

**B.Tech. – VIEP – MECHANICAL ENGINEERING  
(BTMEVI)**

**00291 Term-End Examination  
June, 2015**

**BIME-020 : INDUSTRIAL ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any **five** questions. All questions carry equal marks. Assume missing data if any.*

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1. (a) What is Industrial Engineering ? Outline the scope of Industrial Engineering. 7
- (b) Define the term productivity. How is it different from production ? Give suitable examples. 7
2. (a) Explain the requirements of a good product design. 7
- (b) What is work-study ? Discuss the different techniques of motion-study. 7
3. (a) Describe the procedure for method-study. 7
- (b) Describe the basic procedure for time-study using a stop watch. 7

4. (a) Discuss the importance of ergonomics with respect to the various areas of application. 7
- (b) Explain the ergonomic principles to be followed for the design of displays and control. 7
5. (a) Describe the step-by-step procedure of work measurement. 7
- (b) List the various methods of rating. Discuss the importance of performance rating in time-study. 7
6. (a) List the various types of quality control charts and explain any one of them with the help of suitable example. 7
- (b) Describe the procedure of single sampling plan and double sampling plan. 7
7. Write short notes on the following :  $4 \times 3 \frac{1}{2} = 14$
- (a) Value engineering
- (b) Allowances
- (c) Principles of motion economy
- (d) Design for manufacturing
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