

**IV B.Tech. II Semester Regular Examinations, April/May -2005
WORK STUDY & INDUSTRIAL ENGINEERING PRACTICES
(Production Engineering)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) Define 'Method Study'. Outline and justify the general procedure of 'Method Study'.
(b) Discuss a suitable recording technique/chart which can be employed for developing a better method of flow and handling of materials.
2. Draw a flow process chart of the following. Assume suitable activities
 - (a) Machining of a component
 - (b) Writing a letter by a typist
3. (a) Define Standard Time and give its application.
(b) Define rating. Why is it necessary? Discuss any one method of performance rating and clearly point out its advantages and drawbacks.
4. Who is responsible for the development of 'principles of motion economy? What are the uses of this study? Explain different techniques
5. What are the areas of study of Industrial Engineering? Explain them briefly
6. Describe the following methods of job evaluation? Discuss their merits and demerits also
 - (a) Ranking method
 - (b) Job classification method
7. (a) What is planning? What are the steps involved in it?
(b) Explain the advantages and limitations of planning?
8. (a) Comment on the statement "Safety promotes productivity."
(b) what are the essentials of safety program? What problems are generally Experienced? How they can be caused?

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1. (a) What are the advantages of Method Study?
(b) Explain in detail the various steps involved in Systematic methods of improvement.
2. Draw a flow process chart of the following. Assume suitable activities
 - (a) Machining of a component
 - (b) Writing a letter by a typist
3. (a) Explain the following terms: Rating, Standard time, Fatigue allowance.
(b) The observed time for an element is 0.7 minute. The rating factor is 90% and 20% is given as other allowances. Calculate standard time.
4. Explain the importance of principle of motion economy and state the principles of motion economy related to the use of human body.
5. (a) What are the objective of Industrial Engineering?
(b) What are the activities of Industrial Engineering?
6. (a) State the principles of job evaluation
(b) What is the significance of job evaluation in industry.
7. (a) Discuss the importance of Executive (managerial) training and development
(b) State the principles of management development program.
8. Describe the importance of following in preventing accidents.
 - (a) Illumination
 - (b) Ventilation
 - (c) House keeping
 - (d) plant layout

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1. Define “method study” and motion study and bring out the relationship Between them. Discuss the role of method engineer in raising the industrial productivity.
2. Draw a typical Flow Process Chart. How does it differ from an operation Chart? What are its uses?
3. (a) Explain the concept of time study
(b) Find the standard time for operation performed by a drill man if the work sampling study shows that he was idle for 15% of the total working time of 8 hours and for the remainder of the duty he worked at 110% performance index. He drilled 200 items of acceptable quality during his total duty. Assume that 10% of the total time is taken as fatigue and other personal allowances.
4. (a) Is the movement involving the least muscular activity and the lowest classification of body motions the best and least fatiguing motion? Why?
(b) Under what circumstances is it feasible to make a micro motion analysis of a job? Explain.
5. Give the brief interpretation of industrial Engineering and its functions?
6. (a) State the principles of job evaluation
(b) What is the significance of job evaluation in industry.
7. (a) Discuss the importance of Executive (managerial) training and development
(b) State the principles of management development program.
8. (a) State the causes of Industrial accidents and suggest practical measures to minimize them.
(b) Define accident? What are the prime sources of major accidents?

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1. (a) What is the difference between Method Study and Work Measurement? State the objectives of each.
(b) What steps are followed for doing a Method Study of job process?
2. Draw a typical Flow Process Chart. How does it differ from an operation Chart? What are its uses?
3. What about “Ratio delay study“ ? . what are the application of work sampling? What are advantages and limitations of work sampling?
4. State the principles of motion economy as related to
 - (a) Design of jigs and fixtures.
 - (b) Work place layout
5. (a) What are the advantages of Industrial Engineering?
(b) What are the reasons for adopting Industrial Engineering tools?
6. (a) What is meant by incentive? Explain different types of incentive plans.
(b) Incentives are necessary for smooth and efficient running of plant. Discuss.
7. Why do organization often over look or lack proper evaluation of training and development programmes?
8. (a) State the causes of Industrial accidents and suggest practical measures to minimize them.
(b) Define accident? What are the prime sources of major accidents?
