

**2020**

**PHYSIOLOGY — HONOURS**

**Sixth Paper**

**Full Marks : 100**

*The figures in the margin indicate full marks.*

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

**Unit - 11**

1. (a) What is Physical Ergonomics?  
(b) Give two examples of two different domains of Physical Ergonomics.  
(c) Describe the application of Ergonomics for improvement of industrial productivity.  
(d) What is industrial safety? 4+4+8+4

**Or,**

- (a) Why physical fitness of a sports person acts as an important contributing factor on his/her sports performances?  
(b) Discuss the methods for assessment of physical fitness by Harvard and Modified Harvard Step Tests.  
(c) What is  $VO_{2max}$ ? 8+8+4
2. (a) Name the different types of sweat glands.  
(b) Discuss the mechanism of sweat formation.  
(c) Describe the main components of sweat. 4+8+8

**Or,**

- (a) What is hypobaric environment?  
(b) Discuss the preventive measures to be taken against the hypobaric condition.  
(c) Discuss the major physiological changes that occur at high altitude. 4+8+8

**Please Turn Over**

3. (a) Describe the effects of air pollution on human body.  
(b) Discuss the green house effects on human life. 10+10

**Or,**

- (a) What is Noise?  
(b) Discuss briefly the auditory and non-auditory effects of noise on human body.  
(c) What is 'Ear muff'? 4+12+4

**Unit - 12**

4. (a) Describe briefly the process of bacterial transformation.  
(b) What are chemotherapeutic agents? Give one example.  
(c) Name one bacteriostatic antibiotic and state its mode of action. 6+6+8

**Or,**

- (a) Describe the different steps of Entner-Doudoroff pathway with its significance.  
(b) What is prion?  
(c) What do you mean by 'Lactic fermentation'?  
(d) What are retroviruses? 10+2+4+4
5. (a) Write a brief note on the importance of pharmacology in the study of physiological processes.  
(b) What is drug delivery system?  
(c) What is ED<sub>50</sub> of drug?  
(d) What is drug toxicity? 6+6+4+4

**Or,**

- (a) Describe briefly the mechanism of action of a general anaesthetic.  
(b) Name one of each of the following :  
    (i) Calcium-channel blocker  
    (ii) Carbonic anhydrase inhibitor  
    (iii) Potassium sparer  
    (iv) Adrenergic blocker  
(c) What do you understand by desensitization of drug receptor? 8+8+4
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