



# BRAINWARE UNIVERSITY

**Term End Examination 2021 - 22**

**Programme – Bachelor of Science in Medical Lab Technology**

**Course Name – Bioethics & Biosafety**

**Course Code - GEBT201**

**( Semester II )**

**Time allotted : 1 Hrs.15 Min.**

**Full Marks : 60**

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 60=60

*Choose the correct alternative from the following :*

- (1) Simple sequence repeats are
  - a) 1-6 bp long sequences distributed along the chromosome
  - b) individual specific in number and position.
  - c) also called as micro satellites
  - d) All of these
- (2) Radioactive probe is not required in
  - a) RAPD
  - b) AFLP
  - c) RFLP
  - d) All of these
- (3) Molecular marker Include
  - a) RFLP
  - b) AFLP
  - c) SSR
  - d) All of these
- (4) Which regulatory body responsible for implementation of biosafety guidelines for recombinant DNA technology?
  - a) RDAC
  - b) GEAC
  - c) DST
  - d) ICAR
- (5) Which of the following dye is used for observing DNA in agarose gel?
  - a) Ethyidium bromide
  - b) acetocarmine
  - c) Methylene blue
  - d) None of these
- (6) The following cannot be exploited by assigning or by licensing the rights to others
  - a) Patent
  - b) Design
  - c) trade mark
  - d) None of these
- (7) Which one of the following marker is used for selection of transgenic plants:
  - a) Drug resistance gene.
  - b) RAPD marker.
  - c) Antibiotic resistance gene
  - d) vitamin resistance gene
- (8) Molecular markers are used to construct
  - a) chromosome maps
  - b) cytogenetic maps
  - c) physical maps
  - d) All of these

- (9) Radioactive waste are:
- a) Nuclear war materials
  - b) Rigid container
  - c) Test explosions
  - d) Both (Nuclear war materials) and (Test explosions)
- (10) Intellectual Property Rights (IPR) is a process which protects the use of information and ideas that are of
- a) Ethical value
  - b) Commercial value
  - c) Social value
  - d) Moral value
- (11) Mastermix of PCR contain
- a) DNA, Forward and reverse Primer, Mg<sup>+</sup>, Buffer, Taqpolymerase.
  - b) DNA, Forward Primer, Mg<sup>+</sup>, Buffer, Taqpolymerase
  - c) DNA, Mg<sup>+</sup>, Buffer, Taqpolymerase
  - d) DNA, Primer, Mg<sup>+</sup>, Buffer, Taqpolymerase
- (12) The length of RAPD primer is
- a) 10-15 bp
  - b) 30-40 bp
  - c) 40-50 bp
  - d) None of these
- (13) Chemical, reagents or broth cultures should be pipetted by \_\_\_\_\_?
- a) mouth
  - b) pipette
  - c) ear
  - d) nose
- (14) What is the name of the procedure performed under sterile conditions to eliminate contamination in hopes to obtain a pure culture of one type of microorganism?
- a) sterilization technique.
  - b) aseptic technique.
  - c) disinfectant technique
  - d) pathogen technique.
- (15) Handling of Recombinant products requires
- a) Characteristics of donor and recipient organism
  - b) Characteristic of the modified organism
  - c) expression and properties of the gene product
  - d) All of these
- (16) Paris Convention for the Protection of Industrial Property, initially signed in
- a) 1983
  - b) 1883
  - c) 1988
  - d) 1999
- (17) Which regulatory body helps and supports British businesses with regard to trade with India:
- a) The UK India Business Council (UKIBC)
  - b) British High commission
  - c) British Academy of Commerce
  - d) None of these
- (18) Main features of TRIPs agreement are
- a) Standards
  - b) Enforcement
  - c) Dispute settlement
  - d) All of these
- (19) Salmonella can be studied in
- a) BSL I laboratory
  - b) BSL II laboratory
  - c) BSL III laboratory
  - d) BSL IV laboratory
- (20) Number of member states under WIPO are
- a) 180
  - b) 156
  - c) 192
  - d) None of these
- (21) Trade in services includes which of the following?
- a) Aerospace
  - b) Insurance
  - c) Textiles
  - d) Computer hardware
- (22) Facility design for secondary barriers consist of
- a) Basic Laboratory
  - b) Containment laboratory
  - c) Maximum Containment laboratory
  - d) All of these
- (23) Headquarter of World Trade Organization (WTO) is

- a) Munich, Germany  
c) Geneva, Switzerland
- b) Vienna, Austria  
d) London, UK
- (24) Biosafety level 3 laboratory is applicable to
- a) Clinical research  
c) Undergraduate training institute
- b) Dangerous and exotic agents  
d) None
- (25) Which one of the following does not included under Category IV types of rDNA activities?
- a) Self cloning  
c) Cloning of genes for vaccine production: e.g. Rinderpest and leprosy antigens
- b) Toxin gene clonings  
d) Genes coding for antibiotic resistance into pathogenic organisms.
- (26) Physical Containment (PC) mainly include
- a) Host  
c) Plasmid.
- b) bacteria  
d) Preventing the exposure of the researcher and the environment to the harmful agents
- (27) The extension temperature of PCR is --- degree centigrade.
- a) 72  
c) 95
- b) 50-60  
d) 20
- (28) Which one of the following marker is of co-dominant type?
- a) RAPD.  
c) all.
- b) RFLP.  
d) i and ii
- (29) Examples of hazardous waste are
- a) Chemical waste  
c) Both a and b
- b) Radioactive waste  
d) None of these
- (30) The set of DNAs generated by using random primers in a PCR reaction is called
- a) SSR.  
c) AFLP
- b) RFLP  
d) None of these
- (31) Organisms handled in BSL-III labs are
- a) Leishmania donovani  
c) M. tuberculosis
- b) SARS coronavirus  
d) All of these
- (32) Safety equipment for primary barriers include
- a) Ventilators  
c) Safety glasses
- b) Face shields  
d) Both ii and iii
- (33) Handling of Recombinant products requires
- a) Characteristics of donor and recipient organism  
c) expression and properties of the gene product
- b) Characteristic of the modified organism  
d) All of these
- (34) Which of the following type(s) of Personal Protective Equipment (PPE) is frequently used?
- a) Safety glasses.  
c) Lab Coats.
- b) Gloves  
d) All of the above
- (35) Which one of the following is not a component of elements of containment?
- a) Laboratory practice; and technique.  
c) Facility design.
- b) Safety equipment and  
d) Biochemical hazard.
- (36) The total duration of patent is ..... years
- a) 10  
c) 30
- b) 20  
d) 40
- (37) Which statement is wrong with respect to patent?
- a) Valid for 20 years  
c) require payment every year.
- b) Not a time consuming and lengthy  
d) none
- (38) Hepatitis A, B, and C virus can be studied in

- a) BSL I laboratory  
c) BSL III laboratory
- b) BSL II laboratory  
d) BSL IV laboratory
- (39) Forms of IPR include
- a) Patents  
c) Copyright
- b) Trademark  
d) All of these
- (40) Measles virus can be studied in
- a) BSL I laboratory  
c) BSL III laboratory
- b) BSL II laboratory  
d) BSL IV laboratory
- (41) Leishmania donovani can be studied in
- a) BSL I laboratory  
c) BSL III laboratory
- b) BSL II laboratory  
d) BSL IV laboratory
- (42) In India, the literary work is protected until
- a) Lifetime of author  
c) 40 years after the death of author
- b) 25 years after the death of author  
d) 60 years after the death of author
- (43) The rights of a patentee are
- a) Sell or distribute  
c) Assign the property to others
- b) License  
d) all
- (44) Example of intangible property include
- a) Copyrights  
c) Vehicles
- b) Land  
d) Furniture
- (45) Which of the following is not an intellectual property law?
- a) Copyright Act, 1957  
c) Customs Act, 1962
- b) Trademark Act, 1999  
d) Design Act, 2000
- (46) The term 'Intellectual Property Rights' covers
- a) Copyrights  
c) Trade dress
- b) Know-how  
d) All of the above
- (47) GEAC stands for
- a) Genetic Engineering Applied Committee  
c) Genetic Engineering Appraisal Council
- b) Genetic Engineering Appraisal Committee  
d) Genetic Engineered Appraisal Committee
- (48) A patent document must have
- a) Description of invention  
c) Both i and ii
- b) Claims of scope of protection  
d) None of these
- (49) Ebola virus and Variola virus can be studied in
- a) BSL I laboratory  
c) BSL III laboratory
- b) BSL II laboratory  
d) BSL IV laboratory
- (50) The number of nucleotide repeats in minisatellite are
- a) 6-10  
c) 15-30
- b) 1-5  
d) 30-80

(51)



Identify the safety violation

- a) Organized lab.  
c) All of these
- b) Unorganized lab  
d) None of these
- (52) Patent applications are divided into following headings
- a) Field of the invention  
b) Background of the invention

- c) Both a and b
- (53) Steps leading to Commercialization are
- a) Assessment of report of invention
  - c) Prosecuting patent application
- (54) Plant is a
- a) Tangible property
  - c) Both a and b
- (55) Trademarks are
- a) Tangible property
  - c) Both a and b
- (56) Franchises are
- a) Tangible property
  - c) Both a and b
- (57) Dis advantages of GMO food is
- a) Allergic Reaction
  - c) more nutritious food
- (58) GEAC stands for \_\_\_\_\_
- a) Genetic Ethical Approval Committee
  - c) Genetic Ethical Active Commission
- (59) Which of the following can be patented
- a) Machine
  - c) Composition of matter
- (60) De-contamination Process using Bio organism is known as
- a) Bio pesticides
  - c) Biosafety
- d) None of these.
- b) Requirement for licensing
- d) All of these
- b) Intangible property
- d) None of these
- b) Intangible property
- d) None of these
- b) Intangible property
- d) None of these
- b) Autoimmune response
- d) Pest resistance Plant Production
- b) Genetic Engineering Active Commission
- d) Genetic Engineering Approval Committee
- b) .Process
- d) All of the above
- b) Bio remediation
- d) Bio ethics