

**2018**

**M.Sc.**

**2nd Semester Examination**

**HUMAN PHYSIOLOGY**

**PAPER—PHY-202**

**Subject Code—30**

*Full Marks : 40*

*Time : 2 Hours*

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

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

*Illustrate the answers wherever necessary.*

**( Unit—15 )**

**Answer all questions:**

1. (a) What is warm up ? State the guide lines and physiological effects of warming up ? 1+4

*Or*

- (b) What do you mean by concentric and eccentric contraction ?

*(Turn Over)*

(b) How does dynamic exercise improve the range of motion and lower the risk of injury ?

(c) What is ATP-CP cycle ? 1+3+1

2. (a) How does aging affect the muscle strength and endurance ?

(b) How is exercise related to longevity ? 3+2

*Or*

(a) Explain the set point theory in relation to dietary restriction method of weight loss.

(b) How can the ketogenic diet reduce body weight ? 3+2

3. (a) Mention the major clinical features of renal diseases. State the exercise prescription of renal diseases.

(b) Write the exercise prescription of a stroke patient. (1+2)+2

*Or*

Discuss the exercise induced ECG indicators and non-ECG indicators of coronary heart disease.

2+3

4. (a) Describe different training procedure for competition at high altitude.

(b) What is high altitude pulmonary edema ? 4+1

Or

(a) What do you mean by hyponatremia ?

(b) What is  $Q_{10}$  effect ?

(c) Describe two important factors that improve physiologic adjustments and exercise tolerance during environmental heat stress. 1+1+3

**( Unit—16 )**

Answer *all* questions :

1. Explain the model of Human processing (MHP). What are the usefulness of MHP ? What is perceptual processing ? 2+1½+1½

Or

What is MAN-MACHINE-ENVIRONMENT System ?

Explain fitting the task to man ? What is the system design approach of Ergonomics ? 2+2+1

2. (a) State the occupational variation of anthropometric measurements.
- (b) Discuss the anthropometric principles of ergonomic design. 1+4

Or

- (a) What is essential fat ?
- (b) Write the steps of densitometric method of assessing body composition. 1+4
3. (a) Write about different ways of acquiring chemical hazards.
- (b) What do you mean by wind-chill effect ?
- (c) Write a note on chilblains. 2+1+2

Or

- (a) Write the general principles of using personal protective equipment.
- (b) What do you mean by SCUBA and house mask ? 3+2
4. (a) What do you mean by Caplan's syndrome ?
- (b) Write the preventive measures of asbestosis.
- (c) Discuss the first phase of pneumoconiosis in coalmine workers. 1+2+2

Or

- (a) Describe how task complexity and work load influence occupational stress.
- (b) Mention three stages of human stress response. 3+2