

USN

Question Paper Version : D

Third Semester B.E. Degree Examination, Jan./Feb. 2023
Bio Lab Management and Risk Assessment

Time: 1 hr.]

[Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

Choose the correct option from those in each of the sentence below :

1. Perishable foods should not be allowed to stand at room temperature for more than ____
a) One hour b) Two hour c) Four hour d) Eight hour
2. The process of heating mill to kill pathogenic microorganisms is called ____
a) Sterilization b) Irradiation c) Pasteurization d) None of the above
3. Which Government agency is responsible for enforcing standards for wholesomeness and quality of grains, produce , meat , poultry , milk and eggs produced in the U.S through inspecting and grading?
a) USDA b) FDA c) CDC d) EPA
4. An incident can be called hazardous only when ____
a) Stressor has the potential to cause harm to human and ecological system
b) Poses threat to surrounding
c) Monitoring has failed
d) Outburst of chemicals
5. Which of the following are the reasons for increasing incidence of food – borne illness?
a) Increased consumption of food imported from Foreign Countries
b) Increased number of individuals eating in restaurants
c) Better diagnosis by physicians
d) All of the above
6. Environment Protection Act was enacted in India during ____
a) 1986 b) 1984 c) 1994 d) 1987
7. The Global Warming Potential (GWP) is the least for which of the following green house gases?
a) CH₄ b) CO₂ c) N₂O d) SF₆

8. Kyoto Protocol is related to _____
 a) Food safety
 b) Movement of GMOs
 c) Control of green house gases emission
 d) None of the above
9. Which of the following is an essential of quality management?
 a) Purchasing and Inventory
 b) Process Improvement
 c) Customer Service
 d) All of the above
10. The Country that grows highest area of genetically modified crops in the World is _____
 a) Canada
 b) USA
 c) Brazil
 d) Argentina
11. The application of combination of laboratory practices and procedures, lab facilities and safety equipments when working with potentially infections microorganisms is called _____
 a) Biosafety
 b) Sterilization
 c) Uncontrolled Access Zones
 d) Decontamination
12. Which of the following may be called a biohazard?
 a) Allergens derived from plants
 b) Microorganisms
 c) Toxins derived from microorganisms
 d) All of the above
13. The temperature range and pressure maintained inside autoclave is _____
 a) 103° - 114° C & 20 lbs
 b) 121° - 132° C & 15 lbs
 c) 142° - 153° C & 25 lbs
 d) 150° - 160° C & 12 lbs
14. Which among the following is not an example for dry heat sterilization used in biolabs?
 a) Direct flaming
 b) Hot air oven
 c) Autoclave
 d) Incineration
15. Which of the following equipment is essentially required for growing microbes on a large scale for industrial production of enzymes?
 a) Bioreactor
 b) BOD incubator
 c) Sludge Digester
 d) Industrial Oven
16. Pathogenicity refers to _____
 a) How an organism reaches its target as to cause disease?
 b) The ability of an organism to cause disease
 c) The organisms ability to survive over-time in a variety of environment.
 d) The number of organisms it takes to cause disease in a person.
17. Containment may be best achieved through _____
 a) An action or series of action taken to recognize and identify hazards
 b) Effective vaccinations or antibiotic treatment
 c) Combining good laboratory practices, safety equipment and facility design
 d) Reducing the number of organisms it takes to cause disease or illness in a person.
18. Which of the following organisms is an example for Biosafety – Level 1 Risk?
 a) E.Coli
 b) Ebola Virus
 c) Anthrax
 d) Tuberculosis
19. Which of the following colour is used for radiation hazard?
 a) Red
 b) Orange
 c) Green
 d) Purple
20. Agents associated with serious or lethal human disease for which preventive or therapeutic interventions may be available are categorized under _____
 a) BSL 1
 b) BSL 2
 c) BSL 3
 d) None of the above

21. _____ includes rules of conduct that may be used to regulate our activities concerning the biological world.
 a) Bio - piracy b) Biosafety c) Bioethics d) Bio - patents
22. Basal convention on trans – boundary movement of hazardous waste was implemented in the year _____
 a) 1969 b) 1999 c) 1979 d) 1989
23. What is the correct sequence for impact assessment process in Environment Impact Assessment (EIA)?
 a) Description of event → Identification of impacts → Prediction of impacts → Evaluation of impacts → Identification of mitigation.
 b) Identification of impacts → Prediction of impacts → Evaluation of impacts → Description of event → Identification of mitigation.
 c) Identification of impacts → Description of event → Prediction of impacts → Evaluation of impacts → Identification of mitigation.
 d) Prediction of impacts → Identification of impacts → Description of event → Evaluation of impacts → Identification of mitigation.
24. GEAC stands for :
 a) Genetic Ethical Approval Committee.
 b) Genetic Engineering Activation Commission.
 c) Genetic Ethical Activation Commission
 d) Genetic Engineering Approval Committee.
25. Potentially toxic waste contains _____
 a) Radioactive waste b) Chemical waste
 c) Pharmaceutical waste d) All of the above
26. The core principle of bioethics are all of the following except _____
 a) Beneficance b) Justice c) Malefiscence d) Autonomy
27. Durable material used to make heat – resistant glassware used in biolabs is _____
 a) Polyethylene b) Sodalime c) polystrene d) Borosilicate
28. United Nations Conference on Environment also termed as “Earth Summit”, was held in 1992 in which city?
 a) Rio de Janeiro b) Kyoto c) Stockholm d) Copenhagen
29. GMOs have played a major role in the development of vaccines including
 a) Lika Virus b) Ebola Virus c) Hepatitis B d) All of the above
30. Which of the following is the incorrect match with respect to OMICS approach?
 a) DNA → Genomics b) Lipids → Transcriptomics
 c) Protein → Proteomics d) Metabolite → Metabolomics
31. Which of the following is considered to be the first transgenic crop?
 a) Tobacco b) Cotton c) Maize d) None of the above
32. The total number of principles in a HACCP system are _____
 a) Four b) Seven c) Eight d) Ten

33. Which of the following Vitamin is the major component of Golden Rice?
 a) Vitamin B b) Vitamin D c) Vitamin C d) Vitamin A
34. Which of the following Bacterium is called "Superbug" that could clean up oil spills?
 a) Bacillus subtilis b) Psuedomonas putida
 c) Pseudomonas denitrificans d) Bacillus denitrificans
35. Why is flavr – Savr tomato known for?
 a) Increased shelf - life b) Nematode resistance
 c) Different taste d) All of the above
36. Chlorella sp. are widely used in the removal of _____
 a) Organic wastes b) Hydrocarbons c) Heavy metals d) All of the above
37. The use of living microorganisms to degrade environmental pollutants is called _____
 a) Microremediation b) Nanoremediation
 c) Bioremediation d) None of the above
38. Which of the following is not a waste treatment method for biomedical waste?
 a) Incineration b) Chemical Disinfection
 c) Autoclaving d) Sieving
39. Which of the following colour containers is generally used to dispose off biomedical sharp wastes (including needles and blades)
 a) White b) Yellow c) Red d) Blue
40. The Genetically Modified (GM) brinjal in India has been developed for :
 a) Enhancing mineral content b) Drought resistance
 c) Insect – resistance d) Enhancing shelf - life
41. Microbial agents possessing this route of transmission have caused the most laboratory acquired infections :
 a) Aerosol b) Ingestion c) Parental d) None of the above
42. Which of the following biosafety level practice involves clothing change before entering and shower on exit?
 a) BSL 1 b) BSL 2 c) BSL 3 d) BSL 4
43. Which of the following is the main objective of risk assessment?
 a) To evaluate hazard and minimize the risks
 b) Remediation of containment sites
 c) Hazard management d) To know the source of pollutants
44. Which of the following statements is / are correct with respect to Cartagena Protocol?
 a) It was the first international regulatory framework for safe transfer, handling and use of Living Modified Organisms (LMOs).
 b) It was negotiated under the aegis of the Convention on Biological Diversity (CBD)
 c) India is party to the protocol d) All of the above are correct

45. _____ process determines whether exposure to a chemical can increase the incidence of adverse health effect.
- a) Hazard Identification
 - b) Exposure Assessment
 - c) Toxicity Assessment
 - d) Risk characterization
46. When working with infectious biological material, the best place to perform the work would be _____
- a) On a laboratory bench
 - b) In a biological safety cabinet
 - c) On a clean bench with dust mask
 - d) In a fume hood
47. What does HACCP stand for?
- a) Hazard Analysis and Critical Control Point
 - b) Hazard and Critical Control Point
 - c) Health Analysis and Critical Control Point
 - d) None of the above
48. Cartagena protocol was adopted in the year _____
- a) 1998
 - b) 2004
 - c) 2000
 - d) 2008
49. Which of the following is not one of the steps in risk management process?
- a) Risk Response Development
 - b) Risk Tracking
 - c) Risk Assessment
 - d) Risk Identification
50. HEPA stands for _____
- a) High Efficiency Particles in Air
 - b) High Evaluation Protected Air
 - c) High Efficiency Particulate Air
 - d) None of the above

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