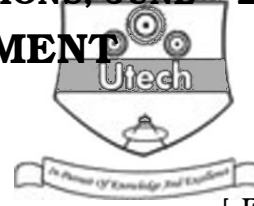




**ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009**  
**PRODUCTION MANAGEMENT**  
**SEMESTER - 4**



Time : 3 Hours ]

[ Full Marks : 70

**GROUP - A**

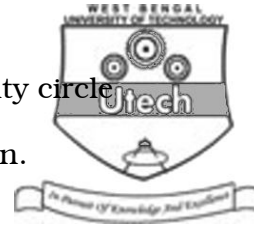
**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10
- i) Fitness for use is known as
- a) Quality b) Quality circle  
c) TQM d) Kaizen.
- ii) Which of the following ratios is used to assess the efficiency of the PPC Department ?
- a) Total assets turnover ratio b) Interest coverage ratio  
c) Debt-equity ratio d) Employee turnover ratio.
- iii) Which one of the following is not a fixed cost ?
- a) Rent b) Insurance  
c) Manager's salaries d) Material.
- iv) Statistical quality control is done to
- a) prevent any defective product from going out of the factory  
b) observe the trend of product quality  
c) initiate corrective action if quality trend shows an adverse pattern  
d) none of these.



v) Continuous improvement is the concept of

- a) Quality
- b) Quality circle
- c) TQM
- d) Kaizen.



vi) Time allowed to an operator to carry out as specified task under specified condition and at the defined level of performance is called

- a) observed time
- b) normal time
- c) standard time
- d) none of these.

vii) PDCA stands for

- a) plan, do, check & act
- b) prepare, do, continue & action
- c) progress, do, check & act
- d) none of these.

viii) "Cost of Quality" is the

- a) cost of creating a quality product
- b) cost of maintaining quality instruments
- c) cost of not creating a quality product
- d) all of these.

ix) For continuous process of material handling, equipment used is

- a) crane
- b) lift
- c) dumpers
- d) conveyor.

x) PERT stands for

- a) Program Evaluation Review Technique
- b) Program Evaluation Renew Technique
- c) Project Evaluation Review Technique
- d) none of these.





4. What do you mean by 'work sampling' ? Point out the advantages and limitations of 'work sampling'. 2 + 3
5. What do you mean by Work Study and Method Study ? Discuss.  $2\frac{1}{2} + 2\frac{1}{2}$
6. Write short notes on any *two* of the following :
- i) Quality Assurance
  - ii) Six Sigma
  - iii) Therbligs
  - iv) Kaizen Philosophy
  - v) Motion Study.



**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following questions. 3 × 15 = 45

7. a) What are the objectives of 'Method Study' ?  
 b) Discuss the various steps in Method study procedure.  
 c) Point out its advantages. 3 + 8 + 4
8. Considering the following data, apply Rate of Return ( ROR ) method to select the best site for a plant : 15

<b>Factors</b>	<b>Site 1 (Rs.)</b>	<b>Site 2 (Rs.)</b>	<b>Site 3 (Rs.)</b>
Land	50,000	75,000	1,00,000
Building	1,50,000	1,25,000	1,00,000
Inbound logistics	18,000	22,000	18,000
Outbound logistics	22,000	18,000	25,000
Raw material	60,000	80,000	55,000
Electricity	10,000	15,000	10,000
Water	30,000	25,000	35,000
Salary	45,000	50,000	40,000
Expected sales	2,50,000	3,00,000	2,50,000



9. What is Work Sampling ? What are its merits ? A group of 10 workmen working 8 hours per day ( one shift ) on a group of engine lathes produced 320 pieces of a component. During the study, it was observed that workmen were idle for 20% of the total available time and 80% of the time they worked at an average performance of 75%. Calculate Standard Time for the job assuming (i) the operation to be completely manual, (ii) the workmen are entitled to 20% allowance for this type of work.

3 + 4 + 8

10. a) Define 'cost of quality'.  
b) Explain the three categories of cost of quality.  
c) Write a short note on ISO 9000 series of standards on quality management systems.

3 + 6 + 6

11. a) What are the objectives of Materials Handling system ?  
b) Discuss the factors to be considered for selection of the material handling equipment.

6 + 9

12. What is Time Study ? Enumerate the steps in conducting Time Study. What is meant by Standard Time ? Discuss the different types of allowances considered in setting the standard time.

2 + 5 + 2 + 6

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END