PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF MANAGEMENT

MID TERM EXAMINATION

Even Semester: 2018-19   **Date**: 20 February 2019

Course Code: OPS 401   **Time**: 2 Hours

Course Name: Production Planning and Control   **Max Marks**: 40

Programme & Sem: MBA & IV Sem   **Weightage**: 20%

Instructions:
   (i) Answer all the questions

Part A

Answer **both** the Questions. **Each** question carries **Five** marks.   (2Qx5M=10)

1. What is the basis for selecting a location for a facility? Briefly explain your reasoning with example.
2. XYZ Company produces 2000 rolls of paper with 2 workers who work for 8 hours every day. The standard price is Rs. 1/roll. Labor cost is Rs. 160, material cost is Rs.50 and overhead cost is Rs. 320.
   a. Calculate Partial Productivity of Labor   b. Calculate Multifactor Productivity.

Part B

Answer **both** the Questions. **Each** question carries **Ten** marks.   (2Qx10M=20)

3. List at least five factors affecting productivity and briefly explain each by giving suitable examples.
4. What are the four types of Layout based on Volume and Variety chart? Represent the plot with brief explanation and suitable examples.

Part C

Answer the Question. Question carries **Ten** marks.   (1Qx10M=10)

5. Exponential smoothing is used to forecast automobile battery sales. Two value of α are examined, $\alpha = 0.8$ and $\alpha = 0.5$. Evaluate the accuracy of each smoothing constant. Which is preferable? (Assume the forecast for January was 18 batteries.) Actual sales are given below:

Period	1	2	3	4	5	6	7
Demand	18	22	26	24	20	16	
Forecast	18						

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END TERM FINAL EXAMINATION

Even Semester: 2018-19   **Date**: 13 March 2019

Course Code: OPS 401   **Time**: 3 Hours

Course Name: Production Planning and Control   **Max Marks**: 80

Programme & Sem: MBA & IV Sem   **Weightage**: 40%

Instructions:
(i)   Read the Questions and answer accordingly

Part A

Answer **both** the Questions. **Each** question carries **ten** marks.   (2Qx10M=20)

1. Differentiate between FINITE AND INFINITE loading.

2. With a neat flow chart explain the INPUT AND OUTPUT to Capacity Requirement

   Planning (CRP).

Part B

Answer **both** the Questions. **Each** question carries **fifteen** marks.   (2Qx15M=30)

3. Product A has 4 subcomponents that is B with 3 components, c with 2 components, D with 3 components and E with 2 component. B as a parent has 3 components of F and 3 components of G. Component D as a parent has 4 components of H and 2 components of G. H as a parent has 2 component of I and 2 component of J. The demand for Product A on 10th day is 100 units.

Lead time information is as follows:

A: 1 day; B: 2 day; C: 2 day; D: 1 days; E: 1 days; F: 2 days; G: 1 day; H: 3 days; I: 2 days

and J: 2 days

Compute:

a.   BOM Structure Tree   (5M)

b.   Calculate the order process for each component.   (10M)

Q4. List the Advantages and Disadvantages of Capacity Requirement Planning   (15M)

Part C

Answer the Questions. **Each** question carries **thirty** marks. (1Qx30M=30)

5. The table below details in table 1 the Actual Battery Sales figures for M/S XYZ Company. The company plans to use forecasting method to determine the sales for the Month of Jan 2018 assuming that the forecast for Jan 2017 is 20 numbers

      a. Develop a 3 month moving average forecast for Jan 2018. (5M)

      b. Develop a 6 month moving average forecast for Jan 2018. (5M)

      c. Develop a EXPONENTIAL SMOOTHING forecast using alpha values being $\acute{a}= 0.7$ and $\acute{a}= 0.5$. (15M)

      d. With reference to point 3, justify which Alpha value is most preferable and why? (5M)

Table 1.

Month	Actual Battery Sales	Forecast
Jan 2017	20	20
Feb 2017	21	
Mar 2017	15	
Apr 2017	14	
May 2017	13	
June 2017	16	
July 2017	18	
Aug 2017	20	
Sep 2017	21	
Oct 2017	18	
Nov 2017	19	
Dec 2017	21	
Jan 2018		