

**U.G. 5th Semester Examination-2020****ENVIRONMENTAL SCIENCE****[HONOURS]****Discipline Specific Elective (DSE)****Course Code : ENVS-H-DSE-L-01B****(Ecotoxicology and Environmental Health)**

Full Marks : 40

Time : 2½ Hours

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

1. Answer any **five** of the following:  $2 \times 5 = 10$
- Define xenobiotics. Cite examples.
  - Distinguish between LC50 and LD50.
  - What is biomarker? Cite an example of biomarker of mercury toxicity.
  - State the symptoms of black foot disease.
  - Define environmental carcinogen citing examples.
  - Why is Cr(VI) more toxic than Cr(III)?
  - What does 'dose-response relationship' mean?
  - Mention the WHO prescribed permissible limits of arsenic and cadmium in drinking water.
2. Write short notes on any **two** of the following:  $5 \times 2 = 10$
- Bioaccumulation and biomagnification

- Epidemiology of fluorosis
  - Occupational health and safety
  - Toxicity bioassay
3. Answer any **two** of the following:  $10 \times 2 = 20$
- Distinguish between toxicodynamics and toxicokinetics. Explain the main modes of toxicants' actions. How do different factors modify actions of toxicants in a living system?  $2+4+4=10$
  - Define heavy metals. Mention sources and routes of exposure of lead in the environment. Give an account of its toxic effects on human health and therapeutic measures against its toxicity.  $2+2+4+2=10$
  - Define pesticides. Explain how the mode of action of organochlorine pesticides on insect pests differ from that of organophosphate pesticides? State the cause(s) and environmental impact of pesticide resistance. Why are biopesticides preferred over chemical pesticides?  $1+4+3+2=10$
  - What are emerging contaminants? How are people exposed to endocrine disruptors? Explain the mode of action and toxic effects of such contaminants on different organisms.  $2+2+6=10$