2020

PHYSIOLOGY — HONOURS

Paper : DSE-B-1

(Work, Exercise and Sports Physiology)

Full Marks : 50

The figures in the margin indicate full marks.

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

Group - A

1. Answer ***any five*** questions : 2×5

(a) What do you understand by Negative work? Give an example.

(b) What is meant by isokinetic work?

(c) Give the concept of anticipatory heart rate.

(d) Distinguish between overweight and obese persons on the basis of BMI.

(e) Define Ponderal Index.

(f) Is there any relationship among O_2 consumption, energy cost and RQ of a person doing a particular work?.

(g) What do you understand by work organization?

(h) Mention any two benefits of exercise.

(i) What is somatotype?

(j) State the utility of Growth Chart.

Group - B

2. Answer ***any two*** questions :

(a) Define static and dynamic works. Give examples. Which work is more stressful and why? 2+1+2

(b) Explain EPOC with diagram.— Classify it. 2+3

(c) Discuss briefly the physiological effects of heat stress in response to workloads. 5

(d) Discuss the significance of the implication of a work–rest cycle. 5

(e) What do you understand by overtraining and detraining? 5

Group - C

3. Answer ***any three*** questions :

(a) Classify work on the basis of workload. How cardiovascular and respiratory indices are used in workload classification during prolonged physical work? What do you mean by 'acceptable workload'? 2+6+2

(b) What is Maximal Aerobic Power? Describe a suitable method for determination of 'Maximal Aerobic Power'. Mention any four factors affecting 'Maximal Aerobic Power'. 2+4+4

(c) Describe a method by which you can measure the cardiovascular fitness of a person using Step Test. How can you interpret the result? 7+3

(d) (i) What are ergogenic aids?

(ii) Discuss any four ergogenic aids that are used in the sports arena. 2+(2×4)

(e) (i) What is Physical Growth?

(ii) Mention any two methods by which you can measure body composition of an individual.

(iii) State the utilities of body composition analysis. 2+6+2
