

Past Papers

MID – Lecture 7 to 9

cytology and molecular

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



اللهم استعملنا ولا تستبدلنا

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Q1 : Which of the following molecular motors is known to travel in a retrograde direction along microtubules?

- A. kinesins and dynein
- B. myosins
- C. Dyneins
- D. kinesins and myosins
- E. kinesins

Answer : C

Q2 : Which type of cytoskeletal element is described as tough, ropelike fibers composed of a variety of related proteins?

- A. Macrofilaments
- B. Microfilaments
- C. Microtubules
- D. indeterminate filaments
- E. Intermediate filaments

Answer : E

Q3: Which type of cytoskeletal element is characterized as a hollow, rigid cylindrical tube with walls composed of tubulin subunits?

- A. microtubules
- B. minitubules
- C. intermediate filaments
- D. Microfilaments
- E. all of these choices

Answer : A

Q4: What is the name of the proteins that make up the nuclear lamina and of what protein superfamily are they a member?

- A. Lamins, laminins.
- B. Lamins, intermediate filaments.
- C. Keratin, intermediate filaments.
- D. Keratin, laminins.
- E. Actin, microfilaments

Answer :B

Q5 : Which of the following molecular motors is associated with microfilaments?

- A. Dyneins
- B. kinesins and myosins
- C. kinesins and dyneins
- D. kinesins
- E. Myosin

Answer : E

Q6 : Focal adhesions. _____

- A. Have been implicated in cell locomotion.
- B. Contain integrins that develop transient interactions with the extracellular matrix.
- C. Collect information about the chemical properties of the extracellular environment.
- D. Transmit information to the cell interior that may lead to changes in cell adhesion, proliferation and survival.
- E. All of these are correct.

Answer : E

Q7 :What is not true about assembly of microfilaments?

- A. Inhibited by the protein thymosin –beta- 4
- B. enhanced by actin polymerizing proteins
- C. requires ATP-G-actin molecules .
- D. faster at its –end .
- E. faster at its + end.

Answer : D

Q8 : During " treadmilling", actin filament is:

- A. shortening
- B. increasing in diameter
- C. contracting
- D. elongating
- E. at equilibrium state

Answer : E

Q9 :The movement of vesicular-tubular carriers VTCS(away from the ER and toward the Golgi complex) occurs along tracks composed of what material ?

- A. microtubules
- B. Microfilaments
- C. RNA
- D. DNA
- E. intermediate filame

Answer :A

Q10 :What is not true about intermediate filaments?

- A. Monomer has 3 structural domains
- B. Can be found in all living cells
- C. Distinguished into 6 different classes based on tissue distribution .
- D. Have diameter about 10 nm
- E. Vimentin filaments are dissociated by phosphorylation

Answer:C

Q11 : What causes catastrophic MT disassembly?

- A. GTP hydrolysis at + end
- B. GTP hydrolysis at- end
- C. Free GDP tau
- D. GDP tubulin dimers in the middle of MT
- E. Taxol

Answer : A

Q12 : The IF LAMINS, except:

- A. are intermediate filaments
- B. dissociation is mediated by their phosphorylation
- C. are filaments of 25 nm in diameters
- D. line nucleoplasmic side of inner nuclear membrane
- E. not involved in import of nuclear protein
- F. Non of the above

Answer : C

Q14 : Actin filaments are not associated with:

- A. hemidesmosomes
- B. stress fibers
- C. contractile ring
- D. focal adhesions
- E. adherens junctions

Answer :1

Q15 : Focal adhesions:

- A. Collect information about the chemical properties of the extracellular environment
- B. Collect information about the physical properties of the extracellular environment
- C. May act as a type of sensory structure
- D. Transmit information to the cell interior that may lead to changes in cell adhesion
- E. All choices are correct

Answer : E

Q16 : What is not true about intermediate filaments?

- A. Are tissue specific
- B. They bear tension
- C. They are polarized with plus and minus ends
- D. Glial acidic protein is an example of intermediate filaments
- E. They are unbranched filaments²

Answer : C

Q17 : In vivo, what anchors cells to substratum?

- A. Hemidesmosome
- B. Desmosome
- C. Gap junction
- D. Adherens junction
- E. Tight junction

Answer : 1

Q:18 The thin filamentous meshwork within the nucleus that is bound by integral membrane proteins of the inner surface of the nuclear envelope in animal cells is called the:

- A. Nuclear lamina
- B. Basement lamina
- C. Nuclear limulus
- D. Nucleon
- E. Basal lamina

Answer : A

Q19 : Which of the following isn't true about microtubules:

- A. They are fast growing at plus end
- B. They are slow growing at minus end
- C. They are made of alpha, beta and gamma subunits
- D. A + B
- E. None of the above

Answer : C

Q20 :Cell division in Eukaryotes requires:

- A. Microtubules for nuclear division
- B. Actin and myosin for cytokinesis
- C. .Actin filaments for nuclear division
- D. A+B
- E. B+C

Answer : D

Q21 :Which type of cytoskeletal element is characterized as a hollow, rigid cylindrical tube with walls composed of tubulin subunits?

- A. microfilaments
- B. microtubules
- C. intermediate filaments
- D. all of these choices
- E. Minitubules

Answer : B

Q22 :Which element of the cytoskeleton is found in the cytoplasm and the nucleus?

- A. microfilaments
- B. microtubules
- C. intermediate filaments
- D. macrofilaments
- E. indeterminate filaments

Answer : C

Q23 : which of the following is a function performed by the cytoskeleton?

- A. Provides structural support that determines cell shape and resists deforming forces
- B. positions various organelles within the cell interior
- C. provides a network of tracks over which materials like mRNA and organelles move within cells
- D. serves as a force-generating apparatus that moves cells from one place to another
- E. All of these choices

Answer : E

Q24 :Which of the following appears to be the most extensible?

- A. intermediate filaments
- B. microtubules
- C. microfilaments
- D. spindle fibers
- E. microtubules and spindle fibers

Answer : A

Q25 : The microtubule wall is composed of globular proteins arranged in longitudinal rows called:

- A. microfilaments
- B. protofilaments
- C. prototubules
- D. prototubulins
- E. microtubular units

Answer : B

Q26 : Which property below is most suitable characteristic of intermediate filaments?

- A. Elastic
- B. Highly resistant to shrinkage
- C. Springy
- D. Ability to absorb mechanical stresses applied by the extracellular environment
- E. Hyper flexible

Answer : D

Q27 : How are intermediate filaments different from actin filaments and microtubules?

- A. Principle component of cytoskeleton in the cell.
- B. It has the largest diameter.
- C. It connects microtubules to actin filaments.
- D. It is highly polarized.
- E. none of the above.

Answer : C

Q28 : Focal adhesions

- A. Transmit information to the cell interior that may lead to changes in cell adhesion, proliferation or survival
- B. Contain integrins that develop transient interactions with the extracellular matrix
- C. Have been implicated in cell locomotion
- D. Collect information about the chemical properties of the extracellular environment
- E. All of these are correct

Answer : E

Q29 : What is the name of the protein that make up the nuclear lamina and of what protein superfamily are they a member?

- A. Actin, microfilaments
- B. Lamins, intermediate filaments
- C. Lamins, laminins
- D. Keratin, laminins
- E. Keratin, intermediate filaments

Answer : B

Q30 : Microvilli are composed of :

- A. red blood cells
- B. myosin
- C. white blood cells
- D. actin
- E. intermediate filament

Answer : D

Q31 : Epidermolysis bullosa, an inherited blistering disease, is caused by

- A. Production of antibodies against hemidesmosome plaque proteins
- B. Production of autoantibodies
- C. Production of antibodies against spot desmosome plaque proteins
- D. genetic alterations in any one of a number of hemidesmosomal proteins
- E. production of antibodies against connexins

Answer : D

For any feedback, scan the code or click on it.



Corrections from previous versions:

Versions	Question #	Before Correction	After Correction
V1 → V2			
V2 → V3			