

2013.

M.Sc.

2nd Semester Examination

HUMAN PHYSIOLOGY

PAPER—PHY-203

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.

Write the answers to the questions of each Unit in separate books.

UNIT—17

Answer any two questions.

1. (a) State the major regions of atmosphere with their characteristic properties. What is air quality standard?
- (b) Which short-term effects do particulate matters produce?

(Turn Over)

- (c) What is the biological plausibility of particulate matters? (3+2)+3+2
2. (a) Write the types of radioactive decay.
(b) State the stochastic and non-stochastic effects of radiation.
(c) 'Human cells differ in radiosensitivity' — justify the statement. 1+(2+2)+5
3. (a) What is basophilic stippling? Mention the causes behind its formation.
(b) Discuss the major hazards of lead pollution on erythrocytes.
(c) Describe the important characteristics of chelating agents. (1+3)+3+3
4. (a) What are 'Medical wastes'? Give examples.
(b) Describe the methods employed in solid waste management.
(c) What is leachate? 2+6+2

UNIT—18

Answer any *two* questions from the following :

1. (a) Which toxicological factors are considered important for basic mechanisms of toxicity?
(b) Elaborate the mechanisms underlying thalidomide embryotoxicity. 4+6
2. (a) What are the major differences between FMO and CYP 450 catalytic cycle?
(b) Discuss the hepatic metabolism of 4-aminobiphenyl with special reference to CYP-1 family mediated toxicity. 5+5
3. (a) Why mitochondrial DNA is much prone to oxidative damage than nuclear DNA?
(b) What are the consequences of DNA-base oxidation?
(c) Oxidative DNA damage ultimately lead to mutation and eventually tumors — justify the statement. 3+4+3

4. (a) Describe the different conventional & sustainable (non-conventional) energy sources.
- (b) Write notes on :
- (i) Environmental Impact Assessment (EIA).
 - (ii) Non-Government Organisation Cell.

5+(2 $\frac{1}{2}$ +2 $\frac{1}{2}$)