

2016

M.Sc.

2nd Semester Examination

HUMAN PHYSIOLOGY

PAPER—PHY-202

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 from the following :

1. (a) What do you mean by physical fitness?
- (b) Discuss briefly about the following two components of physical fitness – (i) agility (ii) flexibility. 1+4

Or

What is meant by 'warm up'? State the effects of 'warm

(Turn Over)

up' on sports performance. 1+4

2. (a) State the 'set point' theory for reduction of body weight.
- (b) Mention the role of ketogenic diet for controlling body weight. $3\frac{1}{2}+1\frac{1}{2}$

Or

- (a) How is muscle strength changed due to aging?
- (b) How is exercise related to longevity? $2\frac{1}{2}+2\frac{1}{2}$
3. (a) Outline a protocol of treadmill test for graded exercise test.
- (b) Mention the exercise induced ECG indicators of coronary heart disease. 2+3

Or

State the clinical features of multiple sclerosis. Discuss the exercise prescription for multiple sclerosis patients.

2+3

4. (a) Mention the cardiovascular response to exercise in heat.

- (b) How body fluid balance is maintained during exercise in heat? 2+3

Or

- (a) Discuss the circulatory response to maximal and sub-maximal exercise at high altitude.
- (b) Mention the limitations of performance at high altitude. 3+2

(Unit—16)

Answer all questions from the following :

1. (a) What is MAN-MACHINE-ENVIRONMENT System ?
- (b) Explain (i) fitting the job to the workers
(ii) fitting the workers to the job. 2+3

Or

- (a) What is a model human processor (MHP) ?
- (b) State the functions of perceptual processor of MHP. 2+3
2. (a) State the anthropometric principles for ergonomic design.
- (b) Is anthropometric dimensions varied between people of different occupation? 4+1

Or

What do you mean by Behnke model of body composition ?
Discuss the Near-Infrared Interactance (NII) method for
determining body composition. $1\frac{1}{2}+3\frac{1}{2}$

3. What are the airborne toxic substances in work places ?
Discuss the effects of irritants and asphyxiants on the
industrial workers. 1+4

Or

Mention types of industrial noise. State the importance of
noise survey and audiometric testing for noise control.
1+4

4. What are the dermatological hazards of agricultural
workers ? Suggest some interventions for dermatological
hazards. $3\frac{1}{2}+1\frac{1}{2}$

Or

- (a) What are the occupational stressors ?
(b) State briefly the methods of stress management.

1+4