

**LAGOS CITY POLYTECHNIC, IKEJA**  
**SCHOOL OF MANAGEMENT AND BUSINESS STUDIES**  
**DEPARTMENT OF BUSINESS ADMINISTRATION**  
**2014/2015 SEMESTER EXAMINATION**

<b>COURSE</b>	<b>TITLE:</b>	<b>ELEMENT</b>	<b>OF</b>	<b>PRODUCTION</b>
	<b>MANAGEMENT</b>			
<b>COURSE CODE:</b>	<b>BAM 223</b>			<b>NO OF QUESTIONS: 6</b>
<b>FOR WHOM:</b>	<b>ND YR II</b>	<b>BAM</b>	<b>PT</b>	<b>TIME ALLOWED: 2HRS</b>
<b>ANSWER</b>	<b>ANY FOUR</b>			<b>INSTRUCTIONS:</b>

**QUESTIONS**

1. (a) (i) What is Linear Programming?  
(ii) State the assumptions of Linear programming?
2. Determine the values of alphabets in the below 2nd tableau of a simplex algorithm process which was arrived at via the understated LP model.

$$\begin{array}{rcl}
 \text{Max } Z & = & 24x + 8y \\
 \text{S. t} & & \\
 4x + y & \leq & 20 \\
 10x + y & \leq & 60 \\
 x, y & \geq & 0
 \end{array}$$

cj	Basis	Current	24	8	0	0	0			
		cb	Value x y s <sub>1</sub> s <sub>2</sub> s <sub>3</sub>							
0	S <sub>1</sub>	a	0	C	1	e	0			
24	x	b	1	d	0	f	g			
0	S <sub>2</sub>	10	0	5/2	0	b	1			
	Zj	120	24	6	0	6	0			
	Cj-Zj		0	2	0	6	0			

Required: Determine the value of a, b, c, d, e, f, g, and h.

3. Discuss management problems that can be solved using mathematical models.
4. What is quality control and why is it important in production operations.
5. (a) Discuss the different ways to introduce new products.  
(b) What are the problems involving production planning in Nigeria?
6. Describe how to determine:
  - (i) The pivot figure
  - (ii) The pivot column
  - (iii) The value
  - (iv) The incoming variable
  - (v) The pivot row
  - (vi) The element