

--	--	--	--	--	--	--	--

B.E. (Full-Time) DEGREE END SEMESTER EXAMINATIONS, APRIL 2013

INDUSTRIAL ENGINEERING BRANCH

FIFTH SEMESTER

IE 9304 APPLIED ERGONOMICS

(REGULATIONS 2008)

8

Time : 3 Hours

Answer ALL Questions

Max Marks : 100

PART - A (10 x 2 = 20 Marks)

1. What are the elements of ergonomics?
2. Differentiate between simple reaction time and choice reaction time.
3. What is the effect of heat on human performance?
4. Mention any two quantitative work load analysis.
5. Differentiate between stress and strain
6. What is basal metabolic rate?
7. Write the various anthropometric principles
8. What are the recommended types of display?
9. What are the standardized controls used in a car?
10. How to control the noise level at the work environment?

PART - B (5 x 16 = 80 Marks)

11. a (i) Explain the interdisciplinary nature of ergonomics (8)
(ii) Describe the human component and machine component of work system. (8)
 12. a Describe all the factors which are influencing the human performance (16)
- OR**
- b Explain the information theory and write its applications. (16)

13.a Describe the direct method of measuring energy expenditure at work (16)

OR

b (i) Explain the classification of fatigue and its measurement method (8)

(ii) What is the need for work and rest schedule and how it is calculated? (8)

14.a Describe the sitting and standing anthropometric measures and its applications along with its suitable diagram. (16)

OR

b Illustrate the VDT work stations by specifying the various anthropometric measures (16)

15.a Describe the personnel protective equipments used in the chemical industries. (16)

OR

b Write short notes on

(i) Factories Act (8)

(ii) Industrial accidents. (8)