

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

**Term-End Examination**

**June, 2017**

00787

**BIMEE-018 : INDUSTRIAL ERGONOMICS**

*Time : 3 hours*

*Maximum Marks : 70*

---

*Note : Answer any **five** questions. All questions carry equal marks.*

---

1. Using suitable examples, explain the laws/principles of ergonomics applicable to equipments or tools used by a worker. 14
2. Discuss the ill-effects of static loading. What are overstrain problems ? How are overstrain problems classified ? 14
3. (a) Explain the concept of the man-machine system in ergonomics. 7  
(b) Discuss the application of the man-machine system with respect to robotics. 7

4. List and explain the recommendations for indoor comfort against heating in factories. Discuss how these recommendations help in improving labour productivity. 14
5. (a) Discuss the ergonomic guidelines for selection of control with respect to arrangement of controls and displays. 7
- (b) Discuss the importance of job design in case of a monotonous task. 7
6. (a) Explain how loading and unloading systems can be designed to reduce physical stress on the backs of workers. 7
- (b) Discuss the various physiological effects of noise on workers' health. 7
7. Write short notes on any *two* of the following : 7+7=14
- (a) Air Pollution and Ventilation
- (b) Effect of Vibration on Workers' Performance and Health
- (c) Work-Station Design
-