

Paper-9

OPERATIONS MANAGEMENT AND INFORMATION SYSTEMS

Test Paper –II/9//OMS/2008/T-2

Time Allowed: 3 hours

Marks: 100

SECTION-I OPERATIONS MANAGEMENT

Full Marks: 50

(Answer Question 1 and any TWO from the remaining)

1. (a) Match the phrase in column I with the most suitable one in column II.

I	II
VED analysis	is a technique of time study
Effectiveness of effort rather than hard drive	helps to establish minimum level of production
Break-even Analysis	does not assess the individual worth of an employee
Tool Room	is used in production planning and control
Activity Sampling	is used in inventory control
Process Layout	is the key to higher productivity
Gantt Chart	is used in computer programming
Job Evaluation	is another name for Industrial Engineering
BASIC	is used in a jobbing workshop
Work Study	is only found in the engineering industry

10

Q1] (b) Indicate whether the following statements are True or False:

- (i) Fork-lift trucks are not used for unit load handling.
- (ii) Higher production may not always be the result of higher productivity.
- (iii) Drawings, where applicable, are the best means of expressing product specification.
- (iv) Closed circuit television is not used in Indian industry.
- (v) Comprehensive legislation protects consumers in India.
- (vi) The Factories Act does not regulate the employment of women.
- (vii) The Bill of Materials is prepared by the Sales Department of an organization.

- (viii) Work content of a job is established by Job Evaluation.
- (ix) A gravity roller conveyor requires electric power for its operations.
- (x) Industrial Engineering is not a line function. 10

Q2] (a) “Other than for increasing the capacity of production, multishift working may be inevitable for certain other reasons.” Elaborate. 8

Q2] (b) Highlight the role of the Cost and Management accountant in a drive for higher productivity in an industrial organization. 7

Q3] (a) Poor maintenance of plant and machinery leads to various losses in industry. Discuss these under 4 broad heads. 5

Q3] (b) Five jobs have to be processed through two machines 1 and 2 sequentially. The table below gives the processing times in hours:

Job	A	B	C	D	E
Machine 1	2	7	5	6	5
Machine 2	4	8	6	7	3

What is the minimum total time for completion of all jobs?
For What periods, if any, does Machine 2 remains idle?
When Job D does get completed? 10

Q4] (a) Give four indicators of poor activity planning in a mass production organization. 5

Q4] (b) What do you understand by scheduling production stages? 10

Q5] (a) Discuss the benefits which may be obtained from an effective Quality Control Programme. 5

Q5] (b) A Company has an old equipment which can give service for another 12 years, if overhauled for every three years. Considering the given data, you are required to suggest whether new equipment, which has a life of 12 years, should be purchased or not?

Old equipment:

Present repair cost	Rs.1,500
Cost of repair after three years	Rs.1,800
Cost of repair after six years	Rs.2,100
Cost of repair after nine years	Rs.2,500
Resale value of the machine after twelve year	Rs.1,500
Annual operating Costs for twelve years	Rs.2,000 per annum

Resale value of the old equipment now	Rs.3,000	
New equipment:		
Installation cost	Rs.15,000	
Operating Costs	Rs. 900 per annum	
Resale value after twelve years	Rs. 4,000	
Interest rate is assumed to be 10%.		10

Q6] (a) Discuss the factors affecting the plant layout. **7**

Q6] (b) What are the various objectives of using control charts for variable characteristics of products undergoing manufacture. **8**

SECTION-II
INFORMATION SYSTEMS
Full Marks: 50

(Answer Question 1 and any **TWO** from the remaining)

Q1] (a) Describe the steps involved in System Development Life Cycle.

Q1] (b) What are major consideration for implementation of a system ? Describe the steps involved in System Implementation.

Q1] (c) What are the components of systems development cost ? **18**

Q2] (a) What is meant by Database Management System (DBMS) ? What are the advantages of DBMS over the conventional file management system ?

Q2] (b) Describe different models of DBMS Structure. **16**

Q3] (a) Describe different activities involved in Data processing. What are Factors you will be considering for deciding on mode of data processing

Q3] (b) Differentiate between batch processing and distributed data processing. **16**

Q4] Write Short notes on :

- i) Internet
- ii) Search Engine
- iii) E-mail.
- iv) E-commerce **16**