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MME-011

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

Term-End Examination

December, 2022

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

1. Answer any **one** of the following in **300-400** words :

- (a) Write a detailed note on distribution and determinants of health effects of radiation. Describe briefly about Chernobyl Accident and discuss about the health consequences.

6+6

P. T. O.

- (b) Describe basic units of radiation. Include terms like Bq, eV, MR/hr, MSV/hr, Gray and Sv. in your discussion.

What is tissue weighing factor ?
Equivalent dose and effective dose.
Describe the significance of these measures
w.r.t. Radiation Injury. 6+6

2. Write short notes in **70-100** words each on any **two** of the following topics : 2×6=12

- (a) Define and differentiate the terms 'Dirty Bomb' and 'Radiological Dispersal Device' (RDD).
- (b) What is the most commonly used radiation detector ? Describe the functions of the same.
- (c) Define "Half-Life" of a radioactive substance. Write about the significance of half-life in a radiological event.

Part—B

3. Answer any **one** of the following in **300-400** words :

- (a) Enumerate the primary aim of investigating a biological attack. What are the steps of epidemiological investigation in a suspected case of Biological Agent Attack ? 6+6

- (b) Describe preparedness of a health facility against a biological event and elaborate on the principles of Health Emergency preparedness. 6+6
4. Write short notes in **70-100** words each on any *two* of the following : 2×6=12
- (a) Diagnostic tools used for detection of Bio-warefare agents
- (b) Differences between man-made and natural biological disasters
- (c) Categories of biowarfare agents with examples

Part—C

5. Answer any **one** of the following in **300-400** words :
- (a) Describe general properties of chemicals that can be used as weapons of mass destruction. Elaborate on dual use of chemicals and give examples. 6+6
- (b) Enumerate chemical disaster events in the past.
- Describe Bhopal gas tragedy and narrate the subsequent health effects observed following the incident. 6+6

6. Write short notes in **70-100** words each on any *two* of the following : 2×5=10

- (a) Clinical manifestations of pulmonary/choking agents.
- (b) What is Blast wave ? Classify blast wave injuries and enumerate major organs affected.
- (c) Chemical spill management