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BIME-020

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

Term-End Examination

December, 2015

BIME-020 : INDUSTRIAL ENGINEERING

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any five questions. All questions carry equal marks. Assume missing data, if any. Use of scientific calculator is permitted.*

1. (a) Explain the principles of motion-economy as applied to the use of hand tools.
(b) Describe the procedure for conducting a work sampling study. 7+7
2. (a) List the various types of control charts for variables and explain any one of them with suitable example.
(b) Discuss the procedure for sequential sampling plan. 7+7
3. (a) Describe any two techniques for conducting method study.
(b) Discuss the purpose and the various applications of work measurement. 7+7

4. (a) Explain the stages involved in a product life cycle with the help of suitable example.
- (b) What is value analysis ? Describe briefly the various value engineering techniques. 7+7
5. (a) Describe ergonomic design of a CNC machine.
- (b) What do you mean by inspection ? Write the objectives and functions of inspection. 7+7
6. (a) Discuss the role of an Industrial Engineer. What are the application areas of Industrial Engineering ?
- (b) Explain partial productivity and total productivity with the help of suitable examples. 7+7
7. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Acceptance Sampling
- (b) Performance Rating
- (c) Environmental Condition of Fatigue
- (d) Predetermined Motion Time Study
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