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## Sardar Patel University, Valla bhVidya Nagar

M.Sc: Environmental Science and Technology

II Semester

Course: Occupational and Environmental Toxicology

Course no: PS2CEST 23

Date:  $16^{t\bar{h}}$  April, 2018

Max.Marks:70

Time: 10.00 - 1.00 pm

N.B. i. Draw neat and labelled diagrams wherever necessary to score full marks. ii. All questions compulsory and carries equal marks.

Q1. Answer the following multiple choice questions

(8X1)

No. of Printed Pages: 2

- 1. Water molecule is liberated in the following reaction of photosynthesis.
- i. Cyclic photophosphorylation
- ii. Non-cyclic iii. Kelvin cycle iv. all
- 2. The respiratory quotient for Carbohydrates is
- i. 1 ii. 0 iii. Less than 1 iv. More than 1
- 3. In Hatch Slack cycle the first stable compound is
- i. Oxaloacetate
- ii. Malate
- iii. Pyruvate iv. None
- 4. Which of the following control the lens of EYE
- i. Ciliary body ii. Retina
- iii. Iris iv. Cornea
- $5.C_{40}\,H_{56}O_2$  is the formula of the following pigments
- i. Chlorophyll a
- ii. Xanthophylls
- iii. Carotenes iv. Carotenoids

- 6 Skeletal muscle are
- i. Voluntary ii. Involuntary iii. Both iv. None
- 7. ECG provides the information on .
- i. Conduction path way of heart ii. Heart enlargement iii. Heart damage iv. All
- 8. The symptom of 'Alzheimer's disease' is
- i. Confusion& irritability ii. Aggression iii. Memory loss iv. all

## Q2. Answer any SEVEN of the following

(7X2)

- 1. Muscular tissue
- 2. Ribcage
- 3. Blood Brain Barrier
- 4. Strucutre of two pigment systems in PS

8. Endocrine distruptors	
9. Lacramal Glands	
3.A. Explain the ADME in details and add a note on acute toxicity (	(6)
3.B. Discuss deleterious interactions of toxicant at molecular level and add note on cancer causing agents	(6)
OR.	
3.B. Describe the dose and response with suitable examples and LC <sub>50</sub> (	(6)
Q4. B.Explain various Cardiac toxicity symptoms due to intake of various drugs and chem	(6)
OR	` '
B. i. Explain the structure of human skin ii. Narrate the structure and functions of human Kidney .	(3+3)
Q5.A. Enumerate human neurotoxic disease symptoms	(6)
5.B. Describe the formation of Pyruvate molecules in cellular respiration  OR	(6)
	(3+3)
Q6.A. Explain mode of action of substituted Phynoxy herbicide compounds  B. Write a general process of translocation and biotransformation of herbicides in plants  OR	(6) (6)
B. Describe the effects of Mercury and Chromium on plants and animal including Human	beings (6)

5. Sweat glands

6. Structure of human Kidney

7. Types of Entry of toxicant in human body