (IT) describes the application of computer systems and ..... to store, retrieve, transmit and manipulate data.
- A. Telecommunication Equipment
  - B. Telecommunication Media
  - C. Transmission Signets
  - D. Synchronous Transmission
  - E. Telecommunication Software
17. Which of the following is **NOT** a computer network configuration?
- A. Star network
  - B. Ring network
  - C. Bus network
  - D. Tree network
  - E. Circuit network
18. With reference to the web, the meaning of the acronym HTML is
- A. Hypertext Markup Language
  - B. Hypertext Makeup Language
  - C. Hypertest Markup Language
  - D. Hypertest Makeup Language
  - E. Hypertext Mark Language
19. The following are data processing methods **EXCEPT**
- A. Transaction Processing
  - B. Star-Ring Processing
  - C. Batch Processing
  - D. Online Processing
  - E. Real-time Processing
20. The following are measures for the management of risks **EXCEPT**
- A. Identifying risks to system security
  - B. Evaluating and prioritising the identified risks
  - C. Developing controls to avoid the identified risks or control the risk within acceptance limits
  - D. Implementing the controls and monitoring their effectiveness
  - E. Allowing the risks to manifest and monitor control

## SECTION B:

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

### QUESTION 1

- a. State any **TWO** advantages and any **TWO** disadvantages of absorption and marginal costing. (8 Marks)
- b. Grammar Limited manufactures product G of which the sales for the year 2015 was ₦25,000,000 at the unit price of ₦40. Production overhead and selling overhead were ₦2.50 and ₦1.50 per unit, respectively. The following additional information are available for the year 2015:

₦/unit

Direct material used	8.50
Direct labour	7.50
Fixed production overhead	6.00
Fixed selling overhead	2.00
Administration overhead	4.00

You are required to calculate:

- Full production cost per unit and value
- Variable cost per unit and value
- Contribution per unit and value
- Break-even point in value
- Total non-production cost per unit and value
- New break-even point (to the nearest Naira) if additional distribution expenses of ₦1.50/unit was incurred (12 Marks)

(Total 20 Marks)

### QUESTION 2

- a. "Under Zero-Based Budgeting, a budget decision must be made before including any decision package in the budget". State what factors you would consider in including a decision-package in a zero-based budget. (5 Marks)
- b. Mr. Kogberegbe, a small manufacturer, has approached you as a Cost Accountant with the following data:

## Sales Forecast

	<b>N</b>
June 2016	2,400,000
July 2016	2,800,000
August 2016	2,000,000
September 2016	3,000,000
October 2016	3,600,000
November 2016	3,800,000

### Additional information:

- Purchases are 45% of selling price and are paid for two months after delivery. Delivery is in the month of sales.
- Collections from sales are 25% in the month of sales less 2% cash discount, 55% in the month after sales and the balance in the third month after sales.
- Production overheads are paid in the same month in which they are incurred and this amounts to ~~N~~1,240,000 per month. Included in this amount are depreciation of ~~N~~70,000 and prepaid rent of ~~N~~500,000.
- Other expenses are paid for in arrears and these amount to ~~N~~620,000 per month.
- New plant of ~~N~~540,000 will be bought in the month of January and installed at a cost of ~~N~~75,000 the following month.
- Bank opening balance as at August 2016 shows an overdraft of ~~N~~2,150,000 and interest is charged at 3% of drawn down balance. Ignore other bank charges.

### Required:

Prepare a cash budget for Mr. Kogberegbe's business for the three months i.e, **September to November, 2016**. Calculate the values to the nearest naira and show all your workings.

(15 Marks)

**(Total 20 Marks)**

### QUESTION 3

HEALTH-GRACE limited produces one standard product called Bambino Syrup which sells at ₦20.00 per bottle. The trading results for the six months ended June 30, 2015 were as follows:

MONTH	SALES (UNITS)	PROFIT/ LOSS ₦
January	120,000	80,000
February	140,000	120,000
March	60,000	(40,000)
April	96,000	32,000
May	104,000	24,000
June	72,000	16,000

From the above information, you are required to calculate the following:

- Break-even point in units and Naira value (2 Marks)
- Fixed cost (2 Marks)
- Variable cost per unit (8 Marks)
- Profit volume ratio (2 Marks)
- Contribution, assuming 70,000 bottles are sold (2 Marks)
- Margin of safety assuming 90,000 bottles are sold. (1 Mark)
- The number of bottles to be sold to generate a profit after tax of ₦70,000 assuming the tax rate is 70%. (3 Marks)

(Total 20 Marks)

### QUESTION 4

- Define the term "Open System" (2 Marks)
- Enumerate **FOUR** ways by which each of the following open systems will adapt to its environment:
  - Deterministic Systems
  - Probabilistic Systems
  - Cybernetic Systems(12 Marks)
- Differentiate between Feedback and Feed forward control systems. (4 Marks)
- Define "Operating System" of a computer system. (2 Marks)

(Total 20 Marks)

### QUESTION 5

- a. Define the term:
- i. "Computer Network". (2 Marks)
- ii. "Protocol" in relation to data transmission and state **FOUR** of its properties. (6 Marks)
- b. Explain what is meant by Video Conferencing and state **FOUR** types of equipment used by participants in the process. (6 Marks)
- c. State **THREE** advantages and **THREE** disadvantages of Video Conferencing. (6 Marks)
- (Total 20 Marks)**

### QUESTION 6

- a. Define the term:
- i. "Data Transmission". (2 Marks)
- ii. "Data warehouse".
- iii. Explain the term "Error Detection" in relation to data transmission and list four error detection algorithms. (6 Marks)
- b. Quick Company Limited manufactures three products X, Y, and Z. Production and related costs have been budgeted for a period as follows:

	PRODUCT		
	X	y	Z
No. of Units	40,000	30,000	10,000
Direct Materials	600,000	300,000	160,000
Direct Labour	400,000	150,000	200,000
Machine hours	10,000	6,000	4,000
Overhead costs:			₦
Purchasing function			180,000
Machine related costs			114,000
Set-up cost			132,000
Storage			48,000
Materials handling			88,000
Inspection			<u>120,000</u>
			<u>682,000</u>

The following activities which are related to the product line have been budgeted for the period:

	PRODUCT			
	x	y	z	Total
Number of purchases	20	30	50	100
Number of stores requisitions	100	80	60	240
Number of set ups	80	140	1180	400
Number of movements of materials	120	36	20	176
Number of inspections	336	90	74	500

Required:

Calculate the cost per unit for each product using ABC system.

(10 Marks)  
(Total 20 Marks)

## **SOLUTION**

### **MCQ**

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

## **SOLUTION 1**

### **a. Advantages of Absorption Costing**

- i. Inventory values include an element of fixed production overhead. This is consistent with the requirement of the accounting standard.
- ii. Calculating under/over absorption of overhead is useful in determining overhead expenditure
- iii. By calculating full cost of sales for a product, it is possible to identify which products are profitable and which are being sold at a loss.
- iv. It is in compliance with the matching concepts

### **Disadvantages of Absorption Costing**

- i. It is a more complex system than marginal costing
- ii. It does not provide information that is useful for decision making
- iii. It does not support competitive pricing
- iv. It does not show a realistic profit that is backed up with cash
- v. It creates problems of calculation of over-and-under absorption of overheads

### **Advantages of Marginal Costing**

- i. It is easy to account for fixed overhead using marginal costing
- ii. There is no under/cover absorption of overheads with marginal costing
- iii. It provides useful information for decision making

### **Disadvantages of Marginal Costing**

- i. It does not value inventory in accordance with the accounting standards
- ii. It does not help to identify profitable products
- iii. It does not obey the matching concept
- iv. It is used only for internal decision making and therefore cannot be used for financial reporting



**b. GRAMMAR LIMITED**

$$\text{Production in units} = \frac{25,000,000}{40} = 625,000 \text{ units}$$

i. Full production cost per unit and value

	<del>N</del>
Direct material	8.50
Direct labour	7.50
Fixed production cost	6.00
Variable production cost	<u>2.50</u>
	<u>24.50</u>

$$\text{Value } 625,000 \times \text{N}24.50 = \text{N}15,312,500$$

ii. Variable cost per unit and value

	<del>N</del>
Direct machine	8.50
Direct labour	7.50
Variable production overhead	2.50
Selling Overhead	<u>1.50</u>
Variable cost per unit	<u>20.00</u>

$$\text{Value } 625,000 \times \text{N}20.00 = \text{N}12,500,000$$

iii. Contribution per unit and value

	<del>N</del>
Selling price	40.00
Variable cost	<u>(20.00)</u>
Contribution per unit	<u>20.00</u>

$$\text{Value } 625,000 \times \text{N}20.00 = \text{N}12,500,000$$

iv. Break even point in value

$$= \frac{\text{Fixed costs} \times \text{selling price}}{\text{Contribution per unit}}$$

$$= \frac{\text{N}12,500,000}{20} \times 40 = \text{N}25,000,000$$

- v. Total non-production cost per unit and value

	N
Fixed selling overhead	2.00
Variable selling overhead	2.50
Administration overhead	<u>4.00</u>
	<u>8.50</u>

$$\text{Value } 625,000 \times \text{N}8.50 = \text{N}5,312,000$$

- vi. New break-even cost point

$$= \frac{\text{New fixed cost} \times \text{Selling price}}{\text{New contribution/unit}}$$

$$= \text{N} \frac{(12 + 1.50 \times 625,000) \times 40}{18.50}$$

$$= \text{N} \frac{8,437,500 \times 40}{18.50} = \text{N}18,243,243$$

## MARKING GUIDE

a.	Two advantages of absorption costing (one mark each)	2	
	Two disadvantages of absorption costing (one mark each)	2	
	Two advantages of marginal costing (one mark each)	2	
	Two disadvantages of marginal costing (one mark each)	<u>2</u>	8
bi.	Computation of full production cost per unit	1	
	Computation of full production cost	1	
ii.	Computation of variable cost per unit	1	
	Computation of total variable cost	1	
iii.	Computation of total contribution per unit	1	
	Computation of total contribution	1	
iv.	Computation of Break-Even Point Value	2	
v.	Computation of total non-production cost per unit	1	
	Computation of total non-production cost	1	
vi.	Computation of new Break-Even Point	<u>2</u>	<u>12</u>
			<u>20</u>

## EXAMINER'S REPORT

This question is in two parts. The first part tests candidates' ability to decipher the merits and the demerits of Absorption Costing and Marginal Costing. The second part tests candidates' ability to compute various approaches to product cost computation.

In general, questions were attempted by about 70% of the candidates but performance was poor as about 30% of the candidates who attempted the question scored 50% and above of the allocated mark.

Candidates who did not do well exhibited the following inadequacies:

- i. Little understanding of absorption costing and marginal costing approaches
- ii. Mix-up of the merits and demerits of absorption costing and marginal costing
- iii. Relevance of absorption costing and marginal costing in management decision-making was poorly appreciated
- iv. Inability to seamlessly separate costs into their fixed and variable components
- v. Relevant and irrelevant costs were not sufficiently understood

Improvement in performance in future examinations will come if candidates

- i. Spend more productive time for their studies
- ii. Acquaint themselves more with recommended literature including the ICAN Study Text
- iii. Work on past question papers and solutions provided in the Institutes' Pathfinder

## SOLUTION 2

- a. The following are to be considered in decision package for a Zero-Based Budget
  - i. Purpose of the activity
  - ii. The likely results and benefit from the activity
  - iii. The resources required for the activity and their costs
  - iv. Alternative ways of achieving same purpose
  - v. A comparison of the cost and benefit of the activity

b.

**MR KOGBEREGBE**  
**CASH BUDGET FOR THE THREE MONTHS SEPTEMBER TO NOVEMBER 2016**

	September N'000	October N'000	November N'000
<b>RECEIPTS:</b>			
Collections from sales	<u>2,395</u>	<u>2,932</u>	<u>3,511</u>
Total inflow	<u>2,395</u>	<u>2,932</u>	<u>3,511</u>
<b>PAYMENTS:</b>			
Purchases	1,260	900	1,350
Production overheads	570	570	570
Other Expenses	620	620	620
Interest on overdraft	<u>57.3</u>	<u>60.67</u>	<u>37.23</u>
Total Outflow	<u>2,507.3</u>	<u>2,150.67</u>	<u>2,577.23</u>
Net Cash Inflow/ (Outflow)	(112.3)	781.33	933.77
Balance brought forward	(1,910)	(2,022.3)	(1,240.97)
Balance carried forward	(2,022.3)	(1,240.97)	(307.2)

Workings:

Collection from sales:	September N'000	October N'000	November N'000
July	560	2,150.67	2,577.23
August	1,100	400	
September	735	1,650	600
October		882	1,980
November			<u>931</u>
<b>TOTAL</b>	<u>2,395</u>	<u>2,932</u>	<u>3,511</u>

**MARKING GUIDE**

a. 5 factors to consider in including a decision package (1 mark each)

5

b. 3 ticks for sales (Sept, Oct, Nov)  
3 ticks for total receipts (Sept, Oct, Nov)  
3 ticks for purchases (Sept, Oct, Nov)  
3 ticks for production overhead (Sept, Oct, Nov)  
3 ticks for other expenses (Sept, Oct, Nov)  
3 ticks for interest on bank loan (Sept, Oct, Nov)  
3 ticks for total payments (Sept, Oct, Nov)

3 ticks for net cash flow(Sept, Oct, Nov)

3 ticks for opening cash balance (Sept, Oct, Nov)

3 ticks for closing cash balance (Sept, Oct, Nov)

30 ticks @ ½ mark per tick

15

20

### EXAMINER'S REPORT

This question is split into (a) and (b). Part (a) tests candidates' understanding and the intricacies of Zero-Based Budget. The part (b) tests the extent to which candidates understand the variability's in cash budget.

This question appears popular among the candidates as about 80% of them attempted it.

Performance was, however, fair as about 60% of the candidates who attempted the question scored 50% of the marks obtainable.

Common pitfalls demonstrated by candidates include the following:

- i. Inability to generate the sales and purchases figures for the relevant months in the Cash Budget
- ii. Inaccurate arithmetic
- iii. Timing of outflow for a number of payments was poor
- iv. Working was not shown on many occasions thereby leading to loss of marks

It is recommended that:

- i. Candidates should use more of past question papers and their solutions as part of their preparation for future examinations
- ii. Cover the contents of the syllabus more effectively and assiduously
- iii. Spend more productive time for preparation
- iv. Vary good quantity texts in their preparation

### SOLUTION 3

a. Break-even point in units = Total fixed cost/contribution per unit  
= ₦160,000/(20-18) = 80,000 units

Break even point in value = Total fixed cost/contribution Margin Ratio  
= ₦160,000/(2/20) = ₦1,600,000

b.  $a = y - bx$

where a = total fixed cost

b = variable cost per unit, and

x = units produced

Using January figures,

$$\begin{aligned} a &= ((\text{N}20 \times 120,000) - \text{N}80,000) - (\text{N}18 \times 120,000) \\ &= \text{N}2,320,000 - \text{N}2,160,000 \\ &= \underline{\underline{\text{N}160,000}} \end{aligned}$$

c. Using High and Low Methods

	High	Low
Units	120,000	60,000
Selling price per unit	<del>N</del> 20	<del>N</del> 20
	<del>N</del>	<del>N</del>
Sales value	2,400,000	1,200,000
Total cost	<u>2,320,000</u>	<u>1,240,000</u>
Profit/Loss	<u>80,000</u>	<u>40,000</u>

$$\frac{\text{Change in Cost}}{\text{Change in activity level}}$$

$$= \frac{2,320,000 - 1,240,000}{120,000 - 60,000}$$

$$= \frac{1,080,000}{60,000} = \underline{\underline{18}}$$

Variable cost per unit = ~~N~~18

a. Profit/Volume Ratio =  $\frac{2}{20} \times 100 = 10\%$

b. Contribution assuming 70,000 bottles are sold:

$$70,000 \times \text{N}2 = \underline{\underline{\text{N}140,000}}$$

c. Margin of safety assuming 90,000 bottles are sold:

$$90,000 - \text{BEP in units} = 90,000 - 80,000 = \underline{\underline{10,000 \text{ units}}}$$

- d. Sales in units = (Total fixed cost + target profit) / contribution per unit
- e. Target profit =  $\text{N}70,000/30\% = \text{N}233,333$   
 Sales in units =  $(\text{N}160,000 + \text{N}233,333)/2 = \underline{\underline{196,667 \text{ bottles}}}$

## MARKING GUIDE

a.	Computation of break-even point in unit	1	
	Computation of break-even point in value	<u>1</u>	<u>2</u>
b.	Statement of formula for deriving fixed cost	1	
	Computation of fixed cost	<u>1</u>	<u>2</u>
c.	Using high and low Method:		
i.	Sales value under high and low	2	
ii.	Total cost under high and low	2	
iii.	Profit/Loss under high and low	2	
iv.	Derivation of variable cost per unit	<u>2</u>	<u>8</u>
d.	Computation of profit/volume ratio	2	
e.	Computation of unit of contribution	1	
	Computation of unit of contribution	<u>1</u>	<u>2</u>
f.	Computation of Margin of Safety	1	
g.	Statement of Formula	1	
	Computation of target profit	1	
	Computation of number of units to achieve target profit	<u>1</u>	<u>3</u>
			<u>20</u>

## EXAMINER'S REPORT

This question tests candidates' understanding of profit/volume relationship and the components of the Break-Even analysis such as: variable costs, fixed costs, contribution, Break-Even point and margin of safety.

About 50% of the candidates attempted this question and performance was good.

The candidates who performed below average showed some similar characteristics in the following areas:

- i. Inability to segregate costs into their fixed and variable parts
- ii. Contribution could not be correctly determined
- iii. The concept of Break-Even point was poorly understood
- iv. The margin of safety was not understood and its interpretation was incorrect.

Candidates are likely to perform much better in future examinations if they:

- i. Familiarise themselves with copies of recent Pathfinder
- ii. Study harder with a view of improved performance

#### **SOLUTION 4**

- a. Open System is a system that interacts with the environment. Therefore, the environment will affect the system and the system will affect the environment. All businesses, social and information systems are open systems.

- b. **Properties**

- i. Deterministic systems:  
The properties include:
  - Use predetermined rules
  - They have predicted operations
  - They give predictable outputsExamples are machines and computer program
- ii. Probabilistic system:  
The properties include:
  - Assigns a probability to future events
  - Its behaviour is less easy to predict
  - Forecasts are based on past eventsAn example is businesses
- iii. Cybernetic system:  
The properties include:
  - It is self organising
  - It is complex in nature
  - It is continually changing
  - It is not easily amenable to computerisationAn examples is trade union negotiation



- c. Feedback control involves a sensor taking a measurement and an adjustment is then made to the system in response to the result of the measurement. In essence, feedback control reacts to something that has already happened.

On the other hand, feed forward control makes control adjustments based on attempting to achieve a particular outcome that has not yet happened.

(4 Marks)

- d. An operating system (OS) of a computer system is the system software that controls the operations of the computer.

(2 Marks)

**(Total 20 Marks)**

## MARKING GUIDE

a.	2 marks for 'interact with the environment'	2	2
bi.	1 mark for each of the 4 properties of Deterministic system	4	
ii.	1 mark for each of the four properties of Probabilistic system	4	
iii.	1 mark for each of the four properties of Cybernetic System	<u>4</u>	12
c.	<b><u>Feedback</u></b> 1 mark for 'taking part of output', 1 mark for 'to adjust the operation'	2	
	<b><u>Feedforward</u></b> 1 mark for 'to achieve a particular future outcome' 1 mark for 'outcome has not occurred'	<u>2</u>	4
d.	1 mark for 'it is a system software', 1 mark for 'controls the operation of the computer'	<u>2</u>	<u>2</u>
	<b>TOTAL</b>		<b><u>20</u></b>

## EXAMINER'S REPORT

This question tests candidates' understanding of the definition and explanation of a number of Information Technology terminologies.

The question appears popular among the candidates. About 70% of the entire candidates attempted this question and performance was good as about half of the candidates who attempted this question scored 60% and above of the allocated marks.

Common pitfalls among candidates who performed below average were as follows:

- i. Inadequate definition of 'Open System'
- ii. There was a complete mix-up in the meaning of Deterministic System, Probabilistic System and Cybernetic System
- iii. The meaning of feedback and feed forward was interposed and attempts didn't show a clear understanding of the subject matter

Candidates' performance will improve in future if they:

- i. Read modern day texts including the ICAN Study Texts and Pathfinder
- ii. Spend more quality time for preparation
- iii. Practice with past question papers

## **SOLUTION 5**

- a. A Computer Network is a telecommunications infrastructure that allow computers to exchange data with each other.

The computer link that exists is either physical media or wireless media  
(2 Marks)

- b. A Protocol is a rule or convention or standard that governs communication over a network. It controls or enables the connection, communication and data transfer between competing endpoints. It may be implemented by hardware or software or both.  
(2 Marks)

### **Properties of Protocol include:**

- How to detect unexpected loss of the connection and what to do next
- Detection of the underlying physical connection or the existence of the other endpoints.
- How to start and end a message
- How to format a message
- Termination of a session and/or connection.
- What to do with corrupted or improperly formatted message (4 Marks)

- c) Video Conferencing is a telecommunication system used by people in different physical locations to hold a meeting (called a virtual meeting).  
(2 Marks)

### **Equipment used:**

- Video input: Camera or webcam
- Video output: Computer monitor, projector or television
- Audio input: Microphone
- Audio output: Loudspeaker, headphone
- Data transfer: Internet

- Computer with video conferencing software including video and audio compression and decompression.
- Desktop systems
- Dedicated systems (4 Marks)

d) **Advantages of Video Conferencing**

- Best option when face-to-face meeting is not possible
- Reduces travel costs
- Increased productivity among dispersed workforce and team
- It encourages short notice meetings
- It improves hiring and retention of high level personnel in different locations
- No need to leave the desk (3 Marks)

**Disadvantages of Video Conferencing**

- Eye contact: It can often give the incorrect impression that the remote participant is avoiding eye contact.
- Appearance consciousness by the participants
- Change in bandwidth or signal quality will affect video conferencing
- Limited non-commercial take-up
- Anxiety by some participants for appearing on camera

(3 Marks)

**(Total 20 Marks)**

## MARKING GUIDE

a.	1 mark for 'telecommunication infrastructure', 1 mark for 'exchange data with each other'	2	2
bi.	1 mark for 'convention or rule', 1 mark for 'communication over a network'	2	
ii.	1 mark for each of four properties of protocol	<u>4</u>	6
ci.	<b>Video Conferencing</b>		
	1 mark for 'to hold meeting in different physical locations'	2	
ii.	1 mark for each of four equipment used	<u>4</u>	6
di.	1 mark for each of three advantages	3	
ii.	1 mark for each of three disadvantages	3	<u>6</u>
	<b>TOTAL</b>		<b><u>20</u></b>

## EXAMINER'S REPORT

This question seeks to test candidates' ability to define and explain some Information Technology terminologies

About 70% of the total population attempted this question and performance was above average.

Candidates whose performance was below average showed similar traits of shortcomings as described below:

- i. Many candidates could not define the concepts properly
- ii. The terminology 'Protocol' with reference to Information Technology was literally interpreted to mean the word 'Protocol' in government settings
- iii. The term 'Computer Network' was poorly explained as an Information Technology terminology. Many candidates interpreted this along the line of service providers in telephoning.

For improved performance in future, candidates are enjoined to:

- i. Have a good mastery of important Information Technology terminologies (through good quality texts).
- ii. Cover the contents of the syllabus very effectively

## **SOLUTION 6**

- a.
  - i. Data transmission is the physical transfer of data over a point-to-point or point-to-multipoint communication channel. Copper twisted wires, optical fibres, wireless communication channel are examples of communication channels
  - ii. A data warehouse is a large database containing operational data from different I.T. systems including legacy systems. It also has reporting and query tools, so that the data can be analysed and information presented in report format. In other words, data warehouse is any centralised data repository which can be queries for business benefit.
  - iii. Error detection is the ability to recognise the presence of error caused by noise or other impairments during transmission from the transmitter to the receiver.

### **Error detection Algorithms are**

- Repetition schemes
- Parity Schemes
- Checksum
- Cyclic redundancy checks

b. Cost per unit for each product using ABC system

Product	X	Y	Z
	₦	₦	₦
Direct materials	600,000	300,000	160,000
Direct labour	400,000	150,000	200,000
Machine costs	57,000	34,200	22,800
Purchase function	36,000	54,000	90,000
Storage	20,000	16,000	12,000
Set-up costs	26,400	46,200	59,400
Material handling	60,000	18,000	10,000
Inspection	80,640	21,600	17,760
	1,280,040	640,000	571,960
Cost per unit	₦1,280,040	₦640,000	₦571,960
	40,000 units	30,000 units	10,000 units
	₦32	₦21.33	₦57.20

**MARKING GUIDE**

ai.	1 mark for 'physical transfer of data', 1 mark for 'communication channel'	2	
ii.	1 mark for 'ability to recognise', 1 mark for 'presence of noise'	2	
	1 mark for each of four error detection algorithms	4	
iii.	1 mark for 'large database', 1 mark for 'has reporting and query tools'	2	<u>10</u>
b.	Determination of Overhead Absorption rates (OAR) for:		
i.	Purchasing function	½	
ii.	Machine Related Cost	½	
iii.	Set-up Cost	½	
iv.	Storage	½	
v.	Materials Handling	½	
vi.	Inspection	½	
	Total costs for products X, Y and Z and Grand Total (1 mark each)	4	
	Units Produced X, Y and Z (½ mark each)	1½	
	Cost per unit X, Y and Z (½ mark each)	1½	<u>10</u> <u>20</u>

## EXAMINER'S REPORT

This question is in two parts:

**Part a** tests candidates' level of understanding of the explanation and definitions of some computer terminologies while **Part b** tests their mastery and ability to compute product costs given required information and using the ABC System.

The question was popular among the candidates as about 80% of the population attempted the question. Performance was good as about half of the candidates scored 50% and above.

Those candidates who performed poorly exhibited a number of common shortcomings summarized below:

- i. Data workhouse could not be adequately explained
- ii. Candidates did not have a good knowledge of 'Error Detection' as Information Technology terminology and the error detection algorithms seem strange to them.
- iii. The term "ABC" seemed strange to candidates
- iv. Inability to determine and apportion overhead related costs
- v. Confusion as to the exact requirements of the question.

Improvement will come in future if candidates:

- i. Understand the requirements of a question before attempting to proffer a solution
- ii. Appreciate the peculiarities of ABC and the need to be better grasped
- iii. Read modern and up to date texts including ICAN Study Texts and Pathfinder
- iv. Familiarise themselves with definitions of Information technology terminologies

**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF NIGERIA**

**FOUNDATION LEVEL EXAMINATION – MAY 2016**

**BUSINESS LAW**

**Time Allowed: 3 hours**

**SECTION A: MULTIPLE –CHOICE QUESTIONS (20 Marks)**

**INSTRUCTIONS: 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. Laws made by the National Assembly are known as
  - A. Acts
  - B. Decrees
  - C. Edits
  - D. Bye-Laws
  - E. Regulations
2. In a civil action, the person that is sued is known as
  - A. The accused
  - B. The defendant
  - C. The Dependant
  - D. The claimant
  - E. The respondent
3. Which of the following is **NOT** contained in the Articles of Association of a company?
  - A. Appointment of Directors
  - B. Share transfer procedures
  - C. Appointment and remuneration of auditors
  - D. Procedures at meetings
  - E. Object clause
4. Which of the following is **NOT** a characteristic of a partnership?
  - A. Sharing loses
  - B. Sharing profits
  - C. Business
  - D. Liability to pay income tax on its profits
  - E. The pooling of resources together

5. The action of a limited liability company is considered ultra vires where it is **NOT** contained in
- A. The capital clause
  - B. The subject clause
  - C. The authorization clause
  - D. The Code of corporate governance
  - E. The object or business clause
6. A company is said to be insolvent when it is unable to pay its debts within three weeks after a written demand for the payment of an amount of money exceeding
- A. ₦1,500
  - B. ₦2,000
  - C. ₦5,000
  - D. ₦7,500
  - E. ₦10,000
7. Ethical codes are administered by professional bodies to ensure all of the following **EXCEPT**
- A. Maintain high standard in the profession
  - B. Protect the vulnerable client
  - C. Prevent arbitrary use of power
  - D. Prevent quackery in the profession
  - E. Maintain a monopoly of the profession
8. Where a student materially alters his school certificate result to gain an advantage for admission to a higher institution, he has committed an offence called
- A. Examination malpractice
  - B. Stealing
  - C. Forgery
  - D. Cheating
  - E. Conversion
9. The Money Laundering (Prohibition) Act provides that no individual person shall make or accept cash payment, **EXCEPT** through a financial institution, of an amount of money exceeding the sum of
- A. ₦1,500.00
  - B. ₦2,000.000
  - C. ₦3,000.000
  - D. ₦4,000.000
  - E. ₦5,000.000



10. The maximum term of imprisonment on conviction for an economic crime is
- A. 10 years
  - B. 15 years
  - C. 18 years
  - D. 20 years
  - E. 25 years
11. Computer generated evidence is admissible in evidence in a Court of law **EXCEPT** where
- A. The processed information is not altered
  - B. The document described the manner of production of the statement
  - C. The computer used was in regular operation
  - D. The processed document is appropriate for the purpose
  - E. It is not from proper custody
12. Which of the following is **NOT** an element of a valid contract?
- A. Consideration
  - B. Intention to create legal relations
  - C. Acceptance
  - D. Injunction
  - E. Offer
13. Agency of necessity may be created in all the following circumstances **EXCEPT** where it is
- A. An emergency
  - B. Impossible to communicate with the principal
  - C. To make secret profit
  - D. An action in good faith
  - E. To prevent irreparable loss
14. The following are disqualified from being directors of a company **EXCEPT**
- A. A person under the age of 18
  - B. An insolvent person
  - C. A person certified to be insane
  - D. A 30-year old unemployed person
  - E. A corporate other than its accredited representative
15. Which of the following is **NOT** an implied term in a sale of goods contract?
- A. The seller having title to the goods
  - B. The goods corresponding with the description
  - C. The sample of goods corresponding with the bulk
  - D. The goods being of satisfactory quality
  - E. The government being informed about the transaction

16. In a hire purchase transaction, the hirer becomes the owner of the good when he
- A. Pays a certain amount
  - B. Is in possession
  - C. Executes the agreement
  - D. Exercises the option to purchase as provided in the agreement
  - E. Completes the instalment payments
17. Insurance contract is broadly divided into
- A. Two categories
  - B. Three categories
  - C. Four categories
  - D. Five categories
  - E. Six categories
18. Which of the following is a negotiable instrument?
- A. Share certificate
  - B. Cheque
  - C. Postal order
  - D. Money order
  - E. Bill of lading
19. The probationary period of employment is to test the employee's
- A. Skill and suitability
  - B. Obedience
  - C. Eloquence
  - D. Emotions
  - E. Background
20. The persons who are granted Letters of Administration by the Probate Division of a High Court are called
- A. Executors
  - B. Executioners
  - C. Trustees
  - D. Administrators/Administratrix
  - E. Sheriffs of Court

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

- a. The Constitution of the Federal Republic of Nigeria is the Supreme Law of the land.

**Required:**

State **FOUR** Characteristics of the Constitution of the Federal Republic of Nigeria. (4 Marks)

- b. Stealing is an offence punishable by the State.

**Required:**

- i. Explain briefly the meaning of stealing. (2 Marks)

- ii. Onyi collected the sum of ~~₦~~40,000 from Ade for the purpose of assisting him to obtain a UK scholarship to study law abroad. Onyi expended the money on his own children's school fees at Okada High College. Ade did not obtain the UK scholarship, and demanded Onyi to refund his money. Onyi did not refund the money. Ade has come to you for advice.

**Required:**

Advise Ade on what actions he should take to enforce his legal rights. (4 Marks)

- c. A company is an artificial person that functions through natural persons.

**Required:**

- i. What is the minimum number of directors of a company? (1 Mark)
- ii. Explain briefly how directors of a company are appointed. (3 Marks)
- iii. Explain **THREE** powers exercised at a General Meeting of a company. (6 Marks)

**(Total 20 Marks)**

## QUESTION 2

- a. Courts are arranged in order of hierarchy from the lowest to the highest.

**Required:**

- i. Explain briefly the term 'Coordinate Jurisdiction'. (2 Marks)
- ii. State **TWO** Courts that are on the same level of hierarchy (2 Marks)

- b. For a contract to be valid, there must be offer and acceptance, among other elements.

**Required:**

- i. Explain briefly "Counter-Offer" in the law of contract. (2 Marks)
- ii. State **FOUR** circumstances that may led to the termination of an offer (4 Marks)
- iii. Esther sold a bale of Ankara cloth to Mama Ope who agreed that she would not sell the cloth above ₦1,000 per piece. Bode bought twenty pieces of the cloth from Mama Ope at ₦1,000 per piece and later resold them at ₦1,500 per piece. Esther wants to sue Bode for breach of contract.

**Required:**

Advise Esther on her legal rights in this case. (3 Marks)

- c. Money Laundering (Prohibition) Act was enacted to check economic crimes.

**Required:**

Explain briefly the following:

- i. Mandatory disclosure by financial institutions under the Money Laundering (Prohibition) act, and the limitation of lodgement of funds by a corporate body. (4 Marks)
- ii. Surveillance on bank account. (3 Marks)

**(Total 20 Marks)**

### QUESTION 3

- a. Negotiable instruments are used in commercial transactions.

**Required:**

Explain briefly

- i. Parties to a Bill of Exchange (3 Marks)
- ii. General Acceptance of a Bill (3 Marks)

- b. Trust is created for the benefit of some other persons.

**Required:**

- i. Explain the term "Trust". (3 Marks)
- ii. State **THREE** uses of Trust. (3 Marks)

- c. Otegbade & Company Limited, a shoe producing company, employed Tajü as a Cobbler in the factory. The Managing Director of the company ensures that, in line with the health and safety policy of the factory, workers are provided with working tools and safety equipment, including protective glasses, which he always insists workers in the factory must wear during working hours. Tajü disregarded the company's safety policy. In the course of filing the heel of a shoe he was producing yesterday, and while not wearing the protective glasses, plastic particles entered his eyes and have permanently damaged his eye sight. The company denies liability. Tajü is threatening to sue the company, and he has come to you for advice.

**Required:**

Advise Tajü on his legal rights in this matter. (6 Marks)

- d. Insurance is to mitigate the effect of losses when they occur.

**Required:**

Explain briefly the term "Insurable Interest". (2 Marks)

**(Total 20 Marks)**

#### QUESTION 4

- a. Femi, an entrepreneur, and his friend Umukan, a Chartered Accountant, are members of the same social club. Femi invited Emike to invest in sachet water business. Emike sought the professional advice of Umukan and paid him a fee for the advice. Umukan informed Emike that Femi's business was doing well. Emike invested to the business based on Umukan's professional advice and eventually suffered a loss of ₦350,000. Emike has come to you for advice.

**Required:**

Advise Emike on his chances of succeeding in a legal action he intends to institute against Umukan. (4 Marks)

- b. i. Partnership is a form of business association that requires pooling of resources together.

**Required:**

State **SIX** clauses that should be included in a Partnership Deed.

(7 Marks)

- ii. Ade, Uzo and Yemoh formed a partnership to carry on trade in palm produce. The other partners mandated Yemoh to be in full control in the running of the partnership. The partnership suffered losses and incurred debts of ₦3,000,000. Ade and Uzo are refusing to pay part of the debts, saying they were not involved in the management of the firm. Yemoh has come to you for advice.

**Required:**

Advise Yemoh on the legal action, if any, he could take to recover contribution from Ade and Uzo. (6 Marks)

- c. Equity develops from the harshness of common law.

**Required:**

Explain briefly **TWO** equitable remedies.

(4 Marks)

**(Total 20 Marks)**

## QUESTION 5

- a. Natural persons run the business of companies, and the principal officers manage them.

**You are required to state:**

- i. **TWO** persons that could be appointed Secretary of a public company. (2 Marks)
- ii. **THREE** specific duties of a Company Secretary (3 Marks)
- iii. Mr Okoruma a flamboyant person, is the Company Secretary of Lukka Company Plc. He hired expensive cars in the name of the company, which he used for his personal purposes. The board has refused to pay the debts incurred by Mr. Okoruma for the car hire.

**Required:**

Advise Mr. Okoruma. (3 Marks)

- b. State **SIX** circumstances under which a company can be placed under Receivable. (6 Marks)
- c. Criminal Law and Ethical Codes are to control the conduct of men and professional in a state.

**You are required to:**

Explain briefly:

Criminal Law (2 Marks)

i. Ethical Codes (2 Marks)

ii. Bribery (2 Marks)

**(Total 20 Marks)**

## QUESTION 6

- a. The nature of a business relationship determines the rights and duties arising therefrom.

**You are required to state the following:**

- i. **THREE** rights of an agent in agency law; (3 Marks)
- ii. **THREE** rights of hirer in hire purchase transactions; (3 Marks)
- iii. **THREE** classes of goods in sale of goods; (3 Marks)
- iv. Capacity of tortious acts and their exceptions; (4 Marks)

- b. Electronic evidence is now admissible in Court.

**Required:**

Explain briefly the conditions for the admissibility of computer generated evidence in Court.

(7 Marks)

**(Total 20 Marks)**



## **Multiple-Choice Questions**

### **Solutions**

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

### **EXAMINER'S REPORT**

**The questions were spread over the syllabus, and candidates' performance was good.**

## Solution 1

- (a) The Constitution of the Federal Republic of Nigeria is the Supreme Law of the Land. It has the following characteristics:
- i. Supremacy – It is the supreme law of the land. It is the organic law from which all authorities and organs of government derive their authority;
  - ii. It is written and rigid;
  - iii. Federalism – It is a Federal Constitution;
  - iv. Separation of powers – It separates the powers of the organs of government;
  - v. Rule of law – It is the law that rules and prevents arbitrariness
  - vi. Fundamental human rights. It makes provisions for the fundamental rights in Chapter IV.
- (b) The Criminal Code creates the offence of stealing or theft. A person who fraudulently takes anything capable of being stolen, converting it to his own use or the use of any other person with the intention of permanently depriving the owner of the thing or property is said to steal that thing or property. A person who steals, if found guilty, is liable to imprisonment for 3 years.

The issue in this case is stealing. The physical element of the offence is taking or “converting” the money capable of being stolen. The mental element is the intent, permanently to deprive the owner of the money.

Onyi collected the sum of ₦4,000 with the intention to permanently deprive Ade of the use of the money, and converting it to pay his own children’s school fees.

Ade was not given UK scholarship, and the money was not refunded on demand.

Ade is advised to report the matter to the Police, so that Onyi could be prosecuted in Court for stealing. On conviction, Onyi would be punished with a term of imprisonment.

Ade may also maintain a civil action against Onyi for the tort of conversion.

- (c)
- i. The minimum number of Directors of a company is two.
  - ii. The first directors of a company are usually appointed by the subscribers to the Memorandum of Association by naming them in the Articles of Association.  
Subsequent appointments are made by the General Meeting of members.
  - iii. The General Meeting of a Company exercises the following powers:
    - Declaration of dividends;
    - Appointment and removal of directors;
    - Appointment and fixing of the remuneration of the auditors of the company;
    - Appointment of members of the Audit Committee;
    - Receiving Directors' Report;
    - Receiving the financial statements; and
    - Auditor's Report thereon

## MARKING GUIDE

		Marks
(a)		
i.	Supremacy	1
ii.	Written and Rigid	1
iii.	Federalism	1
iv.	Separation of powers	1
v.	Rule of Law	1
vi.	Fundamental Rights	1
	Each correct characteristics earns one mark up to 4	4
(b)		
i.	Fraudulent taking or conversion of a thing capable of being stolen – <i>Actus reus</i>	1
	Intention to deprive owner of it – <i>Mens rea</i>	1
		2
ii.	Satisfaction of <i>actus reus</i> by Onyi	2
	Satisfaction of <i>mens rea</i> by Onyi	2
		4
(c)		
i.	Minimum of two (2) directors	1
ii.	First appointment by subscribers	1½
	Subsequent appointment by General Meeting	1½
iii.	Appointment and removal of directors	1
	Declaration of dividends	1
	Appointment of Auditors and fixing of their remuneration	1
	Appointment of Audit Committee Members	1
	Acting in matters where directors are disqualified ( 2 marks each for any correct 3)	-
		<u>6</u> <u>20</u>

## **EXAMINER'S REPORT**

The question tests candidate's knowledge of the characteristics of the Constitution, meaning and elements of stealing; minimum number of directors; appointment of directors; and the power of the General Meeting.

The candidates had a good understanding of the issues, and their performance of was good.

### **Solution 2**

- a.
- i. Coordinate jurisdiction means, being on the same level in the hierarchy of courts. The decisions of these courts are not binding on each other because they are on the same level. The decisions are only of persuasive authority. Courts of coordinate jurisdiction are bound to follow the decisions of higher courts.
  - ii. The Courts that are on the same level of hierarchy are as follows
    - Federal High Court;
    - High Court of the Federal Capital Territory
    - State High Court;
    - National Industrial Court;
    - Customary Court of Appeal; and
    - Sharia Court of Appeal
- b.
- i. Offer is a definite or clear intention to enter into contract on the basis of stated terms. Where a person to whom an offer is made responds by varying or modifying the terms, there is a counter offer. A counter offer is a rejection of an offer. It nullifies the offer and makes it unavailable for acceptance.
  - ii. As a general rule, an offer may be revoked before it is accepted. An offer may be terminated in the following ways.
    - i. By death of either party;
    - ii. By non acceptance within the timeline;
    - iii. Through a counter offer;
    - iv. By revocation before acceptance;
    - v. By intervening incapacity; or
    - vi. By failure of a condition precedent
  - iii. In contract, a person who is not a party to the contract cannot claim on it. The rule of privity states that a stranger to a contract cannot sue or be sued on it.

There is no privity of contract between Esther and Bode, therefore, Esther cannot succeed, if she sues Bode.

- c.
- i. The Money Laundering Act creates an exception to the duty of secrecy that financial institutions owe their customers. The Act provides that financial institutions shall disclose and report to Drug Law Enforcement Agency in writing within 7 days, any single transaction or transfer of funds in excess of
 

₦5,000,000, by an individual; and  
₦10,000,000, by a corporate body
  - ii. The Money Laundering (Prohibition) Act empowers the National Drug Law Enforcement Agency (NDLEA) to place any bank account under surveillance, tap any telephone line, have access to any computer system and obtain communication of any authentic instrument, private contract, financial and commercial records, so as to identify and locate narcotic drugs' proceeds.

## Marking Guide

			Marks
(a)			
i.	Courts of the same hierarchical level	2	2
ii.	Federal High Court	1	
	State High Court	1	
	High Court of the Federal Capital Territory	1	
	National Industrial Court	1	
	Customary Court of Appeal	1	
	Sharia Court of Appeal	1	
	(2 marks for any correct 2)		2
(b)			
i.	Counter offer – modification of original offer		2
ii	Death of either party	1	
	Lapse or exfluxion of time	1	
	Counter offer	1	
	Revocation	1	
	Intervening incapacity	1	
	Failure of condition precedent	1	
	(1 mark each for any 4)		4
iii.	Privity – contract binds only parties to it	2	
	No privity between Esther and Bode	2	
			4
c.			
i.	₦10,000,000 lodgment by Corporate body	2	
	₦5,000,000 lodgment by Individual	2	

- ii. Placing account on surveillance to locate narcotic drugs; wire tapping and computer surveillance 4

2  
20

## EXAMINER'S REPORT

The question tests candidates' understanding of hierarchy of courts, counter offer, termination of offer, privity of contracts as well as limits of fund lodgment and surveillance of bank account under the Money Laundering (Prohibition) Act.

Candidates' understanding of the question and their performance were quite good.

### Solution 3

- a. i. The parties to a Bill are
  - a. The Drawer: This is the person who draws and signs the bill i.e., the person giving the order to the drawer to pay;
  - b. The Drawee: This is the person who is ordered to pay. He is the person who is liable to pay the face value of the bill on maturity; and
  - c. The Payee: This is the person who is entitled to receive the face value of the bill, i.e., the person who is to receive the ascertained sum.
- ii. A General Acceptance is the drawee's assent to the order of the drawer without conditions. It is a confirmation that the drawee is in agreement with the terms of the bill as drawn.
- b. Trust can simply be said to be the binding equitable relationship by which a trustee is compelled to hold property (real or personal) in equity for the benefit of the beneficiaries of the trust property of whom he may be one, or for some object permitted by law.

Trust is useful in the following ways:

- i. It enables land to be held for the benefit of those who cannot hold it themselves;
  - ii. It facilitates the object of charitable purposes;
  - iii. It enables property to be used to the benefit of person in succession;
  - iv. It reduces the incidence of taxation;
  - v. It makes a gift dependent on the occurrence of an event; and
  - vi. It enables persons to make secret provisions in will.
- c. The employer in law is under a duty to provide safe work environment and proper tools for his employees. It is the law that if a servant is injured as a result of poor and unsafe or defective work environment, the employer will be liable to the employee in negligence.

In this case, the employer provided factory protective glasses with the instruction that workers should put them on.

Taju disregarded the instruction to wear glasses for safety. Therefore, Taju will not succeed if he sues the company, because the company took proper care to provide him with safe work tools.

- d. Insurable interest is the pecuniary or proprietary interest of an insured in the subject matter of the insurance contract, from which he stands to gain, if preserved, and stands to lose if the subject matter is not preserved.

### Marking Guide

		Marks
(a)		
i.	The drawer, drawee and payee	3
ii.	Assent to drawer's order without condition	3
		6
(b)		
i.	An equitable relationship involving trustee who holds property for beneficiaries	3
ii.	Holding of property for the ineligible persons	1
	Facilitation of objects of charitable purpose	1
	Giving of property to benefit persons in succession	1
	Reduction of incidence of taxation	1
	Making a gift dependent on an event	1
	Making secret disposition in a will possible	1
	(1 mark each for any 3)	3
(c)	Duty of employer to provide safe work environment and proper tools	3
	Employer not liable for employee's injury where the latter, failed to use the protective glass	3
		6
(d)	Insurable interest – interest in preservation of a subject matter from which the person may suffer loss if damaged or benefit, if preserved	<u>2</u>
		<u>20</u>

### EXAMINER'S REPORT

The question tests candidates' understanding of parties to, and general acceptance of, a bill of exchange, the meaning of uses of trust, the duty of an employer in provide safe work environment, and insurable interests.

Candidates' understanding of the question and their performance were good.

#### Solution 4

- a. A professional owes a duty of care to his client where there is a fiduciary relationship, or contractual obligation. The duty of care on the professional or individual is to avoid careless statement or misstatement, which results in harm or financial losses. Negligent misstatement, when there is a duty against it, may result in damages.

Emeka paid Umukan, a professional accountant, a fee for his advice, which establishes a fiduciary relationship. Emike has acted on the advice and suffered a financial loss of ₦350,000.

Emike is advised that he will succeed in action against Umukan for damages.

- b.
- i. A Partnership Deed should have the following information:
- The name of the partnership;
  - The parties to the partnership;
  - The rights and duties of parties, and third parties;
  - The mode of admission of new partners;
  - Retirement of partners;
  - The general nature of business;
  - Partnership assets;
  - Partnership account; and
  - Dissolution of partnership.

In partnership, as a general rule, partners are entitled to contribute equally to the capital and share equally in the profits of the business. They must equally contribute to offset the losses or debts. Ade and Uzo are to contribute equally with Yemoh in paying the debts of the partnership, as there is no evidence of misappropriation of funds by Yemoh. The action of Yemoh in managing the partnership binds the other partners in the general partnership.

Yemoh will succeed in an action against the other partners, Ade and Uzo, to obtain their contribution in offsetting the debt of ₦3,000,000.

- c. Equitable Remedies are
- a) Injunction: This is an order of Court to one of the parties to do something or stop to do something.
- b) Specific performance: This is an order of Court that a contract should be performed as agreed.



- c) Rescission: This is a remedy in contract cases setting aside the contract and restoring the parties as much as possible to their pre-contract position.
- d) Rectification: This is an order of Court that a mistake accidentally made in a document be corrected to achieve the true purpose of the agreement or the intentions of the parties.

## Marking Guide

		Marks
(a)	That a professional owes a duty of care where there is contractual obligation/fiduciary relationship	1
	To avoid careless/negligent misstatement which results in financial losses	1
	Negligent misstatement may result in damages	1
	That Emike will succeed in court (1 mark for each correct salient point)	1
		4
(b)		
i.	Any six correct clauses mentioned below will earn one mark each	
	Name of the partnership firm:	1
	Particulars of parties to the partnership	1
	The general nature of business	1
	The rights and duties of parties and third parties	1
		1
	The mode of admission of partners	1
	Retirement of partners	1
	Partnership assets	1
	Partnership accounts	1
	Contribution of capital	1
	Sharing of profits or losses	1
	Dispute resolution mode	1
	Dissolution of partnership	1
		6
ii.	(Each salient point earns two marks)	
	Matter has to do with relationship of partners to third parties	2
		2
	Every partner is an agent of the firm	2
	Act of a partner in the normal course of business binding on other partners	2
	Yemoh acted with the full consent of the other partners; thus his action is binding	2
	Thus, the other partners are liable to pay the part of debts incurred by Yemoh on behalf of the firm	2
	Yemoh will succeed in action against other partners Ade and Uzo	2
		6

- (c) (1 mark for each correct equitable remedy stated and another 1 mark for each explained)

Injunction	1	
Specific performance	1	
Rescission	1	
Rectification	1	<u>4</u>
		<u>20</u>

## EXAMINER'S REPORT

The question tests candidates' knowledge of the law on professional negligence and its consequence; contents of a Partnership Deed; ability of a partner to bind Partners against third parties; and equitable remedies available.

The question was well attempted by candidates and performance was good.

## Solution 5

- a. i. The Secretary of Public company must be any of the following
- A Chartered Accountant;
  - A Legal Practitioner;
  - A Chartered Secretary and Administrator; or
  - A Corporate body or firm consisting of the professionals stated above.
- ii. The specific duties of a company secretary are
- Providing secretarial support at all meetings of the company;
  - Advising the company on regulatory compliance;
  - Maintaining the register and other records of the company;
  - Rendering proper returns and giving notifications to CAC as well as attending to other administrative matters or responsibilities; and
  - Exercising any powers vested in the directors with the authority of the board.
- iii. The Secretary has authority to bind the company in all matters of administration. The cars were hired in the name of the company, the company is thus bound to pay.
- Okoruma will succeed in an action to make the company pay the debts incurred on the hired cars.
- b. Depending on the terms of the agreement between the company and its debenture holder; a company could be placed under receivership where
- i. The principal sum borrowed by the company or interest is in arrears;

- ii. The security or property of the company is in jeopardy, and it is not in the interest of the debenture holder that the company should retain power to dispose its assets;
  - iii. The company fails to fulfill any of the obligations imposed on it by the debentures;
  - iv. Any circumstance occurs which by the terms of the debenture calls for realisation of its security;
  - v. The company is being wound up;
  - vi. Any creditor of the company issues a process of execution against any of its assets;
  - vii. The company ceases to do business; or
  - viii. The creditors apply to Court for receivership.
- c. i. Criminal law sets out types of behaviour which are prohibited and punishable by the state. It is an aspect of public law which imposes liability. To establish conviction, the two elements of *mens rea* and *actus reus* must be established in Court.
- ii. Ethical codes regulate the conduct of professionals such as lawyers, doctors, accountants, etc, in their dealings with clients. Ethical codes are used by professional bodies to ensure high standard of conduct in relation to clients.
- iii. Bribery is a form of official corruption. It is committed where a public officer uses his office to extract money from a payer who intends to influence a decision. It could be anything done or omitted to be done in order to influence a decision.

		Marks
(a)		
i.	Any two correct persons stated earn 1 mark each	2
	Chartered Accountant	1
	A Legal Practitioner	1
	A Chartered Secretary and Administrator	1
	A corporate body or firm consisting of the professional stated above	1
ii.	Any 3 correct duties stated earn 1 mark each	3
	Providing Secretarial support at all meetings of the company	1
	Advising the company on regulatory compliance	1
	Maintaining the register and other records of the company	1
	Rendering proper statutory returns	1

	Exercising any powers vested in the directors with the authority of the board	1	
(b)			
i.	The Secretary has authority to bind the company in all matters of administration	1	3
ii.	The cars were hired in the name of the company	1	
iii.	The Company Secretary is held out as an agent of the company	1	
iv.	Okonima will succeed in an action (1 mark for each correct point)	1	
(c)	(1 mark for each correct circumstance stated)		6
i.	Inability to meet financial obligation	1	
ii.	The business is being run at a loss	1	
iii.	Security or property of the company is in jeopardy	1	
iv.	Failure of company to meet statutory obligation	1	
v.	The company is being wound up	1	
vi.	Company fails to fulfill any obligation imposed on it by debenture holders	1	
vii.	The company ceases to do business	1	
viii.	The creditors applying to court	1	
ix.	Any creditor of the company issues a process of execution against any of it	1	
(d)	(Each correct brief explanation earns 2 marks)		
i.	Criminal law Acts forbidden by the state at risk of punishment To establish conviction, both <i>mens rea</i> and <i>actus rea</i> must be established in court	2	
ii.	Ethical codes Regulate conduct of professionals – Accountants, Lawyers, Doctors Used to ensure high standards of conduct in relation to clients	2	
iii.	Bribery Offence relating to official corruption, receiving or agreeing to receive, taking or taking of property as inducement	2	6
			<u>20</u>

### EXAMINER'S REPORT

The question tests candidates' knowledge of eligibility for appointment, duties and status of the Company Secretary; circus instances under which a company can be placed under receivership; and explanation of criminal law, Ethical Codes and bribery.

More than fifty percent of the candidates attempted the question and performed substantially well. Candidates need to pay more attention to admissibility of computer-generated evidence.

## Solution 6

a.

- i. Rights of an agent in agency are:
  - The right to an indemnity from his principal;
  - The right to be paid commission for work done;
  - The right to have his lawful acts ratified by his principal;
  - The right of lien over the goods of his principal for his commission and other monies due to him;
  - Right to enforce contracts against third party;
  - Right to set his principal to assume liability and responsibility for the lawful acts of his agent.
- ii. The hirer has the following rights:
  - The right to use the goods;
  - The right to quiet possession and enjoyment of the goods;
  - The right to know the exact instalment to be paid;
  - The right to know the cash payment of the goods; and
  - The right to choice of insurance and garage of and maintenance of goods or motor vehicle
- iii. The classes of goods in sale of goods are
  - Existing goods: Goods owned by the seller at the time of contract;
  - Future goods: Goods to be produced by the seller after the contract;
  - Ascertained/specific goods: goods identified and agreed upon at the time of contract; and
  - Unascertained goods: These are goods which are not identified and agreed upon at the time of contract
- iv. As a general rule, all persons of full age can sue and be sued in tort. The following are the exceptions:
  - The President and Vice President, while in office;
  - Governor and their Deputies, while in office;
  - Judges have judicial immunity for acts done in their judicial capacity.
  - Minors or infants cannot be sued because they lack capacity;
  - Persons with mental disability;
  - Diplomat

b) S.84 of the Evidence Act contains provisions and conditions for the admissibility of computer and electronically generated evidence as follows:

- i. Statement contained in a document produced by computer shall be admissible evidence of any fact stated in it of which direct oral evidence would be admissible;
- ii. The document containing the statement must have been produced over a period when the computer is used regularly to store information for the purpose whether for profit or not by body corporate;
- iii. Individual statement made throughout the material period the computer was operating properly and the information in the statement derived from the one supplied to the computer in the course of business of those activities;
- iv. The computer storage could be by one computer or a combination operating in succession;
- v. The statement being a certificate, identified and proven to be produced by the computer device used in production, dealing with the matter to the best knowledge of the person that signed it;
- vi. The information supplied in appropriate form by an appropriate equipment in the course of activities by individual or corporate body; and
- vii. The document produced directly from the computer by means of appropriate equipment.

## Marking Guide

		Marks
(a)		
i.	(Any 3 correct rights of an agent in an agency earn 1 mark each)	3
	Of indemnity	1
	To be paid commission	1
	To have his lawful acts ratified by principal	1
	Lien over the goods of his principal over commission due	1
	To enforce contract against third party	1
ii.	(An 3 correct rights of a hirer in hire purchase earns 1 mark each)	3
	To use the goods	1
	To quiet possession	1
	To know the exact instalment to be paid	1
	To know the cash payment of the goods	1
	Freedom of choice of insurer, garage and maintenance of goods or motor vehicle	1

iii.	(Statement of each correct class of goods earns 1 mark)		3
	Existing goods	1	
	Future goods	1	
	Ascertained/specific goods	1	
	Unascertained goods	1	
iv.	Statement of general rule that all persons of full age can sue and be sued in tort	1	
	Statement of any 3 exceptions to the rule will earn 1 mark each		
	President and Vice President	1	
	Governors and their Deputies	1	
	Diplomats	1	
	Persons suffering from mental disabilities	1	
	Minors/infants i.e. below 18 years	1	4
(b)	Statement and explanation of conditions for the admissibility of computer generated evidence in court earns 1 mark each		
	The document processed appropriate for the purpose	1	
	Document produced was from computer in regular operation	1	
	Document described the manner of production of the statement	1	
	Information in the statement derived from the one supplied to the computer in the course of business of those activities	1	
	Processed information is not altered	1	
	Computer storage could be by one computer or a combination of computers operating in succession	1	
	Statement contained in document produced by computer admissible of any fact stated in it which direct oral evidence would be admissible	1	
			<u>7</u>
			<u>20</u>

## EXAMINERS REPORT

The question tests candidates' knowledge of the rights of an agent in agency and hirer in hire purchase; classes of goods in sale of goods; capacity in tortious acts and their exceptions; and conditions for the admissibility of computer generated evidence in court. Candidates attempted all the questions; but performance was good only in part (a) while part (b) was poor.

The commonest pitfall was candidates' inability to master the conditions that would enable computer generated evidence to be admissible in court.

Candidates are advised to read more on this area of the syllabus.