

**2020****PHYSIOLOGY****Course : 103****(Physiology of Occupation, Physiology of Exercise and Physiological Instrumentation)**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*Answer any **two** questions of the following: 20×2=40

1. a) What do you mean by dynamic anthropometry? Discuss the applications of anthropometric data in work space design?
- b) What is somatotyping? State its importance in different sports events.
- c) State the importance of work study. Describe the basic procedure of method study.  
(2+5)+(4+3)+(2+4)=20
2. a) Write the types of control devices used in industry? Describe about control display compatibility with suitable examples.

- b) Define Occupational health according to ILO. Describe briefly, with suitable examples, about the occupational health problems that occur due to dust exposure in work environment.

- c) Write a note on nutritional supplements as ergogenic aids. (3+3)+(2+6)+6=20

3. a) What is EPOC? Describe different components of EPOC with suitable graphs.

- b) What is super compensation? Briefly describe the physiological significance of endurance training method.

- c) Explain the benefit of warming up and warming down before and after exercise.

(2+5)+(2+6)+5=20

4. a) What is the basic principle of ion exchange chromatography? What are the different types of polymers used commonly in ion exchange chromatography?

- b) What is flow-rate and linear velocity in chromatography? Describe the factors that can influence the retention time of an analyte in gel chromatography?

- c) What is the function of annular ring in a microscope? Why is Köhler illumination important in microscopy?
- d) What are the factors that influence sedimentation velocity of a particle in centrifugation?

$$(3+2)+(2+3)+(2+4)+4=20$$

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**Submit your answer in PDF format to:**

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