

**Avinashilingam Institute for Home Science and Higher Education for
Women, Coimbatore-641043**

**Master's Degree Examination – November 2017
III Semester**

Class: II PG
Major: Interior Design and Resource Management

Max.marks: 60
Time: 3 hours

12MIRC15 ERGONOMICS

Part A
Answer the following

10 x ½ = 5

1. Which of the following is used in making a more detailed study of some particular part of the process?
a) Operation chart b) Process Chart c) Cycle graph d) None
2. 'Ergonomics' is related to human.
a) Comfort b) Safety c) Both 'a' and 'b'
d) None of the above
3. The following subject(s) is (are) related to 'Ergonomics'
a) Anthropology b) Physiology c) Psychology
d) All of the above
4. Eliminating or combining parts of job is suggested by incorporating changes in
a) Tools b) Posture c) Production sequence d) Raw materials
5. The scientific study of man and his working environment is
a) Demography b) Ergonomics c) Work simplification d) Occupational health
6. The recommended height of the work surface in the kitchen for efficient operation is
a) 4 inches below the elbow level b) 3 inches below the elbow level
c) 5 inches below the elbow level d) 6 inches below the elbow level
7. Ergonomics principle suggests that
a) Monitoring displays should be placed outside peripheral limitations
b) Glow-in-the dark dials made of reflective substances are good for viewing in the nights
c) Visual systems should be preferred over auditory systems in noisy locations
d) All of the above
8. In designing an efficient workspace, the left hand will cover
a) Maximum working area b) Normal working area
c) Minimal working area d) All of the above
9. The height of the top of the work bench should be ___ the height of the elbow of the workmen.
a) at b) Above c) Below d) All of the above
10. The safe exposure limits for noise levels for 8 hours of working day is
a) 90 dBA b) 110 dBA c) 130 dBA d) 150 dBA

Part B

5 x 4 = 20

Answer ALL questions

Answer should not exceed 200 words or one page

- 11 (a). What do you mean by anthropometry? Explain the role of anthropometry in design of work station.
- or
- 11 (b) Briefly discuss the working heights specifications with suitable examples in kitchen counter.
- 12.(a). Explain the effects of work place thermal condition on safe work behaviour
- or
- 12(b). Define noise. Discuss the ways to reduce noise in work space.
- 13(a) State some of the health hazards occur while keeping the body in an upright position.
- or
- 13(b) State the condition to be focused when selecting office furniture.
- 14(a) List the guidelines to design a work station to minimize muscle fatigue
- or
- 14 (b) State the 3 components needed in posture analysis and work station design
- 15 (a) What are the factors to be considered while designing a furniture for physically challenged person?
- or
- 15(b) Explain process chart with illustrations.

Part C

5 x 7 = 35

Answer all the questions

Answer should not exceed 600 words or 3 pages.

- 16(a) Elaborate the importance of range, reaching heights of maximum, minimum and normal with suitable sketches.
- or
- 16 (b) Sketch the layout of kitchen with L shaped platform showing work triangle and any one suitable section.
- 17(a) Classify fatigue.
- or
- 17 (b) Write note on the following:
- i) What are the recommended floors in the workplace?
 - ii) Who uses pushing and pulling motions at work?
- 18(a) Enumerate the importance of Ergonomic triangle and its role in kitchen design.
- or
- 18b) How do you differentiate a bad and good posture? Explain the threats created due to bad postures in our day to day activities.
- 19(a) Explain the importance of Mundell's Classes of Change.
- or
- 19(b) List any four health and safety issues related to textile industry design.
- 20(a) Design an office furniture giving importance to ergonomic concepts.
- or
- 20 (b) Elaborate the environmental factors affecting work efficiency.
