

**III B.Tech. II Semester Regular Examinations, April/May -2005**  
**ERGONOMICS**  
**(Bio-Medical Engineering)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Design equipment to screen malnutrition .  
(b) Suggest the nutritional food they should take to become physiologically normal.
2. Draw out a design of computer room, their requirements. Compare and contrast between a computer operator and a typist.
3. (a) Design a camp for a platoon of sixty military personnel at high altitude for a period of one month.  
(b) What equipment they should carry for their stay in healthy state ?
4. What do you mean by a simulator?
5. Describe in detail the factors required for a space craft.
6. (a) How do you explain tremors in hands ?  
(b) List out the types of tremors in hands  
(c) What mechanical apparatus will suit the worker with tremors ?
7. Design an O.T table with the necessary accessory devices and specify the different types of O.T tables used in hospitals?
8. Design a control room and present its layout.

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1. Define process control. Give an account of design of models.
2. (a) Define Performance in work place  
(b) What methods do you suggest to bring improvement.
3. What are anthropometric measurements? Discuss in detail how they are helpful for designing a tool room?
4. Design a place for a training room for a sports man with detailed specifications.
5. What do you understand by anthropometry ?
6. (a) How do you explain tremors in hands ?  
(b) List out the types of tremors in hands  
(c) What mechanical apparatus will suit the worker with tremors ?
7. Design an operation table with accessories like monitor, spotlight and air conditioning.
8. Write the case study of control room layout with a neat sketch.

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1. (a) Describe Electrocardiogram and its principle of operation.  
(b) How a doctor interprets it.
2. (a) Define Performance in work place  
(b) What methods do you suggest to bring improvement.
3. Design an equipment for armed forces personnel to reach a height of one thousand feet above the sea level to encounter the enemy forces.
4. (a) What is audiometry ?  
(b) How do we judge the levels of hearing in defective hearing?
5. Describe in detail the factors required for a space craft.
6. (a) How do you explain tremors in hands ?  
(b) List out the types of tremors in hands  
(c) What mechanical apparatus will suit the worker with tremors ?
7. Draw a sketch of dental chair keeping in mind the instruments like scaler, washer, driller, x-ray equipment etc.,
8. Give a layout of hospital with various facilities for a hundred bedded hospitals.

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1. Define process control. Give an account of design of models.
2. Draw out a design of computer room, their requirements. Compare and contrast between a computer operator and a typist.
3. What are anthropometric measurements? Discuss in detail how they are helpful for designing a tool room?
4. (a) What is audiometry ?  
(b) How do we judge the levels of hearing in defective hearing?
5. (a) How do you prove that there is electrical activity in human beings  
(b) Describe Electrocardiogram and how is helpful to a doctor.
6. (a) How do you explain tremors in hands ?  
(b) List out the types of tremors in hands  
(c) What mechanical apparatus will suit the worker with tremors ?
7. Design an operation table with accessories like monitor, spotlight and air conditioning.
8. Give a layout of hospital with various facilities for a hundred bedded hospitals.

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