BIJU PATNAIK INSTITUTE OF IT & MANAGEMENT STUDIES

2nd SEMESTER (BATCH: 2019-21)

CLASS TEST - I

OPERATION MANAGEMENT (18MBA205)

Total Marks : 30 **Time: 1.30 Hours**

Q1. All Questions are compulsory each questions carry 1 mark (10x1=10)

a) Define Operation Management.
b) What do you mean by Continuous Production?
c) Differentiate between Manufacturing and Service Operation.
d) Describe the role and responsibility of Operation manager in Health Care Sector?
e) Differentiate between forming and machining process.
f) State two major Reasons of Job Design.
g) What is Process Analysis?
h) What is the need of the location study?
i) Define peak capacity.
j) What do you mean by mixed Strategy in aggregate planning?

Q2. Answers two questions each questions carry 5 marks (2x5=10)

a) The following are the results of work sampling study;

Total observation period (in hours)= 500 hours
Performance rating = 92%
Allowances= 12%
Employees working during observation time=2700
Employees idle during observation time=1300
Unit processed= 50000 units

Find the Standard number of units the worker should process in an hours.

b) In a private university have been seven different departments/ shops whose coordinates are given in the following table. The university is interested in locating new fire-fighting equipments in the concern area. Calculate the Minimax location of the new fire-fighting equipments.

Sl. No.	Existing Facility/Departments	Co-ordinate of Centroid
1	Administration Department	30,100
2	Library	20, 180
3	HR Department	50,40
4	Finance Department	30,60
5	Marketing Department	50,60
6	Operations Department	50,110
7	General Store	40,120
8	Canteen	70,30
9	Boy's Hostel	50,90
10	Girl's Hostel	80, 130

c) Describe briefly about the Global competitiveness of Operation Management with suitable examples.

Q3. Answer one question out of two questions (1x10=10)

a) What is Capacity Planning? Describe the Principle of Capacity Planning? Explain all the types of capacity used in Capacity planning ?

b) Define Aggregate Production planning. Explain its nature and strategy used in aggregate planning. What are the costs associated in Aggregate Planning.

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BIJU PATNAIK INSTITUTE OF IT & MANAGEMENT STUDIES

2nd SEMESTER (BATCH: 2018-20)

CLASS TEST - I

OPERATION MANAGEMENT (18 MBA 205)

Total Marks : 30 **Time: 1.30 Hours**

Q.1. All Questions are compulsory each questions carry 1 mark (1x10=10)

a) Why Operation Management is important in emerging 4th Industrial Revolution?
b) State two major Reasons of Job Design.
c) What do you mean by Capacity Planning?
d) Differentiate between matching watching process and assembly process.
e) Name the Technique used for Work Measurement.
f) What do you mean by Continuous Production?
g) What is Process Analysis?
h) Define the term Work Study.
i) Explain different levels of strategic decision taken in operation related organizations.
j) What are the symbols used in method study?

Q.2.Answers two questions each questions carry 5 marks (5x2=10)

a) The following are the results of work sampling study;

Total observation period (in hours)= 400 hours	Employees working during observation time=2700
Performance rating = 92%	Employees idle during observation time=1300
Allowances= 10%	Unit processed= 42000 units

Find the Standard number of units the worker should process in an hours.

b) Define Capacity and explain various types of capacity.

c) Differentiate between Manufacturing and Service Operation.

Q.3.Answer one question out of two questions (10x1=10)

a) Define Aggregate Production planning. Explain its nature and strategy used in aggregate planning. What are the costs associated in Aggregate Planning?

b) What is Operations Strategy? How to formulate Operations Strategy? Explain the Role & responsibility of Operation Manager.

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BIJU PATNAIK INSTITUTE OF IT & MANAGEMENT STUDIES

2nd SEMESTER (BATCH: 2017-19)

CLASS TEST - I

Operation Management (MNG 205)

Total Marks : 30 **Time: 1.30 Hours**

1. Fill in the blanks (All questions are compulsory) [5x1=5]
   (a) Production process is the transformation / conversion process by which all the …… are converted into ……..
   (b) Manufactured products are _____ (Capital intensive / Labour Intensive).
   (c) ……. Layout gives job shop production.
   (d) In product layout , …….. are arranged sequentially.
   (e) When a single worker involve with more than one task at a time, then …… technique is used to find ST.

2. Answer in brief. (All questions are compulsory) [5x1=5]
   (a) What are the different allowances used in a time study?
   (b) What is the difference between manufacturing and service operation?
   (c) Define standard time.
   (d) Which type of layout is suitable for mass production?
   (e) Explain the suitability of fixed position layout.

3. Answer any two. [2x5=10]
   (a) A company has to decide about the location of s proposed plant among three alternatives A, B, and C. [5]
   Data obtained are given below:

Data (Rs.'000'/annum)	Locations		
	A	B	C
Wages and Salary	20	22	25
Power Cost	15	12	12
Raw Material Cost	28	25	21
Initial Investment	110	120	115
Expected Sales Revenue	125	140	130

   Based on Return on Investment (ROI) choose the best location.

   (b) If the sum of nine observations is 10.35 minutes, performance rating of 1.13, using an Allowance of 20% of job time, determine the appropriate standard time for the operation. [5]

   (c) There are 5 existing facilities are to be served by a single new facility. The details of the existing facilities are shown in the table below: [5]

Existing facility (i)	1	2	3	4	5
Coordinates (a_i, b_i)	5, 10	20, 5	15, 20	30,25	25, 5
No. of loads/year	100	300	200	300	100

   Find the optimum location of the new facility based on gravity/centroid location concept.

4. Answer any one.
   (a) What are the types of layout? Explain them with example. [10]

   (b) Write short notes on both. [2x5=10]
   (i) Time study procedure
   (ii) Reasons for plant location study and the influencing factors to decide the location.

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BIJU PATNAIK INSTITUTE OF IT & MANAGEMENT STUDIES

2nd SEMESTER (BATCH: 2016-18**)**

CLASS TEST - I

Operation Management (MNG 205)

Total Marks : 30 **Time: 1.30 Hours**

1. Fill in the blanks (All questions are compulsory) 5x1=5
   (a) Production process is the transformation / conversion process by which all the ……. are converted into ……..
   (b) Effective capacity is always less than the …… capacity.
   (c) ……. Layout gives job shop production.
   (d) In product layout , …….. are arranged sequentially.
   (e) When a single worker involve with more than one task at a time, then …… technique is used to find ST.

2. Answer in brief. (All questions are compulsory) 5x1=5
   (a) What are the different allowances used in a time study?
   (b) What is the difference between manufacturing and service operation?
   (c) Define standard time.
   (d) Which type of layout is suitable for mass production?
   (e) Explain the suitability of fixed position layout.

3. Answer any two. 2x5=10
   (a) A company has to decide about the location of s proposed plant among three alternatives A, B, and C. [5]
   Data obtained are given below:

Data (Rs.'000'/annum)	Locations		
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Wages and Salary	20	22	25
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   Based on Return on Investment (ROI) choose the best location.

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   (c) There are 5 existing facilities are to be served by a single new facility. The details of the existing facilities are shown in the table below: [5]

Existing facility (i)	1	2	3	4	5
Coordinates (a_i, b_i)	5, 10	20, 5	15, 20	30,25	25, 5
No. of loads/year	100	300	200	300	100

   Find the optimum location of the new facility based on gravity/centroid location concept.

4. Answer any one.
   (a) What are the types of layout? Explain them with example. [10]
   (b) Write short notes on both. [2x5]
   (i) Time study procedure
   (ii) Reasons for plant location study and the influencing factors to decide the location.

BIJU PATNAIK INSTITUTE OF IT & MANAGEMENT STUDIES

2nd SEMESTER (BATCH: 2015-17**)**

CLASS TEST - I

Operation Management (MNG 205)

Total Marks : 30 **Time: 1.30 Hours**

(Group '**A**' is compulsory. Any *one* from Group '**B**' and any *one* from Group '**C**')

GROUP- 'A'

1. (i) …….. layout require for job shop production process. ***(5 × 1=5)***

(ii) The production process converts …… into ……..

(iii) Product Layout is also called …… layout.

(iv) CT = $\frac{\text{Pr}oductive\ \ Time}{\text{.....}}$

(v) The first stage of New product development is …….

2. (i) Define Operation Management. ***(5 × 1=5)***

(ii) How Balancing Efficiency can be calculated?

(iii) Name the factors, which affects to Plant Location Study.

(iv) How many types of Layouts are there in Plant Layout?

(v) What is the objectives of Assembly Line Balancing?

GROUP- 'B' ***(1 × 10=10)***

3. There are fire existing facilities which are to be served by a single new facility. The details of existing facilities are shown below:

Existing facility (***i***)	**1**	**2**	**3**	**4**	**5**
Co-ordinates (***a_i, b_i***)	5, 10	20, 5	15, 20	30, 25	25, 5
No. of trips of loads / yr. (***w_i***)	100	300	200	300	100

Find the optimum location of the new facility based on gravity location.

4. The activities with their Immediate Predecessors and their processing time given below. The line operates for 7hrs.with designed output of 550 units per day.

Activity	**I.P.**	**Processing time (*minutes*)**
A	-	0.65
B	A	0.4
C	B	0.3
D	C	0.2
E	C	0.45
F	D, E	0.4
G	F	0.3

Calculate:

(i) *Cycle time*

(ii) *Theoretical minimum number of workers.*

(iii) *Find the total Idle time of the work station.*

(iv) *Find Balancing Efficiency (B.E).*

GROUP- 'C' ***(1 × 10=10)***

5. Why we need Plant Location and explain the factor which affects Plant Location Study?

6. What is Plant Layout? Write its objectives and types?

Best of luck!