

7. _____ can result either from the direct interaction of a cell with its neighbor or from the action of secreted signaling molecules.
- a) cell signaling
 - b) cancer
 - c) apoptosis
 - d) hematopoiesis
8. In _____, a molecule released by one cell acts on neighboring target cells.
- a) autocrine signaling
 - b) paracrine signaling
 - c) both a & b
 - d) apoptosis
9. Two component regulatory system consist of a membrane – bound _____ that senses a specific environmental stimulus in eukaryotes.
- a) histidine kinase
 - b) serine kinase
 - c) throsine kinase
 - d) threonine kinase
10. Receptor throsine kinases are the cell surface receptors for _____.
- a) Growth factors
 - b) Cytokines
 - c) Hormones
 - d) all the above
11. Which receptor span the plasma membrane of the cell, with one part of the receptor on the outside of the cell and the other on the inside?
- a) Extracellular
 - b) Intracellular
 - c) both a & b
 - d) none of the above
12. Cyclic AMPs are _____ messengers.
- a) Primary
 - b) secondary
 - c) tertiary
 - d) quaternary
13. Which molecules are secreted by cells that provides structural and biochemical support to the surrounding cells?
- a) Integrins
 - b) Gap junctions
 - c) Extracellular matrix
 - d) connections
14. _____ is the process by which a cell directs the contents of secretory vesicles out of the cell membrane and into the extracellular space.
- a) endocytosis
 - b) pinocytosis
 - c) exocytosis
 - d) phagocytosis

15. _____ mediates cell-ECM interactions with collagen, fibrinogen, fibronectin, and vitronectin.
- a) Integrins
 - b) Cadherins
 - c) ECM
 - d) Gap junctions
16. What happens at neuronal synapse?
- a) triggers the opening of calcium channels
 - b) triggers the release of neurotransmitter
 - c) diffusion of neurotransmitter
 - d) all the above
17. _____ are endogenous chemicals that transmit signals across a synapse from one neuron to another 'target' neuron.
- a) Neurotransmitters
 - b) Neurotransmitters
 - c) Retinotransmitters
 - d) none of the above
18. SNARE protein can be expanded as _____.
- a) Soluble NSF attachment protein receptor
 - b) Insoluble NSF attachment protein receptor
 - c) Soluble protein receptor
 - d) Soluble NSF attachment
19. Which oncogenes help in the transduction of signals for cell growth and differentiation?
- a) GTPase
 - b) Tyrosine kinase
 - c) Serine / Threonine kinase
 - d) Receptor throsine kinase
20. Which genes code for proteins those help to regulate cell growth and differentiation?
- a) Proto-oncogenes
 - b) oncogenes
 - c) Tunor suppressor genes
 - d) Splicing genes
21. _____ caused by the translocation of pieces from chromosomes 9 and 22.
- a) Chronic Myelogenous Leukemia
 - b) Brain tumor
 - c) Skin cancer
 - d) Kidney tumor

22. Which phase of cell cycle will show high level of DNA synthesis?
a) G₁ b) G₀ c) S d) M
23. Tumor suppressor genes follow the _____ hypothesis.
a) two hit b) three hit c) four hit d) five hit
24. Which phase in cell cycle is called the resting phase in which the cell stop dividing?
a) G₀ b) G₁ c) S d) M
25. SMACs can be expanded as _____.
a) Small mitochondria – derived activator of caspases
b) Small mitochondrial caspases
c) Small mitochondria – derived activator
d) Signal mitochondria – derived activator of caspases
26. In apoptosis, cytochrome c is released from mitochondria by forming a channel called _____.
a) Mitochondrial apoptosis – induced channel
b) Mitosis apoptosis – induced channel
c) Mitogen apoptosis – induced channel
d) Mitochondria – derived activator of caspases
27. _____ can induces apoptosis in virus infected cells by opening up pores in the target's membrane.
a) B-cells b) Macrophages c) Monocytes d) Cytotoxic T cells
28. Caspases are a family of _____ that play essential roles in apoptosis.
a) Cysteine proteases b) Asparagine proteases
c) Serine proteases d) Threonine proteases
29. Cytotoxic cells induce apoptosis in virus infected cells by secreting a serine protease called _____.
a) porins b) perforins c) granzyme B d) cadherins
30. TRAIL receptors is otherwise called as _____.
a) Death receptors b) TNF receptor
c) Caspases receptors d) Fas receptors
