

EAST PORT TOUR 2025 LABQUIZ

Name:

Email:

1. Which enzyme is commonly used for reverse transcription of RNA into cDNA?

- a) DNA polymerase
- b) M-MLV transcriptase
- c) DNA ligase
- d) RNase

2. What is the main advantage of RNA/DNA quantification using fluorescent dyes compared to classical spectrophotometry?

- a) Higher sensitivity and selectivity for the specific nucleic acid
- b) The possibility of direct amplification without DNA isolation
- c) Faster reaction time
- d) Does not require the use of a fluorometer

3. What is the use of trypsin in cell culture?

- a) Digestion of DNA and RNA
- b) Inhibition of bacterial growth
- c) Proteolytic cleavage of adhesion proteins
- d) Induction of apoptosis

4. What does the MEA technology (Microelectrode Array) used in the Maestro Pro platform from Axion BioSystems primarily measure?

- a) Cellular metabolism
- b) Electrical activity of neurons and cardiomyocytes
- c) Mechanical properties of cells
- d) Gene expression

5. Which of these microplate reader(s) allow detection of Western blots?

- a) Glomax Navigator
- b) Maestro Pro
- c) SpectraMax iD3 and i3X
- d) Biotek Synergy

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6. What is the main purpose of adding Mg^{2+} ions to a PCR reaction, such as when using GoTaq® G2 Flexi DNA Polymerase from Promega?

- a) Inhibition of nonspecific amplification
- b) Activation of DNA polymerase
- c) Stabilization of the DNA template
- d) Increasing primer specificity

7. Which of the following markers is used for the most sensitive determination of cell viability?

- a) Redox potential of NADH/NADPH
- b) Intracellular ATP
- c) Specific protease activity
- d) Plasma membrane integrity

8. What are the basic types of FBS from the German company Capricorn?

- a) FBS Standard, FBS Xtra, FBS Advanced, FBS minis
- b) FBS alpha, FBS beta, FBS stable
- c) FCS, HBBS, PBS
- d) FBS exosome depleted, FBS charcoal depleted, FBS premium

9. Why is it important to use an antibiotic solution, such as Penicillin-Streptomycin from Capricorn Scientific, in cell cultures?

- a) Supports cell growth
- b) Prevents bacterial contamination
- c) Increases media pH
- d) Determines cell differentiation

10. Which of the following products from HansaBioMed is used for the concentration and purification of extracellular vesicles based on tangential flow filtration and has a hollow fiber diameter of 50 nm?

- a) TFF Easy
- b) TFF MV
- c) TFF EV
- d) EV Spinner