

SECTION 1: MCQs (20 Marks)

1. Hypertrophy
 - a) Occurs after partial hepatectomy
 - b) Increases function of an organ exponentially
 - c) Is usually pathological
 - d) Is triggered by mechanical and trophic chemicals
2. An example of hypertrophy would be?
 - a) Liver regeneration after partial hepatectomy
 - b) Breast development at puberty
 - c) The uterus during pregnancy
 - d) Papilloma virus induced skin wart
3. Hyperplasia is
 - a) Increase in the size of cells
 - b) Increase in the number of cells
 - c) Increase in the number of cellular organelles
 - d) Increase in the size of organ
4. Examples of hyperplasia include?
 - a) Cardiac enlargement seen in hypertension
 - b) Fatty liver
 - c) Skeletal muscle enlargement with weight lifting
 - d) None of the above
5. Which of the following is NOT associated with atrophy?
 - a) Decreased smooth endoplasmic reticulum
 - b) Decreased rough endoplasmic reticulum
 - c) Decreased mitochondrial number
 - d) Increased autophagic vacuoles, which contain fragments of cellular components
6. The following are features of apoptosis EXCEPT?
 - a) Cell swelling
 - b) Formation of cytoplasmic blebs
 - c) Chromatin condensation
 - d) Phagocytosis of apoptotic bodies
7. Irreversible cell injury is characterized by?
 - a) Dispersion of ribosomes
 - b) Cell swelling

- c) Lysosomal rupture
d) Cell membrane defects
8. Pinocytosis?
a) Adds to the cell membrane
b) Is the uptake of small particulate matter
c) Involves the uptake of soluble macromolecules
d) Involves the uptake of opsonized bacteria
9. Fatty change
a) Occurs during protein malnutrition
b) Is not a feature of hypoxia
c) Is abnormal accumulations of free fatty acids in cells
d) Always impairs cellular function
10. Metaplasia is a reversible change in which one adult cell type is replaced by another adult cell type. In which of the following situations is the process of epithelial metaplasia most likely to have occurred?
a) Acute myocardial infarction
b) Lactation following pregnancy
c) Tanning of the skin following sunlight exposure
d) Vitamin A deficiency
11. The first vascular response to injury is?
a) Arteriolar vasoconstriction
b) Capillary enlargement
c) Slowing of circulation
d) Recruitment of the vascular beds
12. Which of the following immune cell is able to phagocytose?
a) Neutrophils
b) Macrophages
c) Monocytes
d) T-cells
13. The most common peripheral circulating lymphocyte is the?
a) B-cell
b) T-cell
c) Macrophage
d) NK cell
14. Macrophages are derived from?
a) Monocyte

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- b) T cell
 - c) Eosinophil
 - d) Plasma cell
15. Which of the following types of necrosis is grossly opaque and chalky white
- a) Coagulation necrosis
 - b) Fat necrosis
 - c) Liquefaction necrosis
 - d) Gangrenous necrosis
16. Localized area of ischaemic necrosis is mostly associated with?
- a) Hematoma
 - b) Emboli
 - c) Infarction
 - d) Petechiae
17. Which of the following is a reversible change?
- a) Pyknosis
 - b) Karyorrhexis
 - c) Swelling of endoplasmic reticulum
 - d) Gangrenous necrosis
18. Granuloma formation is most frequently associated with?
- a) Acute inflammation
 - b) The healing process
 - c) Wound contraction
 - d) Persistent irritant
19. Which of the following terms refer to a malignant tumour of mesenchymal origin?
- a) Hepatoma
 - b) Sarcoma
 - c) Teratoma
 - d) Hematoma
20. Which of the following is not a malignant tumour?
- a) Glioma
 - b) Lymphoma
 - c) Melanoma
 - d) Leiomyoma

SECTION 2: LEQs (60 Marks)

1. Explain the cell cycle and how it is regulated. (20mks)
2. Describe reversible versus irreversible cell injury. (20mks)
3. Describe the cellular adaptations to stress. (20mks)

END