

**Avinashilingam Institute for Home Science and Higher Education for Women  
(Deemed to be University) Coimbatore - 641043**

**Master's Degree Examination November 2018**

**Semester - III**

**Class : II PG**

**Time : 3 hours**

**Major : Interior Design and Resource Management**

**Max. marks : 60**

**17MIRC15 - Ergonomics in Work Place Design**

**Part A**

**Choose the correct answer**

**10 X 1/2 =5**

1. The ability of the heart to beat regularly without external stimulation is called  
a) pulse pressure    b) rhythmicity    c) vital capacity    d) tidal volume
2. The normal respiration rate for an adult at rest is \_\_\_\_\_ breaths per minute.  
a) 10 to 15    b) 20 to 25    c) 12 to 20    d) 15 to 25
3. Any activity which involves the movement of legs is a kind of \_\_\_\_\_ effort.  
a) mental    b) pedal    c) torsal    d) visual
4. The sequence of eliminating wastefulness resulting from using unwanted step is known as  
a) time study    b) process chart    c) pathway chart    d) motion study
5. Sound intensity is measured in units called  
a) decibel    b) vibration    c) resonance    d) Hertz
6. The study of people in relation to their work environment is defined as  
a) physiology    b) psychology    c) anthropometry    d) ergonomics
7. The material highly suitable for kitchen counter top is  
a) cuddappa    b) marble    c) granite    d) wood
8. The window area in a kitchen should be \_\_\_\_\_ floor area to provide sufficient ventilation.  
a) 20%    b) 10%    c) 30%    d) 40%
9. Cognitive ergonomics is concerned with  
a) human anatomy    b) mental processes    c) organizational structures    d) climate
10. One of the architectural barrier for the physically challenged is  
a) doors    b) windows    c) staircases    d) handrails

**Part B**

**5 X 4 = 20**

**Answer ALL Questions**

**Answer should not exceed 200 words or one page**

- 11.a. What are the tests used to diagnose and monitor the condition of lungs?  
(Or)
- 11.b. Explain the basic properties of cardiac muscle.
- 12.a. Mention the role of lighting in work place.  
(Or)
- 12.b. Discuss the impact of temperature on work performance.
- 13.a. State the types of fatigue and methods of alleviating fatigue in doing different activities. (Or)
- 13.b. What postures help to reduce physical strain in doing heavy work in kitchen?
- 14.a. Explain the importance of work triangle in improving work efficiency.  
(Or)
- 14.b. Give a brief note on the principles of storage in the kitchen.
- 15.a. Write an account of ergonomic chair.  
(Or)
- 15.b. What are the problems faced by physically challenged in using regular space designs?

**Part C**

**5 X 7 = 35**

**Answer ALL Questions**

**Answer should not exceed 600 words or three pages**

- 16.a. Define blood pressure. What are the major factors affecting blood pressure?  
(Or)
- 16.b. Discuss the mechanism of respiratory system.
- 17.a. How does noise in work place affect human health? Explain the various measures adopted to control noise.  
(Or)
- 17.b. Write on the environmental factors affecting work efficiency.
- 18.a. Discuss the various techniques used in performing time and motion study.  
(Or)
- 18.b. Explain how to ensure safe and hazard-free work place.
- 19.a. What are the problems felt by women working in poorly designed kitchen?  
(Or)
- 19.b. Enumerate on the features of different types of kitchen with illustrations.
- 20.a. What are the aspects to be considered while designing work place for physically challenged? Discuss (Or)
- 20.b. Define anthropometry. Why is it necessary to consider anthropometric measurements in designing furniture for persons with disability?