NCRD's Sterling Institute of Management Studies
Nerul, Navi Mumbai

SEMESTER END EXAMINATION MMS SEM II April 2016

Sub: - Designing Operations Systems

Date: 23rd April, 2016 **Time: 11:00 am to 2:00 pm**

Day: Saturday **Marks: 60 Marks**

Roll No:

Instructions: Question No. 1 is compulsory. (Total 20 Marks)

Attempt Any Four Questions from Ques 2 to Ques 7. (10 Marks each)

Giving relevant examples, graphs etc. carries weightage.

Q1. (a) **Standard Engineering Works (SEW)** is a medium sized company engaged in the manufacture of engine components. It is growing rapidly, and hence the Director wants to have proper estimates of time required for producing their components required for various engines. Hence he felt the need for time study.

A very frequently manufactured part, having large demand, had been chosen for the exercise. The 'Grinding Operation' involves the following elements:

Element Code	Element Description	Observed Time (Min)	Rating Factor	Remarks
A	Pick up Job and tighten carrier	0.20	90	--
B	Position unit between centres	0.05	80	--
C	Advance wheel to the Job	0.03	100	--
D	Grind diameter to size	0.78	100	--
E	Spark off	0.06	100	--
F	Withdraw wheel to clear the Job	0.05	100	--
G	Measure the diameter	0.02	85	Once in 5 pieces
H	Release the Job	0.06	80	--
I	Loosen carrier and keep job aside	0.10	90	--
J	Dressing the wheel	0.04	90	Once in 20 pieces

Assuming rest and personal allowances as 13 %, and contingency allowance to be 2 %, calculate the Standard Time of the grinding operation. **(10 marks)**

(b) Explain in Brief the following, using an appropriate example: **(2 marks each)**

(i) MTS (ii) Order Winner (iii) Backward Integration (iv) BEP

(v) Bottleneck

Q2. Attempt any two **(5 marks each)**

(a) Discuss the 'competitive dimensions' in operations management in the current business environment.

(b) Explain Service Failure and Recovery.

(c) What is Process Analysis? Illustrate with an suitable example.

Q3. Attempt any two **(5 marks each)**

(a) Describe the various types in which 'services' can be classified.

(b) Discuss the 'product-process matrix' for manufacturing environment.

(c) Differentiate clearly between product and service and state its implications.

Q4. Attempt any two **(5 marks each)**

(a) Discuss about the 'customer contact matrix'.

(b) Explain the evolution of operations management.

(c) Using a diagram, elaborate the process of 'method study'.

Q5. Attempt any two **(5 marks each)**

(a) What is meant by the concept of 'service blueprinting'? How is it useful? Illustrate with example.

(b) Explain 'work sampling' through an example related to many workstations or equipment / machines, in a production department.

(c) Discuss the various contrasting service designs.

Q6. Attempt any two **(5 marks each)**

(a) "Make or Buy Decision – is a often encountered in operations" – Comment giving an example, and relevant factors favouring each of the option.

(b) Explain the Service Process Structuring.

(c) What is a 'plant layout'? State the various types and discuss any one in detail.

Q7. Write short notes on any two **(5 marks each)**

(a) Operations Strategy

(b) Dimensions of Customer Contact

(c) Service Guarantees