

LAGOS CITY POLYTECHNIC, IKEJA
SCHOOL OF MANAGEMENT AND BUSINESS STUDIES
DEPARTMENT OF BUSINESS ADMINISTRATION
2015/2016 SEMESTER EXAMINATION

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

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 table 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 ₁ s ₂ s ₃							
0	S ₁	a	0	C	1	e	0			
24	x	b	1	d	0	f	g			
0	S ₂	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