

**B.Sc.-M.Sc. INTEGRATED PROGRAMME (TOXICOLOGY)
SEMESTER V, ONLINE EXAMINATION 2020
PAPER CODE - BTX-GE5 TH**

PAPER TITLE: BIOSAFETY AND BIOETHICS

Time : Two Hours

Maximum Marks : 37

Attempt all questions. All parts of a question must be attempted in continuation. Start answer of a fresh question on a new page. Cite examples and draw labeled diagrams wherever necessary

Question No. 1:

Answer any SEVEN of the following briefly or fill in the blanks: [07 x 1 = 07]

- Name the three committees and their function to implant the rDNA guidelines in India?
- Agents that are associated with human disease which are rarely serious and for which preventive or therapeutic intervention are often available, are classified as
- Agents that are likely to cause serious or lethal human disease for which preventive or therapeutic intervention are not usually available, are classified as
- Biohazardous agents classified as Risk group 2 have ----- individual risk and ----- community risk.
- Biohazardous agents classified as Risk group 3 have ----- individual risk and ----- community risk
- Mention three routes of entry for pathogen in a laboratory personnel?
- Name three activities in a laboratory which can generate aerosols?
- First GMO was created in the year?

Question No. 2:

Attempt any THREE of the following:

[03 x 5 = 15]

- Briefly describe HEPA filters and the three mechanisms particulate matter removal in Biosafety cabinets?
- Briefly describe Class1 and class 3 biosafety cabinets with an outline of the main feature of their design?
- Briefly describe Class2 and class 4 biosafety cabinets with an outline of the main feature of their design?
- Briefly explain the three categories of guidelines stipulated for research using rDNA Technology for Biosafety Regulations?

Question No. 3:

Attempt any THREE of the following:

[03 x 5 = 15]

- a) Explain Rules 1989 for GMOs regulation in India and name the six competent authorities and their main functions for their implementation?
- b) Briefly explain the parameters for safety assessment of GM foods?
- c) What are GMOs? Name any two foods and any two medicines derived from GMOs? Give any two examples to explain the advantages and disadvantages of GMOs.
- d) What is 'substantial equivalence' in the safety assessment approach for the genetically modified crops? Give an outline of the codex framework of safety assessment of a food derived from GM crop?

It should be noted that 40 minutes extra time will be provided to scan your answer sheets, build a PDF and upload it.

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