

Department of Applied Mechanics
AM 776 Product Design - I

Date : 27/11/06 MAJOR TEST Max Mark - 60

Time - 2 hrs 10.30 Am to 12.30 Pm

Note : Attempt all Questions

Q1a What aspects of Design are emphasized in Human factors in Engineering? (4)

Q1b. What do you understand by GLARE & VISUAL FATIGUE (3)

Q2a How can Noise be controlled in man-made machines (3)

Q2b. What do you understand from Hearing Loss from Non continuous Noise (3)

Q3a. What are the effects of Noise on Performance (4)

Q3b. Explain with examples the principle of Design for Extreme Individuals, Adjustable range and for the Average. (5)

Q4. Write short Notes on.

(i) Body Movements

(ii) Body Strength

(iii) Endurance (5)

Q5. What do you understand by choice of Displays. Under what conditions the selection of Displays made depends. (8)

Q6. What principles guide the design of following Mechanical Controls and Tools.

- (i) Selector Switches
- (ii) Knobs.
- (iii) Cranks and Hand wheels.
- (iv) Lever and Pedals.
- (v) Tools.

(8)

Q7. Explain Acceleration & Deceleration in connection with Human Body. What are the protections provided to avoid the effects.

(6)

Q8. What are the adverse effects of Vibration on human body.

(4)

Q9. What do you understand by Acclimatization and the role of Wind chill and Relative Humidity.

(03)

Q10. What measures can be taken to combat the adverse effect of Temperature.

(04)