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FACULTY OF ADMINISTRATION AND MANAGEMENT SCIENCES

DEPARTMENT OF ACCOUNTING
2017 / 2018 HARMATTAN SEMESTER EXAMINATIONS
ACC 315 – PRODUCTION MANAGEMENT

INSTRUCTIONS:

- (i) Attempt any four questions
 - (ii) Time allowed – 2 hours
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Question one:

- (a) What do you understand by production system and production management? (4 marks)
- (b) Discuss the various types of production system. (7 marks)
- (c) Briefly discuss the traditional and modern factors of production. (6 ½ marks)

Question two:

- (a) Discuss in details the concept of work study. (5½ marks)
- (b) Outline and discuss the major elements of work study. (6 marks)
- (c) Enumerate the advantages of work study. (6 marks)

Question three:

Plant layout can be described as the physical arrangement of industrial facilities. This arrangement includes the spaces needed for material movement, storage, indirect labourers and all other supporting activities or services as well as operating equipment and personnel.

Required:

- (a) Discuss the principles of a good plant layout. (8 marks)
- (b) Highlight the factors affecting plant layout. (5 marks)
- (c) Discuss the types of plant layout. (4 ½ marks)

Intermittent
↓
Job Production
Batch "

Continuous
↓
mass
flow

Question four:

- (a) Outline five (5) production or service areas where assignment model can be applied. (5 marks)
- (b) A company is currently constructing four roads (A,B,C,D) and wants to assign four site engineers (X,Y,W,Z) who will supervise the jobs. Based on the following table of cost (in thousand Naira) implications on each engineer, determine the optimal assignment. (12 ½ marks)

	A	B	C	D
X	20	28	19	13
Y	15	30	31	28
W	40	21	20	17
Z	21	28	26	12

Question five:

The steady demand for a retailer's product is 15 units per week. The retailer buys from a wholesaler at a cost of ₦12 per unit while delivery cost is ₦20 per order. The stockholding cost is 15% per annum. Assuming that there are 52 weeks in a year, you required to;

- (a) Determine the batch size which leads to the minimum total cost. (6 ½ marks)
- (b) Determine the number of orders placed per year. (3 marks)
- (c) Determine the length of the inventory cycle. (3 marks)
- (d) Calculate the total inventory cost. (5 marks)

$$T_{oc} + T_{cc} + C_{o-p}$$

$\frac{EOQ}{2} \times \text{unit price}$

Question six:

- (a) List and discuss the various techniques of work measurement. (9 marks)
- (b) Outline the specific limitation(s) of each of the techniques identified in (a) above. (6 marks)
- (c) Discuss any two (2) techniques of method study. (2½ marks)

$$EOQ = \sqrt{\frac{2DO}{CC}}$$

$$\text{Demand} = 15 \times 52 = 780$$

$$O.C = 20$$

$$CC = 12$$

$$C = 15\%$$

$$\text{Stock holding} = 15\% \text{ of } 535$$