BRAINWARE UNIVERSITY

Term End Examination 2025-2026
Programme – BBA(HM)-Hons-2023
Course Name – Bio-Medical Waste Management
Course Code - BHM60115
(Semester VI)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) When was the Environment Protection Act under which the BMW Rules passed?

a) 2001 b) 2000
c) 1999 d) 1986

(ii) Who is legally responsible for biomedical waste management in a hospital?

a) Occupier b) Pollution Control Board
c) Waste handler d) Medical superintendent

(iii) Which of the category does Sharps such as needles and scalpels belong to:

a) Yellow b) Blue
c) Red d) White

(iv) Outline the waste that is commonly generated in OPD areas.

a) Cytotoxic drugs b) Chemical solvents
c) Human anatomical waste d) Soiled cotton and gloves

(v) Infer the waste that Diagnostic laboratories mainly generate:

a) Office waste b) Construction waste
c) Sharps and infected samples d) Food waste

(vi) Infer from the following an OT waste mainly includes:

a) Expired drugs b) Chemical cleaning agents only
c) Anatomical and soiled waste d) General paper waste

(vii) Incineration is best defined as:

a) Mechanical shredding of waste b) High-temperature combustion of waste reducing it to ash
c) Biological decomposition of waste d) Low-temperature chemical disinfection

(viii) Which waste category is MOST suitable for incineration?

a) Sharps b) Human anatomical waste
c) Contaminated plastics d) Glassware

(ix) Relate to the treatment, Electron Beam Technology treats biomedical waste:

a) High-energy electrons that break microbial DNA
b) Steam sterilization under pressure
c) Chemical disinfection using chlorine
d) Burning waste at high temperature

(x) Infer the major advantage of Electron Beam Technology over incineration.

a) Releases dioxins and furans
b) Requires fossil fuel combustion
c) Produces ash residue
d) Generates minimal air pollution

(xi) Outline the requirement, Plasma Pyrolysis treats biomedical waste by:

a) Ultraviolet radiation
b) Extremely high temperature plasma arc
c) Microwave radiation
d) Saturated steam at 121°C

(xii) Behavioral change interventions in BMW management mainly relates to:

a) Attitude, perception, and routine practices
b) Financial incentives
c) Knowledge alone
d) Infrastructure only

(xiii) Show the main purpose of Internal audits in biomedical waste management.

a) Waste reduction only
b) Continuous quality improvement
c) Fault-finding
d) None of these

(xiv) Identify the mandatory provision under BMW Rules, 2016.

a) Disposal without treatment
b) Only manual segregation
c) Annual reporting of BMW management
d) On-site incineration in every hospital

(xv) Outline the correct statement for Untreated biomedical waste.

a) Be disposed of in open areas
b) Not be kept beyond 48 hours
c) Be mixed with general waste
d) Be stored indefinitely

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Explain the significance of colour-coding system prescribed under the Bio-Medical Waste Management Rules, 2016 (3)
3. Show the use of the Hydroclave system over conventional autoclaving in large health care facilities. (3)
4. Classify the types of infectious waste commonly generated in IPD wards. (3)
5. Infer the meaning of genotoxic waste. (3)
6. Explain the contribution of patient awareness on safer biomedical waste management in hospitals (3)

OR

Explain the effects of lack of training among support staff on biomedical waste management in a hospital. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Analyze the incineration process as a method of disposal of biomedical waste. (5)
8. Inspect the methods used for disposal of sharps and other biomedical waste in hospitals. (5)
9. What are the hazardous and non-hazardous biomedical waste with examples. (5)
10. Critically analyze the major amendments introduced in the Biomedical Waste Management Rules, 2016 (5)
11. What are the most critical waste categories generated in an OT requiring immediate segregation? (5)
12. Explain the contribution, periodic evaluation of training programs does on continuous improvement in biomedical waste management practices. (5)

OR

Evaluate the barriers to effective training and capacity building in biomedical waste handling. (5)