

## B.Sc. Semester-VI Examination, 2022-23

### PHYSIOLOGY [Honours]

Course ID : 62516 Course Code : SH/PHY/603/DSE-3(T)

Course Title : Ergonomics and Occupational Physiology

Time : 1 Hour 15 Minutes Full Marks : 25

*The figures in the right-hand margin indicate marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** questions from the following:  
1×5=5
- a) Why ergonomics is also called as 'Human Factors Engineering'?
  - b) How the knowledge of ergonomics benefits agricultural workers?
  - c) Define acoustic trauma.
  - d) What is vibration syndrome?
  - e) What is NIHL? '
  - f) Mention the full form of P<sub>4</sub>SR.
  - g) Define luminosity.
  - h) Why dynamic work is preferred over static work?

2. Answer any **two** questions from the following:  
5×2=10
- a) Write a short note on the concept of industrial hazards. 5
  - b) What is WBGT? Mention its role in our society. 2+3
  - c) State the adverse effects of control-display incompatibility. 5
  - d) State the classification of physiological work load. 5
3. Answer any **one** question from the following:  
10×1=10
- a) What is meant by 'user friendly devices'? Write the harmful effects of vibration on human health. 2+8
  - b) Define ergonomics. Briefly discuss about the importance of ergonomics in occupational health and well-being. 2+8
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**B.Sc. Semester-VI Examination, 2022-23****PHYSIOLOGY [Honours]****Course ID : 62517 Course Code : SH/PHY/604/DSE-4(T)****Course Title : Sports and Exercise Physiology**

Time : 1 Hour 15 Minutes

Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** questions of the following:

1×5=5

- a) Differentiate between fast twitch and slow twitch muscle fibres.
- b) Write the full form of 'EPOC'.
- c) What do you mean by athlete's heart?
- d) What do you mean by RICER?
- e) Why sports anaemia takes place?
- f) What do you mean by the term 'Lactate Threshold'?
- g) What are the functions of myoglobin during the recovery process?
- h) Define 'Bioenergetics'.

*[Turn Over]*2. Answer any **two** questions of the following :

5×2=10

- a) Define the term 'ergogenic nutrient'. Explain how ergogenic nutrient can improve performance in elite sport focusing any one nutrient. 1+4
- b) Explain the physiological processes that restore the body to its pre-exercise state. Discuss five techniques used to avoid sports injuries. 2+3
- c) Write the adverse effects of detraining. 5
- d) Define cardiovascular endurance. Discuss the effect of training to improve aerobic power of an individual. 1+4

3. Answer any **one** question of the following:

10×1=10

- a) Write the role of phosphagen system in sports activity. State the importance and factors affecting O<sub>2</sub> debt in sports performance. 3+(3+4)
- b) Describe briefly about the cardiovascular responses to graded exercise. Write a note on hormonal responses to exercise. 8+2