

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

Term-End Examination

December, 2013

BIMEE-018 : INDUSTRIAL ERGONOMICS

Time : 3 hours

Maximum Marks : 70

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

1. Explain some laws or principles of ergonomics applicable to tools or equipments used by operators. 14
2. Discuss the ergonomic guidelines to be followed for an effective workplace layout. 14
3. Discuss the ill effects of static loading. Also classify the overstrain problems. 14
4. (a) Discuss the ergonomic design of a Visual Display Terminal (VDT) workstation with a suitable example. 8
(b) What is 'OSHA' ? Explain its roles in framing safety related guidelines. 6
5. (a) Explain the concept of the man-machine system in ergonomics. 7
(b) Write the use of man-machine system in robotics systems. 7

6. Write short notes on the following : **3.5x4=14**
- (a) Aperture of pupil
 - (b) Eye movement
 - (c) Physiology of reading
 - (d) Display and control
7. List and explain the recommendation for indoor comfort against heating in industries. **14**
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