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Manipal Institute of Technology, Manipal



VII SEMESTER B.TECH (INDUSTRIAL AND PRODUCTION ENGINEERING) END SEMESTER (MAKE UP) EXAMINATIONS, DEC 2015/JAN 2016

SUBJECT: ERGONOMICS [MME 465]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ANY FIVE FULL** the questions.

- 1A. Explain the objectives and importance of Ergonomics. (02)
- 1B. Explain with an example the six directional interactions between one man and one machine in an environment. (03)
- 1C. With a block diagram explain the sources and pathways of stimuli. (05)
- 2A. Explain the reliability of a system with redundancy arrangement. (02)
- 2B. Explain any four characteristics of the systems. (04)
- 2C. With a neat sketch explain the Human-Machine system. (04)
- 3A. Write a note on Information theory. (02)
- 3B. Explain perception, sensory storage and short term store with regard to Human sensorimotor system. (04)
- 3C. Explain the types of information presented by displays. (04)
- 4A. Explain the fundamental Man-Machine system assumptions. (03)
- 4B. Discuss the general guidelines to be followed while designing the visual displays. (04)
- 4C. Write a note on the design of specific hand operated controls. (03)
- 5A. Explain visual acuity, contrast sensitivity and adaptation with regard to human visual system. (03)
- 5B. What is Anthropometry? Explain the Static and Dynamic Anthropometry. (03)
- 5C. Explain the basic design of Quantitative and Qualitative scales. (04)

- 6A.** Explain the effect of light and noise on performance. **(03)**
- 6B.** Discuss the design of foot controls. **(03)**
- 6C.** Write a note on the design of work surfaces. **(04)**