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MME-011

**POST GRADUATE CERTIFICATE IN
MEDICAL MANAGEMENT OF CBRNE
DISASTERS (PGCMDM)**

Term-End Examination

December, 2023

MME-011 : BASICS OF CBRNE

Time : 3 Hours

Maximum Marks : 70

Note : (i) *There are three Parts A, B and C.*

(ii) *All parts are compulsory.*

Part—A

- I. Answer any *one* question in **300-400** words : 12
1. Describe the use of on-site detection of chemical warfare agents in a chemical warfare scenario and explain the readings of residual vapour detection kit in Nerve agent use.
 2. What is a blast wave ? How does it cause damage ?
- II. Write short notes in **70-100** words on any *two* of the following : $6 \times 2 = 12$
1. Toxins and type of toxins
 2. PTSD and chemical warfare
 3. Chemical Hazard Risk Reduction

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Part—B

- I. Answer any *one* question in **300-400** words : 12
1. How would you respond to a radiological dispersal device explosion ?
 2. What are the biological effects of exposure to high doses of ionizing radiation ?
- II. Write short notes in **70-100** words on any *two* of following : $2 \times 6 = 12$
1. Performance check of a Radiation Survey Instrument
 2. Raman Spectroscopy
 3. Personal Protective Equipment

Part—C

- I. Answer any *one* question in **300-400** words : 12
1. Diagnostic methods for detection of bio-agent during a biological attack.
 2. Describe the steps of outbreak investigation caused by a bioagent.
- II. Write short notes in **70-100** words on any *two* of the following : $2 \times 5 = 10$
1. Biological Weapons Convention
 2. Brucellosis
 3. Bioterrorism and India

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