

V.E.S. COLLEGE OF ARTS, SCIENCE AND COMMERCE
DEPT. OF MICROBIOLOGY
MISSION EXAM 2020
MSc-SEM IV
SAMPLE QUESTION PAPERS

MSc. Microbiology Sem IV Sample MCQ paper

PSMB401-TOOLS AND TECHNIQUES: BIOMOLECULAR ANALYSIS

1. For the separation of which of the following substances, Gas-Solid chromatography is used?
 - a) Thermally stable organic components
 - b) Thermally stable inorganic components
 - c) Volatile organic components
 - d) Low molecular weight gaseous species

2. The packing of the HPLC column is mostly made up of _____ particles.
 - a) Silica
 - b) Plastic
 - c) Glass
 - d) Aluminium

3. The PCR variant designed for the study of RNA expression
 - a) RT PCR
 - b) Anchored PCR
 - c) Nested PCR
 - d) Arbitrarily PCR

4. The nature of substrate use for microarray is
 - a) Porous and solid
 - b) Nonporous and solid
 - c) Porous and liquid
 - d) Nonporous and liquid

5. With increase in pressure in SFC, the density -
 - a) increases and decreases
 - b) decreases
 - c) increases
 - d) remain constant

6. Which of the following is an application of PCR?
 - a) Site-directed mutagenesis
 - b) Site-specific recombination
 - c) Site-specific translocation
 - d) Site- specific transcription

7. The short DNA fragments that are placed onto a microarray are called?
 - a) Marker
 - b) mRNA
 - c) Probes
 - d) Test sequences

8. Where does the FISH probe localize to?
 - a) Golgi apparatus
 - b) Cytoplasm
 - c) Cell membrane
 - d) Nucleus

9. Vacuum is required in which type of microscope
 - a) Optical microscope
 - b) Electron microscope
 - c) Scanning probe microscope
 - d) Scanning Near Field optical microscope

10. In scanning Tunnelling microscope , in order to maintain constant current between probe and sample_____also needs to kept constant
 - a) current
 - b) Distance
 - c) Apperture
 - d) sample

PSMB402- PHARMACEUTICAL MICROBIOLOGY

1. In one gene mapping technique, denatured DNA from metaphase chromosomes is hybridized with a radioactively labeled probe. This DNA is then exposed to film to reveal the approximate chromosomal location of the DNA in the probe. Which technique does this best describe?
 - a) Southern blotting
 - b) Somatic cell hybridization
 - c) Fluorescence in situ hybridization
 - d) Single strand conformation polymorphism (SSCP) analysis
2. Sampling, specification and testing with organization, documentation and release procedure are the part of
 - a) Food packaging
 - b) Hygiene maintenance
 - c) Good Manufacturing Practices
 - d) Public health
3. _____ is used most widely as a gas sterilant.
 - a) Ethylene oxide
 - b) Hydrogen peroxide
 - c) Nitrogen dioxide
 - d) Formaldehyde
4. According to the USFDA., which of the following is not true for cosmetics ?
 - a) Acts as cleanser
 - b) Promotes attractiveness
 - c) Protect and nourishes skin
 - d) Affects body functions
5. The gap between the number of new chemical entities (NCE) and the actual number of NCEs introduced in the market is known as _____.
 - a) Proteomics
 - b) Innovation deficit
 - c) Target identification
 - d) Bioinformatics
6. To perform a conducting test the microorganism challenge is usually done in _____ product.
 - a) 10g/10ml
 - b) 30g/30ml
 - c) 20g/20ml
 - d) 5gm/5ml
7. To protect and increase shelf life of cosmetics, _____ is added.
 - a) Vitamins
 - b) Additives
 - c) Preservatives
 - d) Water

8. Preservative is the substance which _____
- Enhances the growth of microorganisms
 - Inhibits the growth of microorganisms
 - Controls the growth of microorganism
 - Decreases the growth of microorganism
9. Creams are basically _____
- semisolids
 - emulsions
 - ointment like preparation
 - jellies
10. The identification of new and clinically relevant molecular targets for drug intervention is called as _ .
- Lead Optimization
 - Target validation
 - Target identification
 - Lead validation

PSMB403- ADVANCES IN BIOTECHNOLOGY

1. _____ defines the scope of invention to be protected through this patent so that others may not use it.
- Patent
 - Claims
 - Copyrights
 - Trademarks
2. _____ patenting is still a matter of concern to some consider is an unethical
- DNA
 - Gene
 - Plant
 - Oligonucleotides
3. _____ has been a catalyst to be in consideration of bioethics issues .
- Microbiology
 - Biotechnology
 - Community
 - Environment
4. Which bioethical principle gives rights to individuals to make their own choices?
- Autonomy
 - Justice
 - Beneficence

- d) Do-no harm
5. Scientists will win more public support for research by involving people in _____ and being open.
- a) decision-making
 - b) research
 - c) discussion
 - d) conflicts
6. *S. cerevisiae* expression system is used for intracellular production of a heterologous protein namely
- a) oxidase
 - b) catalase
 - c) isomerase
 - d) Superoxide dismutase
7. What is the full form of BST?
- a) Bovine serum test
 - b) Binary search tree
 - c) British summer time
 - d) Bovine somatotropin
8. *Pichia pastoris* expression system encoded gene AOX1 , express protein
- a) alcohol oxidase
 - b) catalase
 - c) isomerase
 - d) lipase
9. The process for generating amino acid coding changes at the DNA level is called as _____.
- a) Damaged Mutagenesis
 - b) Indirect Mutagenesis
 - c) Directed Mutagenesis
 - d) Complete Mutagenesis
10. Oligonucleotide mutagenesis is also called as _____.
- a) Site-specific Mutagenesis
 - b) Recombinant Mutagenesis
 - c) Side-specific Mutagenesis
 - d) Mismatch mutagenesis



PSMB404- Applied and Environmental Monitoring & Management

1. _____ is multivalent CHO binding protein.
 - a) Pilli
 - b) Fimbriae
 - c) Lectin binding
 - d) Collagen binding

2. Which of the following organic compounds are used as solid adsorbents by microorganisms?
 - a) Silica
 - b) Resin
 - c) Animal skin
 - d) Charcoal

3. Clp protease has been shown to be involved in the -
 - a) degradation of proteins involved in initial attachment
 - b) degradation of proteins involved in matrix development
 - c) degradation of structural proteins
 - d) degradation of misfolded proteins

4. _____ is a cationic biocide used to eradicate biofilm.
 - a) SDS
 - b) quaternary ammonium compound
 - c) triclosan
 - d) alginate lyase

5. The chemical signal molecules produced and released by quorum sensing bacteria are called _____.
 - a) Autoinducers
 - b) Chemokines
 - c) Cytokines
 - d) Ligands

6. Controlled eutrophication can be done by applying algicides namely
 - a) copper sulphate and chloride
 - b) zinc and ammonia
 - c) magnesium
 - d) hydrogen sulfate

7. Which of the following is the greatest volume of waste discharge to water?
 - a) Spillage from oil pipelines
 - b) Sewage
 - c) Nuclear waste
 - d) Spillage from tankers

8. What is called for the useless heat from hot water recycled by industries?
 - a) Cooling towers
 - b) Recycling
 - c) Heat pump

- d) Co-generation
9. Coagulant aids commonly used are
- a) Activated silica and polyelectrolytes
 - b) Quaternary ammonium compounds
 - c) alcohols
 - d) Parabens
10. Which of the following miscellaneous products found in solid-waste?
- a) Pesticides
 - b) Antibiotics
 - c) Inflammable substances
 - d) Waste paper
