

## 2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS  
**WORK STUDY & INDUSTRIAL ENGINEERING PRACTICES**  
 (PRODUCTION ENGINEERING)

Apr/May 2006

TIME – 3 HOUR  
 MARK – 80

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

1. (a) What are the objectives of Method Study?  
 (b) Which are the recording techniques used in the Method study Improvement? Explain [8+8]
2. Describe with an example one of the recognized charts of method study. Explain as to how this chart is made and used? [16]
3. (a) Describe the nature and uses of activity sampling.  
 (b) The following information is collected during the work sampling study. Total study time = 8 hours, Number of pieces produced during this period = 20, the percentage of 'working' from the work sampling study has been found as 85% . The average performance index noted = 120% . Personal and delay allowances = 15% . Determine the standard time per piece? [2\*8]
4. What principles would you bear in mind when effecting improvements in work place layout and what techniques could be employed? [16]
5. How does Industrial engineering help to improve productivity of an enterprise? [16]
6. (a) What do you understand by wage and salary? What are the characteristic differences between them?  
 (b) Explain briefly the factors influencing the wages. [8+8]
7. (a) What is training? Explain the benefits of training to the employees and the organization?  
 (b) Explain the various steps involved in planning the training programmes? [8+8]
8. (a) Explain "Job safety analysis" state its necessity.  
 (b) Explain the importance of safety while at work to the
- i. Management  
 ii. worker [16]