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PG/MIS/PHY-304(U-1 & 2)/18
(CBCS)

M.Sc. 3rd Semester Examination, 2018

PHYSIOLOGY

PAPER -- PHY-304(U-1& 2)(CBCS)

Full Marks : 40

Time : 2 hours

Answer all questions

*The figures in the right hand margin indicate marks
Candidates are required to give their answers in their
own words as far as practicable*

Illustrate the answers wherever necessary

UNIT-1

(*Environment and Health*)

1. (a) What are the major factors those regulate earth's climate ?

(b) What is vulnerability of climate change ?

$$3\frac{1}{2} + 1\frac{1}{2}$$

(Turn Over)

(2)

Or

Write notes on :

$$2\frac{1}{2} + 2\frac{1}{2}$$

- (i) Greenhouse effect and its impact on earth's climate.
 - (ii) Air quality impacts on health.
2. (a) Describe the direct cellular toxicity after binding of carbon monoxide (CO) with different types of proteins.
- (b) Mention the role of nitric oxide in co-poisoning. 3 + 2

Or

- (a) What are organophosphorous pesticides ?
 - (b) Discuss the mechanism of neurotoxicity induced by organophosphorous pesticides. 2 + 3
3. (a) Write the importance of good measurement of exposure and diseases.
- (b) State the different determinants of health.

(3)

- (c) What do you mean by environmental tobacco smoke (ETS)? 2 + 2 + 1

Or

- (a) How could you measure the frequency of diseases ?
- (b) Define case fatality rate. Calculate the percentage (%) of CFR.
- (c) Describe the measures of association in respect to two by two table with a suitable example. 2 + 2 + 1

4. (a) What is e-waste ?
- (b) Discuss briefly about the principle of waste-to-energy (WTE) conversion.
- (c) Define the term 'Extended Product Responsibility (EPR). 1 + 3 + 1

Or

- (a) What are the merits and demerits of incineration method ?

- (b) Define the federal standards of EPA for design and maintenance of landfills. $2\frac{1}{2} + 2\frac{1}{2}$

UNIT-2

(*Human Physiology*)

1. (a) What is bipotential gonad ?
(b) Describe the role of different genetic factors in the testicular development. 1 + 4

Or

- (a) What is Spermatocytogenesis ? Describe the process with proper diagram.
(b) Discuss the Golgi and Cap phase of sperm maturation. (1 + 2) + (1 + 1)
2. (a) Differentiate growth and development.
(b) Define infancy.
(c) Write briefly on the mental and emotional domains on growth and development.

Or (1 + 1) + 1 + (1 + 1)

- (a) What is adolescence ?

- (b) Write briefly on bone and brain growth during adolescence.
- (c) What are the major emotional changes observed during adolescence? 2 + 2 + 1
3. (a) Define secondary subfertility. Discuss the causes of subfertility in women.
- (b) What are Assisted Reproductive technology (ART)? Define intracytoplasmic sperm insemination (ICSI). (1 + 2) + (1 + 1)

Or

- (a) What do you understand by partial surrogacy?
- (b) Cite examples of two STI and their causes.
- (c) Highlight the basic steps involved in IVF technology. 1 + 2 + 2
4. (a) What is meant by hormone replacement therapy (HRT)? Write down its different indications.

(6)

(b) Briefly discuss the available preparations of HRT in market.

(c) Mention the risks of using estrogen as a part of HRT. (1 + 1) + 2 + 1

Or

(a) What happens during the menopausal transition ?

(b) Write down the causes of menopause.

(c) State the clinical signs and symptoms of menopause. 2 + 1 + 2